

Railway & Traffic cables



Cable Catalogue

- **BayRail®** for signalling applications
- **BayCom®** for telecommunication applications
- **BayEnergy®** for grounding and power applications

THANK YOU VERY MUCH

THAT YOU ARE CONSIDERING US!

“Satisfied customers are the standard of our work!”

With this motto the management team runs the company. Over 130 years of experience in the cable production means a maximum of technical competence in development, design and production.

We use this know-how entirely for the success of our customers. We also offer highest flexibility in planning, product information and service and can also produce customer-specific special designs in short delivery times. Convince yourself of our sophisticated logistics system.

Thomas Schimpff

Speaker of the Management Board

CONTACT

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Chairman of the Supervisory Board: Christiane Wilms-Mester,
Board of Directors: Johann Erich Wilms
Place of Business: 91154 Roth Germany, Field under in the commercial register,
HRB-No. 314 District Court of Nuremberg

Bayka
since 1885

DIRECTORY

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BayRail®
Signalling, Balise, PZB and LZB-cables



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BayRail®

BayCom®
Telecommunication-cables for Railways



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BayCom®

BayEnergy®
Power and grounding cables for Railways



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page

BayEnergy®

BayEnergy®



Power cables



- Copper conductors, 1 kV to 30 kV
- Aluminium conductors, 1 kV to 30 kV
- Paper-insulated, 1 kV to 36 kV
- XLPE-insulated overhead lines, 1 kV
- Grounding cables, Cu-, Al-strands/ropes
- Cables according to international standards

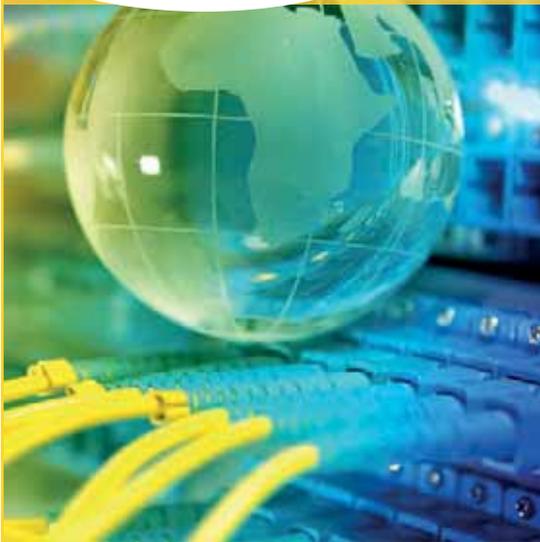
Standards



References



BayCom®



Telecommunication cables



- BayCom®★ & BayCom®★★ Quality
- Multisystem- & wide area cables
- Inhouse- & Outdoor-HF-switchboard cables (xDSL)
- Local- & xDSL cables
- Fibre optic cables (FOC)
- Cables according to international standards

Standards



References



BayRail®



Cables for railways and transport



- Signalling cables
- Railfoot cables
- PZB, LZB- & Balise cables
- Railway power & grounding cables
- Telecommunication cables
- Cables according to international standards

Standards



References



BayGreen®



Cables for solar and wind power plants



- Copper solar cables
- Tower cables
- Power cables up to 30 kV
- Copper telecommunication cables
- Fibre optic telecommunication cables
- Inhouse, switchboard cables
- Optional:
- UV-, ozone-, halogen free, EMC, FRNC, ...

Standards



BayMotion®



Flexible connecting & interconnecting cables



- Flexible power & control cables
- Low-capacitance motor connecting cables
- Flexible power connecting cables
- Optional:
- UV-, ozone-, oil resistant, EMC, FRNC, ...
- Cables according to international standards

Standards



BaySpecial®



Special cables



- Hybrid cables (PowerComcable - PCc)
- Theft resistant cables
- RailOptic® - fibre optic railfoot cables
- Customized cables by request
- We develop cables together with our customers! We are, for example, development partner of DB AG, Deutsche Telekom AG and Hamburger Hochbahn AG.
- We can find a customized solution for your problem. Please contact us!

Standards (acc. to customer requirements)



BAYERISCHE KABELWERKE AG



The whole
World of Cables
all from one source



*Ecology + know-how =
sustainability!*

Bayerische Kabelwerke AG – Bayka – was founded in 1885 with its headquarter in Roth/Germany. “Satisfied customers have been the benchmark of our work for more than 125 years”, this is the principle of our management.

We manufacture cables for power, telecommunication, railway and traffic networks, industrial applications, mechanical engineering and for green energy solutions.

Our comprehensive product range and our manufacturing processes are in accordance with national and international standards and specifications.

The cable portfolio varies from medium- and low-voltage, telecommunication and signalling cables, flexible control cables and (high screened) low-capacitance motor connection cables to wires and ropes. Because of the high quality of our products and their reliability for decades Bayka has been a respected partner of power utilities, German Telecom (DT AG), German Railways (DB AG) and many other national and international customers.

„Made in Germany“!

Bayka
seit 1885

BAYERISCHE KABELWERKE AG

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91154 Roth · Germany

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Chairman of the Supervisory Board: Christiane Wilms-Mester, Board of Directors: Johann Erich Wilms, Place of business: 91154 Roth · Germany, Filed under in the commercial register, HRB-Nr. 314 District Court of Nuremberg

BAYKA COLOR FARBKONZENTRATE GMBH



Bayka Color Farbkonzentrate GmbH is a producer of colour concentrates, compounds, masterbatches and plastic mixtures and was initially established for its own use.

Caused by powerful equipment for plastics processing Bayka Color is now an independent company, which sells its high-quality products to international companies based in the plastics industry.



BAYKA COLOR FARBKONZENTRATE GMBH

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E-Mail: farbkonzentrate@bayka.de
www.baykacolor.de

BAYKA BERLIN GMBH

Bayka Berlin GmbH is a specialized company for the production of power cables. Modern equipment, qualified staff and concentration of know how ensures productivity at its highest level.

We produce standard copper and aluminium cables as well as special cables according to customer requirements for national and international markets.



BAYKA BERLIN GMBH
Soltauer Strasse 8
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www.bayka.de



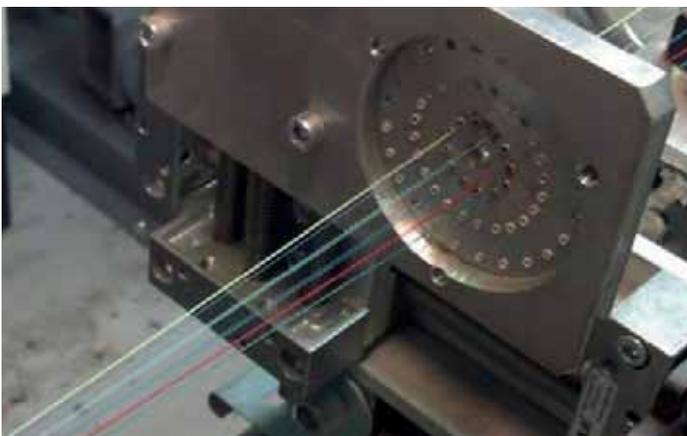
BGF- BERLINER GLASFASERKABEL GMBH

BGF (Berliner Glasfaserkabel GmbH) was established in 1986 and acquired by Bayka AG in 2005. Since this merger, we are able to offer a wider product range and complement our portfolio with the pioneering field of fibre optic cables.

Today, well-known companies such as Deutsche Telekom AG or DB AG trust in our outdoor, indoor, air and railfoot cables.



BGF - BERLINER GLASFASERKABEL GMBH
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www.bgf-kabel.de



QUALITY & SUSTAINABILITY

The quality of our work and our products is the basic condition for our company's success, our ability to compete, and the protection of our employee's jobs.

This is accomplished by the certifications per DIN EN ISO 9001 and KTA 1401 (quality), DIN EN ISO 14001, DIN EN ISO 50001 (environment) and OHSAS 18001, which are combined into an integrated management system and filled with life by Bayka employees.

Since July 2012 the photovoltaic plant has been installed on the company roofs. 12,100 m² achieve a total performance of 960 kWp. At once we modernized our plant with new and energy-saving roofs and insulations.



Bayka Photovoltaic plant

Total power:
960 kWp

Gross collector area:
ca. 12.100 m²



RESEARCH & DEVELOPMENT

As a development partner of national and international companies, we know the requirements our customers place on cables. The synergies from our energy, telecommunication, rail and signalling cable departments enable a purposeful and prompt development of cables.

Development updates of existing products or new developments per customer specification are implemented into an ideal cable design together with our customers, and

are then produced by means of our flexible production equipment.

We continuously update this section. You will soon be provided with information about other developments, e.g.

- FOC rail-base cables
- Development updates for data cables
- Special use cables for railway installations

- Updates or new developments for special use cables
- Development of theft-protected rail grounding ropes
- Flexible TPU multi-function cables for transformer or sub-station building
- Together with you we can create a cable directly for your requirements.

BAYKA REFERENCES

Railway & Traffic



Telecommunication



Energy



Industry, Plants and mechanical engineering



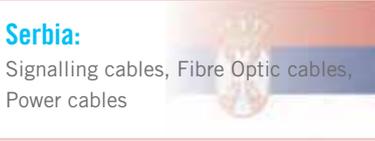
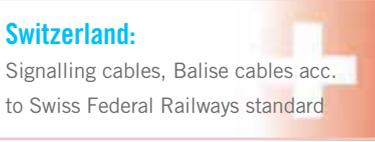
BAYKA REFERENCES RAILWAY

Signalling cables, Telecommunication cables and fibre optic cables for railways

Selection of German Highspeed-lines and other railway projects with Bayka support

<p>Hannover < -- > Würzburg Total Distance: 327 km, Build: 1973-1991, Max. Speed (Vmax): 280 km/h Bayka-cables: Signalling, Telecommunication, TUSI® - Tunnelsafety and Fibre optical cables</p>	<p>Cologne < -- > Rhein/Main Distance: 180 km, Build: 1995-2002, Max. Speed (Vmax): 300 km/h Bayka-cables: Telecommunication, TUSI® - Tunnelsafety cables, LZB</p>
<p>Nuremberg < -- > Munich Build: 1999-2006, Max. Speed (Vmax): ca. 300 km/h Bayka-cables: Signalling, Telecommunication, TUSI® - Tunnelsafety and Fibre optical cables</p>	<p>Nuremberg < -- > Erfurt Distance: 190 km, Build: 1996- ca. 2017 Bayka-cables: Signalling, Telecommunication, TUSI® - Tunnelsafety and Fibre optical cables</p>
<p>Railway control centre 2010 - 2013: Kitzingen-Rottendorf, Südwest (near Munich), Pasing (Munich), Osterhofen, Augsburg, Fürth</p>	<p>Urban railway 2010 - 2013: Nuremberg < -- > Neumarkt, Nuremberg < -- > Ansbach</p>
<p>New tracks 2010 - 2013: ABF Nord, ABF 38 near Munich</p>	<p> We are certified frame contract and development partner of the German Railways!</p>

Selection of international railway projects with Bayka support

<p>Australia:  Signalling cables</p>	<p>Austria: Signalling cables, Line conductor cables for the LZB system & grounding cables according to Austrian standards</p>	<p>Bulgaria:  Signalling cables</p>
<p>Denmark 2012:  Signalling cables</p>	<p>Estonia 2012:  Signalling cables</p>	<p>Finland:  Signalling cables</p>
<p>France:  Signalling cables</p>	<p>Italy 2012:  Fibre Optic, Rail-foot-cables</p>	<p>Kroatia:  Signalling cables (old german spec.), PZB cables</p>
<p>Sweden 2012 - 2013:  Grounding cables for railway</p>	<p>Serbia:  Signalling cables, Fibre Optic cables, Power cables</p>	<p>Slovakia 2013:  Signalling cables</p>
<p>Slovenia 2011:  Signalling cables</p>	<p>Switzerland:  Signalling cables, Balise cables acc. to Swiss Federal Railways standard</p>	<p>Turkey, Turkmenistan:  Signalling cables</p>
<p>United Kingdom:  Signalling cables</p>		

BAYKA REFERENCES RAILWAY

Signalling cables, telecommunication cables and fibre optic cables for railways

Selection of spanish railway projects with Bayka support



Proyecto de Instalaciones de Seguridad y Comunicaciones Variante de Alpera

Tipo de cable suministrado: CCPSSP, CCPSSP-R, EAPSP, P y PI con F. R. 0,1 y 0,3

Adjudicatario Proyecto: BOMBARDIER TRANSPORTATION

Cliente final: ADIF

Proyecto de Instalaciones de Seguridad y Comunicaciones Fuente Piedra-Antequera

Tipo de cable suministrado: CCPSSP, EAPSP, P y PI con F. R. 0,1 y 0,3

Adjudicatario Proyecto: BOMBARDIER TRANSPORTATION

Cliente final: ADIF

Proyecto de Instalaciones de Seguridad y Comunicaciones Accesos Puerto Valencia

Tipo de cable suministrado: CCPSSP, CCPSSP-R, EAPSP, P y PI con F. R. 0,1 y 0,3

Adjudicatario Proyecto: BOMBARDIER TRANSPORTATION

Cliente final: ADIF

Proyecto de Enclavamientos Eléctricos en Líneas 1 y 6 Metro Madrid

Tipo de cable suministrado: RFFW, EAPSP, CCTSST, P y PI

Adjudicatario Proyecto: BOMBARDIER TRANSPORTATION

Cliente final: Comunidad de Madrid – FC Metropolitano de Madrid

Proyecto de Perturbaciones para afección de LAV en la Estación de Barcelona-Sants

Tipo de cable suministrado: EATST, CCTSST FR 0,3 P y PI, CCTSST-R FR 0,1

Adjudicatario Proyecto: BOMBARDIER TRANSPORTATION

Cliente final: ADIF

Proyecto de Perturbaciones para afección de LAV en el tramo Lleida-Barcelona

Tipo de cable suministrado: CCPSSP, CCTSST FR 0,3

Adjudicatario Proyecto: BOMBARDIER TRANSPORTATION

Cliente final: ADIF



We are certified supplier of spanish railways for signalling and telecommunication cables



A ROUND THING - BAYKA

Your requirements and our know-how are worked out in the dialog between operator (purchase & technology) and manufacturer for a round solution.

We look forward to your requirements and also find a suitable solution for you!



SIGNALLING, BALISE, PZB AND LZB-CABLES



BayRail®

Signalling cables

Signalling cables PE sheath, filled	14 - 28
Signalling cables PE sheath, unfilled	29 - 43
Signalling cables PVC sheath, unfilled	44 - 56
Halogenfree, flame-retardant, noncorrosive (LSOH/FRNC)	14 - 28



BayRail®

Railfoot-, PZB-, LZB- and Balise cables

Railfoot cables	68
Balise cables for automatic train protection (ATP) systems	69-70
PZB / Indusi cables, LZB (continuous train control) cables	71-72



BayRail®

Signalling cables according to international standards

 France	73 - 76
 Switzerland	77 - 79
 Spain	80 - 95

BayRail® - Signalling cables

A-2Y0F(L)2YB2Y - core-stranded, filled, (H115) / (H145)

...x1x0,9 acc. to DB TL 416.0113



Standards

Technical specifications 416.0113,
Engineering specifications 416.0116,
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance (pair of cores) Ω/km	≤ 28,9
Insulation resistance GΩxkm	≥ 1,5
Mutual capacitance at 800 Hz nF/km	≤ 115
For the central core nF/km	≤ 120
Alternating voltage test 50 Hz	
Core-core Veff	2500
Continuous operating voltage	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

The cables are longitudinally watertight due to low capacitance filling material and transversally watertight due to a multi-layer sheath.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
0F	filling of the cabled assembly with low capacitance filling material
(L)2Y	laminated sheath made of polyethylene
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H145)	maximum mutual capacitance value at 800 Hz, 145 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y0F(L)2YB2Y from 2x... to 200x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2Y0F(L)2YB2Y - core-stranded, filled, (H115) / (H145)

...x1x1,4 acc. to DB TL 416.0113



Standards

Technical specifications 416.0113,
Engineering specifications 416.0116,
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance (pair of cores) Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 1,5
Mutual capacitance at 800 Hz nF/km	≤ 145
For the central core nF/km	≤ 155
Alternating voltage test 50 Hz	
Core-core Veff	2500
Continuous operating voltage	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

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A	outdoor cable
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0F	filling of the cabled assembly with low capacitance filling material
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B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H145)	maximum mutual capacitance value at 800 Hz, 145 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y0F(L)2YB2Y from 4x... to 200x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2Y0F(L)2YB2Y - core-stranded, filled, (H115) / (H145)

...x1x1,8 acc. to DB TL 416.0113



Standards

Technical specifications 416.0113,
Engineering specifications 416.0116,
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,8
Conductor resistance (pair of cores) Ω/km	≤ 7,2
Insulation resistance GΩxkm	≥ 1,5
Mutual capacitance at 800 Hz nF/km	≤ 145
For the central core nF/km	≤ 155
Alternating voltage test 50 Hz	
Core-core Veff	2500
Continuous operating voltage	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

The cables are longitudinally watertight due to low capacitance filling material and transversally watertight due to a multi-layer sheath.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
0F	filling of the cabled assembly with low capacitance filling material
(L)2Y	laminated sheath made of polyethylene
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H145)	maximum mutual capacitance value at 800 Hz, 145 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y0F(L)2YB2Y from 4x... to 200x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

AJ-2YOF(L)2YDB2Y - core-stranded, filled, (H115) / (H145)

...x1x0,9 acc. to DB TL 416.0113



- Outer sheath: PE, black
- Steel tape armouring
- Concentric copper wires
- Al-laminated sheath: PE, black
- Core filled
- Core insulation: PE (pilot core blue, other cores natural)
- Solid copper conductor



Standards

Technical specifications 416.0113,
Engineering specifications 416.0116,
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance (pair of cores) Ω/km	≤ 28,9
Insulation resistance GΩxkm	≥ 1,5
Mutual capacitance at 800 Hz nF/km	≤ 115
For the central core nF/km	≤ 120
Alternating voltage test 50 Hz	
Core-core Veff	2500
Continuous operating voltage	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

The cables are longitudinally watertight due to low capacitance filling material and transversally watertight due to a multi-layer sheath.

Type Designation Codes

- AJ** outdoor cable with inductive protection
- 2Y** insulating cover made of polyethylene (PE)
- OF** filling of the cabled assembly with low capacitance filling material
- (L)2Y** laminated sheath made of polyethylene
- D** screen made of copper wires
- B** armouring
- 2Y** outer protective sheath made of PE
- S** signalling cable
- (H115)** maximum mutual capacitance value at 800 Hz, 115 nF/km
- rk** reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2YOF(L)2YDB2Y from 10x... to 200x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

AJ-2YOF(L)2YDB2Y - core-stranded, filled, (H115) / (H145)

...x1x1,4 acc. to DB TL 416.0113



Standards

Technical specifications 416.0113,
Engineering specifications 416.0116,
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance (pair of cores) Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 1,5
Mutual capacitance at 800 Hz nF/km	≤ 145
For the central core nF/km	≤ 155
Alternating voltage test 50 Hz	
Core-core Veff	2500
Continuous operating voltage	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

The cables are longitudinally watertight due to low capacitance filling material and transversally watertight due to a multi-layer sheath.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
OF	filling of the cabled assembly with low capacitance filling material
(L)2Y	laminated sheath made of polyethylene
D	screen made of copper wires
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H145)	maximum mutual capacitance value at 800 Hz, 145 nF/km
rk	reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2YOF(L)2YDB2Y from 10x... to 200x...

- Use www.bayka.de or this QR-Code for our full portfolio:



Edition: 05/2016

BayRail® - Signalling cables

AJ-2YOF(L)2YDB2Y - core-stranded, filled, (H115) / (H145)

...x1x1,8 acc. to DB TL 416.0113



- Outer sheath: PE, black
- Steel tape armouring
- Concentric copper wires
- Al-laminated sheath: PE, black
- Core filled
- Core insulation: PE (pilot core blue, other cores natural)
- Solid copper conductor



Standards

Technical specifications 416.0113,
Engineering specifications 416.0116,
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,8
Conductor resistance (pair of cores) Ω/km	≤ 7,2
Insulation resistance GΩxkm	≥ 1,5
Mutual capacitance at 800 Hz nF/km	≤ 145
For the central core nF/km	≤ 155
Alternating voltage test 50 Hz	
Core-core Veff	2500
Continuous operating voltage	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

The cables are longitudinally watertight due to low capacitance filling material and transversally watertight due to a multi-layer sheath.

Type Designation Codes

- AJ** outdoor cable with inductive protection
- 2Y** insulating cover made of polyethylene (PE)
- OF** filling of the cabled assembly with low capacitance filling material
- (L)2Y** laminated sheath made of polyethylene
- D** screen made of copper wires
- B** armouring
- 2Y** outer protective sheath made of PE
- S** signalling cable
- (H145)** maximum mutual capacitance value at 800 Hz, 145 nF/km
- rk** reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2YOF(L)2YDB2Y from 10x... to 160x...
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2YOF(L)2YB2Y - core-stranded, filled, (H95)
 ...x1x1,4 acc. to DB TL 416.0114



Standards

Technical specifications 416.0114,
 Engineering specifications 416.0116,
 Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance (pair of cores) Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 1,5
Mutual capacitance at 800 Hz nF/km	≤ 95
For the central core nF/km	≤ 105
Alternating voltage test 50 Hz	
Core-core Veff	2500
Continuous operating voltage	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

The cables are longitudinally watertight due to low capacitance filling material and transversally watertight due to a multi-layer sheath.

Type Designation Codes

- A** outdoor cable
- 2Y** insulating cover made of polyethylene (PE)
- OF** filling of the cabled assembly with low capacitance filling material
- (L)2Y** laminated sheath made of polyethylene
- B** armouring
- 2Y** outer protective sheath made of PE
- S** signalling cable
- (H95)** maximum mutual capacitance value at 800 Hz, 95 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2YOF(L)2YB2Y from 10x... to 50x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2Y0F(L)2YB2Y - core-stranded, filled, (H95)

...x1x1,8 acc. to DB TL 416.0114



Standards

Technical specifications 416.0114,
Engineering specifications 416.0116,
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,8
Conductor resistance (pair of cores) Ω/km	≤ 7,2
Insulation resistance GΩxkm	≥ 1,5
Mutual capacitance at 800 Hz nF/km	≤ 95
For the central core nF/km	≤ 105
Alternating voltage test 50 Hz	
Core-core Veff	2500
Continuous operating voltage	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

The cables are longitudinally watertight due to low capacitance filling material and transversally watertight due to a multi-layer sheath.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
0F	filling of the cabled assembly with low capacitance filling material
(L)2Y	laminated sheath made of polyethylene
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H95)	maximum mutual capacitance value at 800 Hz, 95 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y0F(L)2YB2Y from 10x... to 50x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

AJ-2YOF(L)2YDB2Y - core-stranded, filled, (H95)

...x1x1,4 acc. to DB TL 416.0114



Standards

Technical specifications 416.0114,
Engineering specifications 416.0116,
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance (pair of cores) Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 1,5
Mutual capacitance at 800 Hz nF/km	≤ 95
For the central core nF/km	≤ 105
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Continuous operating voltage	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

The cables are longitudinally watertight due to low capacitance filling material and transversally watertight due to a multi-layer sheath.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
OF	filling of the cabled assembly with low capacitance filling material
(L)2Y	laminated sheath made of polyethylene
D	screen made of copper wires
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H95)	maximum mutual capacitance value at 800 Hz, 95 nF/km
rk	reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2YOF(L)2YDB2Y from 10x... to 50x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

AJ-2YOF(L)2YDB2Y - core-stranded, filled, (H95)

...x1x1,8 acc. to DB TL 416.0114



Standards

Technical specifications 416.0114,
Engineering specifications 416.0116,
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,8
Conductor resistance (pair of cores) Ω/km	≤ 7,2
Insulation resistance GΩxkm	≥ 1,5
Mutual capacitance at 800 Hz nF/km	≤ 95
For the central core nF/km	≤ 105
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Continuous operating voltage	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

The cables are longitudinally watertight due to low capacitance filling material and transversally watertight due to a multi-layer sheath.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
OF	filling of the cabled assembly with low capacitance filling material
(L)2Y	laminated sheath made of polyethylene
D	screen made of copper wires
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H95)	maximum mutual capacitance value at 800 Hz, 95 nF/km
rk	reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2YOF(L)2YDB2Y from 10x... to 50x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2Y(L)2YB2Y - quad stranded, (H45)

...x4x0,9 acc. to DB TL 416.0115



- Outer sheath: PE, black
- Steel tape armouring
- Al-laminated sheath: PE, black
- Core insulation: PE
- Core twisted to quads (pilot quad with blue plastic helix)
- Solid copper conductor



Standards

Technical specifications 416.0115,
Engineering specifications 416.0116,
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance (pair of cores) Ω/km	≤ 56,6
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 45
For the central quad nF/km	≤ 50
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
(L)2Y	laminated sheath made of polyethylene
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H45)	maximum mutual capacitance value at 800 Hz, 45 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y(L)2YB2Y from 1x... to 40x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2Y(L)2YB2Y - quad stranded, (H45)

...x4x1,4 acc. to DB TL 416.0115



- Outer sheath: PE, black
- Steel tape armouring
- Al-laminated sheath: PE, black
- Core insulation: PE
- Core twisted to quads (pilot quad with blue plastic helix)
- Solid copper conductor



Standards

Technical specifications 416.0115,
Engineering specifications 416.0116,
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance (pair of cores) Ω/km	≤ 23,4
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 45
For the central quad nF/km	≤ 50
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
(L)2Y	laminated sheath made of polyethylene
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H45)	maximum mutual capacitance value at 800 Hz, 45 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y(L)2YB2Y from 1x... to 40x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

AJ-2Y(L)2YDB2Y - quad stranded, (H45)

...x4x1,4 acc. to DB TL 416.0115



Standards

Technical specifications 416.0115,
Engineering specifications 416.0116,
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance (pair of cores) Ω/km	≤ 23,4
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 45
For the central quad nF/km	≤ 50
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
(L)2Y	laminated sheath made of polyethylene
D	screen made of copper wires
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H45)	maximum mutual capacitance value at 800 Hz, 45 nF/km
rk	reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2Y(L)2YDB2Y from 3x... to 40x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2Y(L)2Y2YV / A-2Y(L)2Y2YB2Y / AJ-2Y(L)2Y2YDB2Y - quad and core-stranded
 ...x1x0,9 / 1,4 / 1,8 acc. to DB TL 416.0118



- Outer sheath: PE, black
- Steel tape armouring (2 tapes 0,5 or 2 tapes 0,8)
- Concentric copper wires
- Inner sheath: PE, black
- Core insulation: PE (pilot core blue, other cores natural)
- Solid copper conductor
- AI-laminated sheath: PE, black
- Core insulation: PE, cores twisted to quads
- Solid copper conductor



Standards

Technical specifications 416.0118,
 Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9	1,4	1,8
Conductor resistance Ω/km	≤ 28,9	≤ 11,9	≤ 7,2
Insulation resistance GΩxkm	≥ 10	≥ 10	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 120	≤ 120	≤ 120
Quads			
Conductor loop resistance Ω/km	≤ 56,6	≤ 23,4	
Insulation resistance GΩxkm	≥ 10	≥ 10	
Mutual capacitance at 800 Hz nF/km	≤ 45	≤ 45	
For 1x4, 3x4, and/or central quad (in the first layer, only 1 quad), ≤ 52 nF applies			
Capacitive couplings at 800 Hz pF/500m			
K ₁	≤ 650	≤ 650	
C9-12 neighbouring quads	≤ 500	≤ 500	
C9-12 quads next to neighbouring quads	≤ 150	≤ 150	
ea1/2	≤ 1300	≤ 1300	
Surge impedance at 40 kHz Ω	130 ±12 %	130 ±12 %	
Wave attenuation at 40 kHz dB/km	≤ 2,6	≤ 1,5	
Near-end crosstalk attenuation at 40 kHz (average value/min. single value) dB			
In the quad	≥65/60	≥65/60	
Neighbouring quads	≥65/60	≥65/60	
Quads next to neighbouring quads	≥70/60	≥70/60	
Quads in neighbouring layer	≥75/65	≥75/65	
Alternating voltage test 50 Hz			
Core/core, core/screen Veff		2500	
Temperature ranges			
During laying, installing °C		-10 to +60	
Before and after laying, installing °C		-40 to +60	

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated. The combined signalling cables are suitable:

- for special use in safety installations
- for energy transfer in a cable, especially when, for the star quads, high symmetry with one another is required against external interferences and against earth potential, as is called for by AF and digital transmission.
- for transmission of direct current at an operating voltage of ≤ 600 V or of alternating currents ≤ 420 Veff.
- for especially long railway control distances during low-frequency (AF) or digital transmission.
- for earthing the cable screen on both sides according to the relevant requirements of DB AG.

The cables should be used where they provide benefits in a technical and/or economical sense.

Type Designation Codes

- A** outdoor cable
- AJ** outdoor cable with inductive protection
- 2Y** conductor insulation, sheath made of PE
- (L)2Y** laminated sheath made of polyethylene
- D** screen made of copper wires
- B** armouring
- 2YV** outer sheath made from PE, reinforced
- S** signalling cable
- rk** reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- AJ-2Y(L)2Y2YDB2Y 1x4x0,9 + 4x1x1,4 S to
- AJ-2Y(L)2Y2YDB2Y 7x4x1,4 + 10x1x1,8 S

www.bayka.de



Edition: 05/2016

BayRail® - Signalling cables

A-2Y2YV - core-stranded, (H115) / (H145), reinforced outer sheath

...x1x0,9 acc. to DB TL 416.0113 (until 2007)



Standards

Technical specifications 416.0113, edition 1.1 - 2007 *),
Engineering specifications 416.0116, edition 1.1 - 2007 *),
Bayka BayRail® company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	0,9
Conductor resistance Ω/km	≤ 28,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 115
For the central core nF/km	≤ 120
Alternating voltage test 50 Hz Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
2YV	outer sheath made of polyethylene, reinforced
S	signalling cable
(H115)	maximum mutual capacitance value at 800 Hz, 115 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y2YV 50x1x0,9 S (H115) - 2x1x0,9 to 200x1x0,9

- Use www.bayka.de or this QR-Code for our full portfolio:



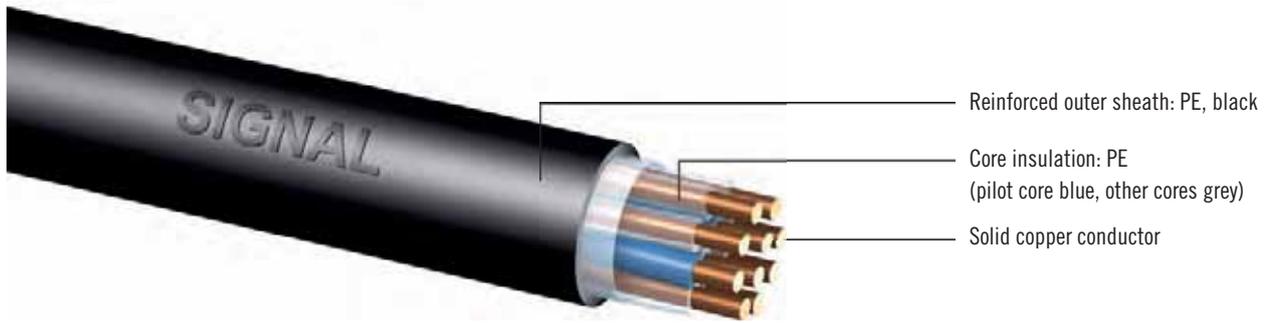
*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

A-2Y2YV - core-stranded, (H115) / (H145), reinforced outer sheath

...x1x1,4 acc. to DB TL 416.0113 (until 2007)



- Reinforced outer sheath: PE, black
- Core insulation: PE
(pilot core blue, other cores grey)
- Solid copper conductor



similar to the illustration



Standards

Technical specifications 416.0113, edition 1.1 - 2007 *),
Engineering specifications 416.0116, edition 1.1 - 2007 *),
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive)
and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation
No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 145
For the central core nF/km	≤ 155
Alternating voltage test 50 Hz	
Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

- A** outdoor cable
- 2Y** insulating cover made of polyethylene (PE)
- 2YV** outer sheath made of polyethylene, reinforced
- S** signalling cable
- (H115)** maximum mutual capacitance value at 800 Hz,
115 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y2YV 50x1x1,4 S (H145) - 4x1x1,4 to 200x1x1,4

- Use www.bayka.de or this QR-Code for our full portfolio:



*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

A-2Y2YV - core-stranded, (H115) / (H145), reinforced outer sheath

...x1x1,8 acc. to DB TL 416.0113 (until 2007)



Standards

Technical specifications 416.0113, edition 1.1 - 2007 *),
Engineering specifications 416.0116, edition 1.1 - 2007 *),
Bayka BayRail® company standard.

The cables are in compliance with EU LVD (Low Voltage Directive)
and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation
No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	1,8
Conductor resistance Ω/km	≤ 7,2
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 145
For the central core nF/km	≤ 155
Alternating voltage test 50 Hz Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
2YV	outer sheath made of polyethylene, reinforced
S	signalling cable
(H115)	maximum mutual capacitance value at 800 Hz, 115 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y2YV 50x1x1,8 S (H115) - 4x1x1,8 to 200x1x1,8

- Use www.bayka.de or this QR-Code for our full portfolio:

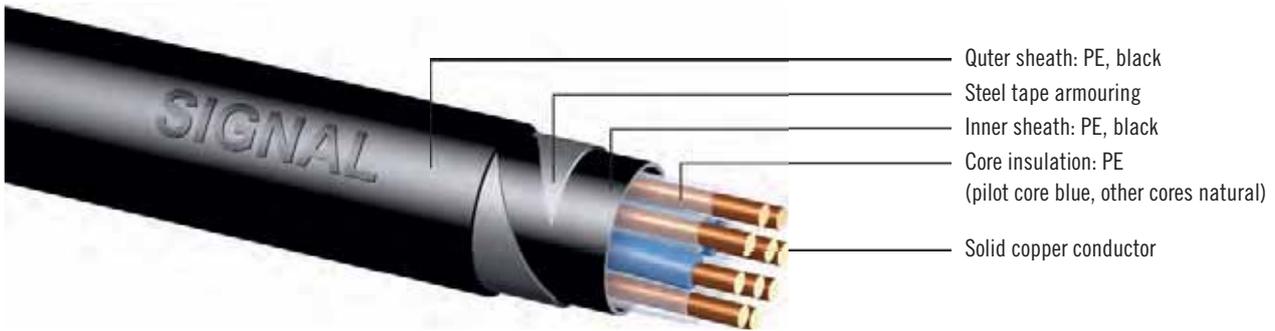


*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

A-2Y2YB2Y - core-stranded, (H115) / (H145), armoured, resp. with inductive protection
 ...x1x0,9 acc. to DB TL 416.0113 (until 2007)



- Outer sheath: PE, black
- Steel tape armouring
- Inner sheath: PE, black
- Core insulation: PE
(pilot core blue, other cores natural)
- Solid copper conductor



similar to the illustration



Standards

Technical specifications 416.0113, edition 1.1 - 2007 *),
 Engineering specifications 416.0116, edition 1.1 - 2007 *),
 Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive)
 and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation
 No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	0,9
Conductor resistance Ω/km	≤ 28,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 115
For the central core nF/km	≤ 120
Alternating voltage test 50 Hz	
Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

- A** outdoor cable
- 2Y** insulating cover made of polyethylene (PE)
- 2Y** inner sheath made of polyethylene, reinforced
- B** armouring
- 2Y** outer protective sheath made of PE
- S** signalling cable
- (H115)** maximum mutual capacitance value at 800 Hz, 115 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y2YB2Y 50x1x0,9 S (H115) - 2x1x0,9 to 140x1x0,9

- Use www.bayka.de or this QR-Code for our full portfolio:

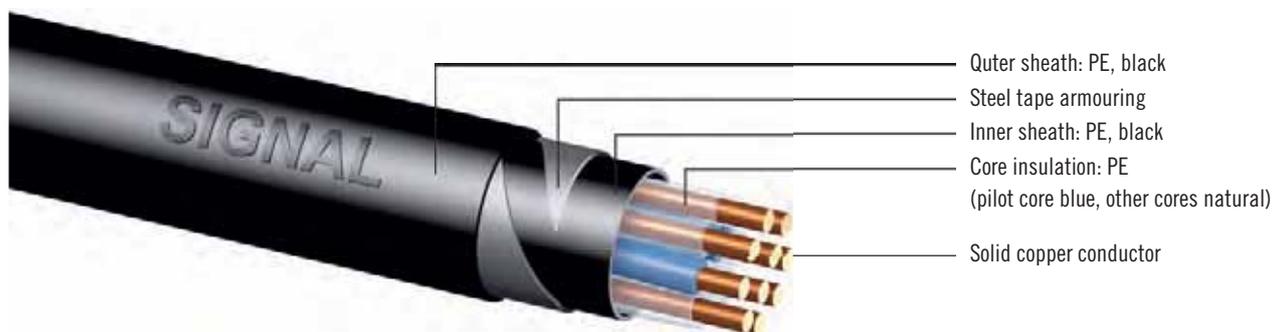


*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

A-2Y2YB2Y - core-stranded, (H115) / (H145), armoured, resp. with inductive protection
 ...x1x1,4 acc. to DB TL 416.0113 (until 2007)



Standards

Technical specifications 416.0113, edition 1.1 - 2007 *),
 Engineering specifications 416.0116, edition 1.1 - 2007 *),
 Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive)
 and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation
 No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 145
For the central core nF/km	≤ 155
Alternating voltage test 50 Hz Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
2Y	inner sheath made of polyethylene, reinforced
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H145)	maximum mutual capacitance value at 800 Hz, 145 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y2YB2Y 50x1x1,4 S (H145) - 4x1x1,4 to 60x1x1,4

- Use www.bayka.de or this QR-Code for our full portfolio:

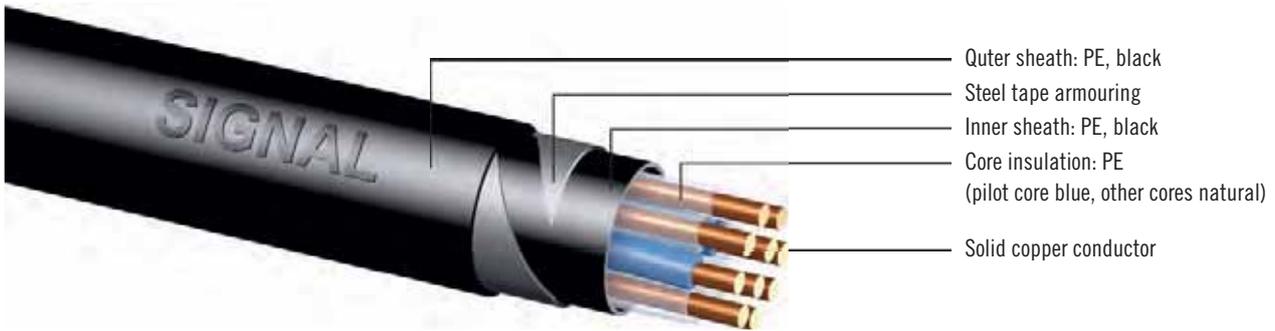


*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

A-2Y2YB2Y - core-stranded, (H115) / (H145), armoured, resp. with inductive protection
 ...x1x1,8 acc. to DB TL 416.0113 (until 2007)



similar to the illustration



Standards

Technical specifications 416.0113, edition 1.1 - 2007 *),
 Engineering specifications 416.0116, edition 1.1 - 2007 *),
 Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive)
 and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation
 No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	1,8
Conductor resistance Ω/km	≤ 7,2
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 145
For the central core nF/km	≤ 155
Alternating voltage test 50 Hz	
Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
2Y	inner sheath made of polyethylene, reinforced
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H145)	maximum mutual capacitance value at 800 Hz, 145 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y2YB2Y 50x1x0,9 S (H115) - 4x1x1,8 to 40x1x1,8

- Use www.bayka.de or this QR-Code for our full portfolio:

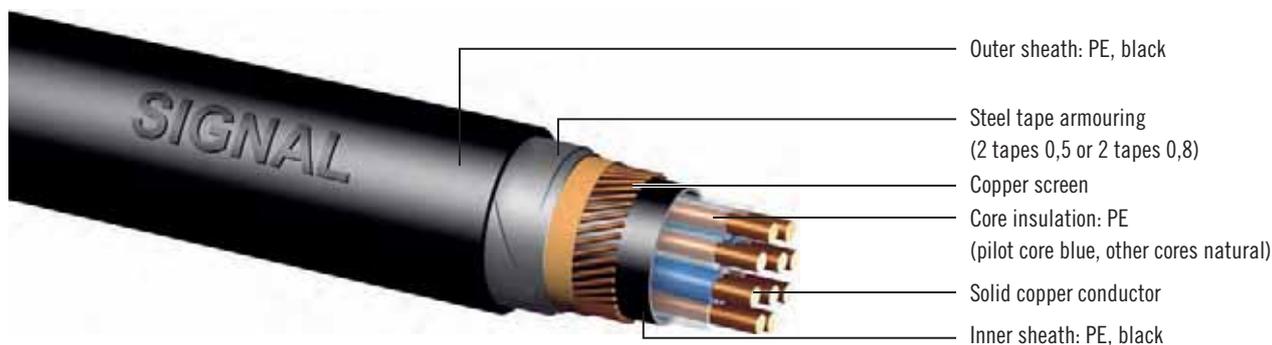


*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

AJ-2Y2YDB2Y - core-stranded, (H115) / (H145), armoured, resp. with inductive protection
 ...x1x0,9 acc. to DB TL 416.0113 (until 2007)



similar to the illustration



Standards

Technical specifications 416.0113, edition 1.1 - 2007 *),
 Engineering specifications 416.0116, edition 1.1 - 2007 *),
 Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive)
 and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation
 No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	0,9
Conductor resistance Ω/km	≤ 28,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 115
For the central core nF/km	≤ 120
Alternating voltage test 50 Hz Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
2Y	inner sheath made of polyethylene, reinforced
D	screen made of copper wires
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H115)	maximum mutual capacitance value at 800 Hz, 115 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2Y2YDB2Y 50x1x0,9 S (H115) - 10x1x0,9 to 200x1x0,9

- Use www.bayka.de or this QR-Code for our full portfolio:

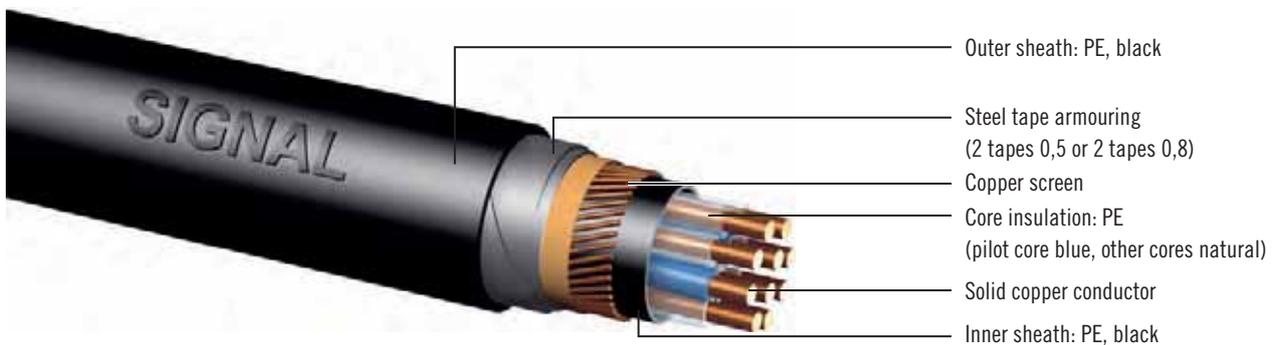


*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

AJ-2Y2YDB2Y - core-stranded, (H115) / (H145), armoured, resp. with inductive protection
 ...x1x1,4 acc. to DB TL 416.0113 (until 2007)



similar to the illustration



Standards

Technical specifications 416.0113, edition 1.1 - 2007 *),
 Engineering specifications 416.0116, edition 1.1 - 2007 *),
 Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive)
 and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation
 No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 145
For the central core nF/km	≤ 155
Alternating voltage test 50 Hz	
Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
2Y	inner sheath made of polyethylene, reinforced
D	screen made of copper wires
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H145)	maximum mutual capacitance value at 800 Hz, 145 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2Y2YDB2Y 50x1x1,4 S (H145) - 10x1x1,4 to 200x1x1,4

- Use www.bayka.de or this QR-Code for our full portfolio:

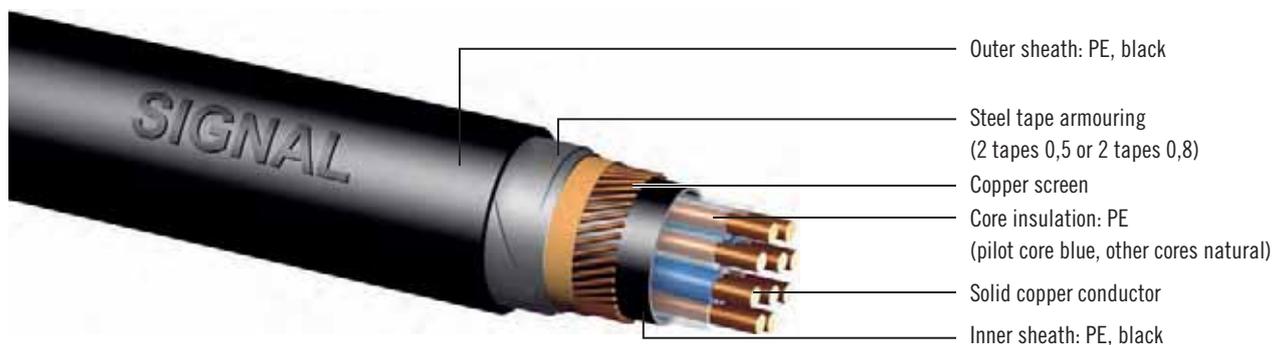


*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

AJ-2Y2YDB2Y - core-stranded, (H115) / (H145), armoured, resp. with inductive protection
 ...x1x1,8 acc. to DB TL 416.0113 (until 2007)



Standards

Technical specifications 416.0113, edition 1.1 - 2007 *),
 Engineering specifications 416.0116, edition 1.1 - 2007 *),
 Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive)
 and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation
 No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	1,8
Conductor resistance Ω/km	≤ 7.2
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km For the central core nF/km	≤ 145 ≤ 155
Alternating voltage test 50 Hz Core-core Veff	2500
Operating voltage peak value Direct current V Alternating current Veff	≤ 600 ≤ 420
Temperature range °C During laying, installing Before and after laying, installing	-10 to +60 -40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
2Y	inner sheath made of polyethylene, reinforced
D	screen made of copper wires
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H145)	maximum mutual capacitance value at 800 Hz, 145 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2Y2YDB2Y 50x1x1,8 S (H115) - 10x1x1,8 to 200x1x1,8

- Use www.bayka.de or this QR-Code for our full portfolio:



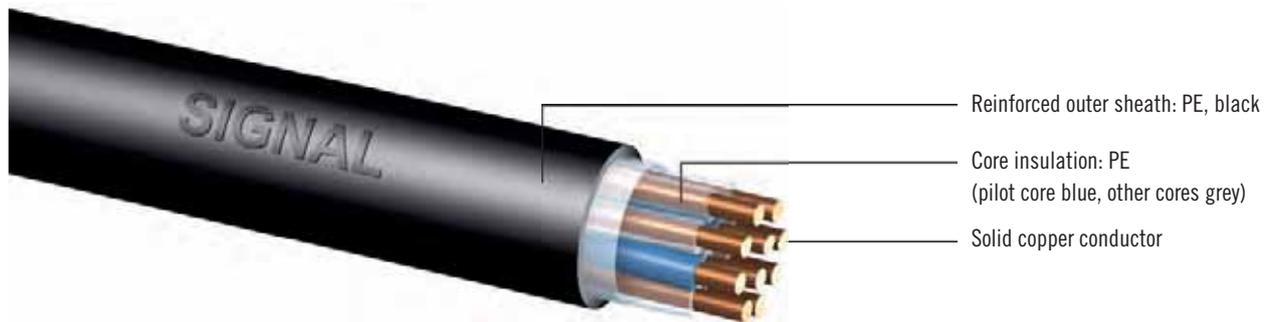
*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

A-2Y2YV - core-stranded, (H95), reinforced outer sheath

...x1x1,4 acc. to DB TL 416.0114 (until 2007)



similar to the illustration



Standards

Technical specifications 416.0114, edition 1.1 - 2007 *), Engineering specifications 416.0116, edition 1.1 - 2007 *), Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 95
For the central core nF/km	≤ 105
Alternating voltage test 50 Hz	
Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

- A** outdoor cable
- 2Y** insulating cover made of polyethylene (PE)
- 2YV** outer sheath made of polyethylene, reinforced
- S** signalling cable
- (H95)** maximum mutual capacitance value at 800 Hz, 95 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y2YV 10x1x1,4 S (H95) - 10x1x1,4 to 50x1x1,4

- Use www.bayka.de or this QR-Code for our full portfolio:



*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

A-2Y2YV - core-stranded, (H95), reinforced outer sheath

...x1x1,8 acc. to DB TL 416.0114 (until 2007)



Reinforced outer sheath: PE, black

Core insulation: PE
(pilot core blue, other cores grey)

Solid copper conductor



Standards

Technical specifications 416.0114, edition 1.1 - 2007 *),
Engineering specifications 416.0116, edition 1.1 - 2007 *),
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive)
and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation
No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	1,8
Conductor resistance Ω/km	≤ 7.2
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 145
For the central core nF/km	≤ 155
Alternating voltage test 50 Hz Core-core Veff	2500
Operating voltage peak value Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
2YV	outer sheath made of polyethylene, reinforced
S	signalling cable
(H95)	maximum mutual capacitance value at 800 Hz, 95 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y2YV 10x1x1,8 S (H95) - 10x1x1,8 to 50x1x1,8

- Use www.bayka.de or this QR-Code for our full portfolio:



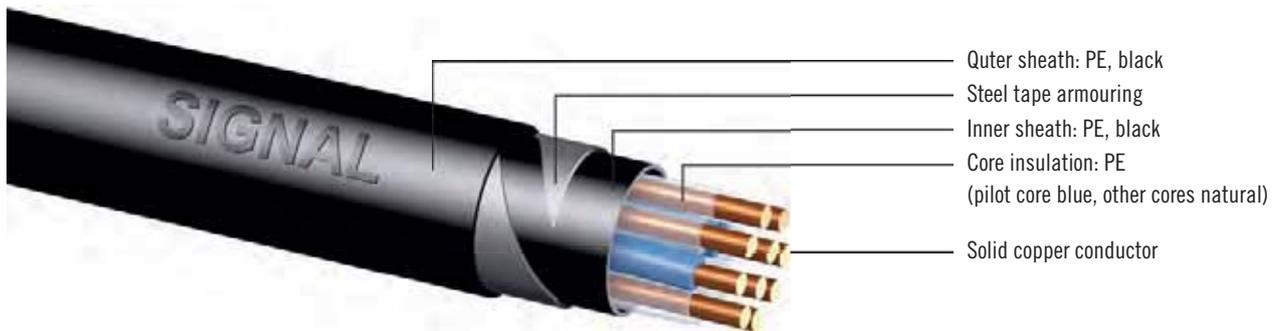
*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

A-2Y2YB2Y - core-stranded, (H95), armoured, resp. with inductive protection

...x1x1,4 acc. to DB TL 416.0114 (until 2007)



- Outer sheath: PE, black
- Steel tape armouring
- Inner sheath: PE, black
- Core insulation: PE (pilot core blue, other cores natural)
- Solid copper conductor



similar to the illustration



Standards

Technical specifications 416.0114, edition 1.1 - 2007 *), Engineering specifications 416.0116, edition 1.1 - 2007 *), Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 95
For the central core nF/km	≤ 105
Alternating voltage test 50 Hz	
Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

- A** outdoor cable
- 2Y** insulating cover made of polyethylene (PE)
- 2Y** outer sheath made of polyethylene, reinforced
- B** armouring
- 2Y** outer protective sheath made of PE
- S** signalling cable
- (H95)** maximum mutual capacitance value at 800 Hz, 95 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y2YB2Y 10x1x1,4 S (H95) - 10x1x1,4 to 20x1x1,4

- Use www.bayka.de or this QR-Code for our full portfolio:



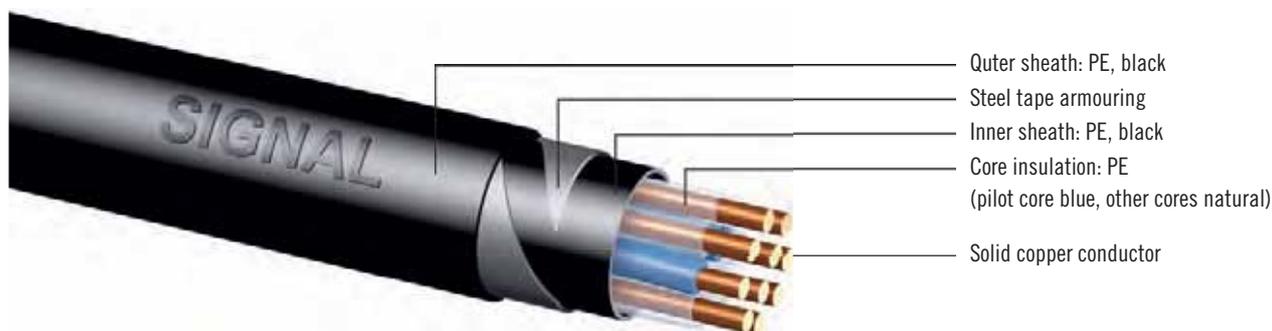
*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

A-2Y2YB2Y - core-stranded, (H95), armoured, resp. with inductive protection

...x1x1,8 acc. to DB TL 416.0114 (until 2007)



Standards

Technical specifications 416.0114, edition 1.1 - 2007 *), Engineering specifications 416.0116, edition 1.1 - 2007 *), Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	1,8
Conductor resistance Ω/km	≤ 7.2
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 95
For the central core nF/km	≤ 105
Alternating voltage test 50 Hz Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
2Y	outer sheath made of polyethylene, reinforced
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H95)	maximum mutual capacitance value at 800 Hz, 95 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y2YB2Y 10x1x1,8 S (H95) - 10x1x1,8 to 14x1x1,8

- Use www.bayka.de or this QR-Code for our full portfolio:

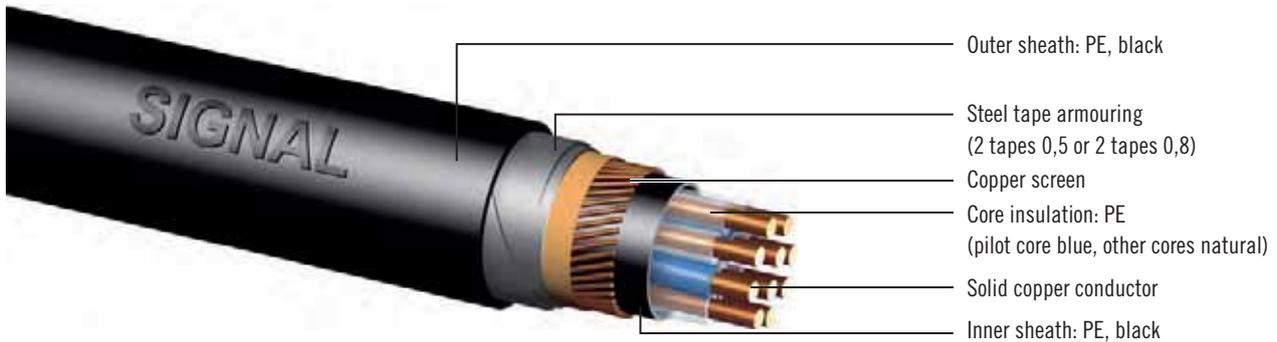


*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

AJ-2Y2YDB2Y - core-stranded, (H95), armoured, resp. with inductive protection
 ...x1x1,4 acc. to DB TL 416.0114 (until 2007)



similar to the illustration



Standards

Technical specifications 416.0114, edition 1.1 - 2007 *),
 Engineering specifications 416.0116, edition 1.1 - 2007 *),
 Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive)
 and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation
 No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 95
For the central core nF/km	≤ 105
Alternating voltage test 50 Hz	
Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
2Y	outer sheath made of polyethylene, reinforced
D	screen made of copper wires
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H95)	maximum mutual capacitance value at 800 Hz, 95 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2Y2YDB2Y 10x1x1,4 S (H95) - 10x1x1,4 to 50x1x1,4

- Use www.bayka.de or this QR-Code for our full portfolio:



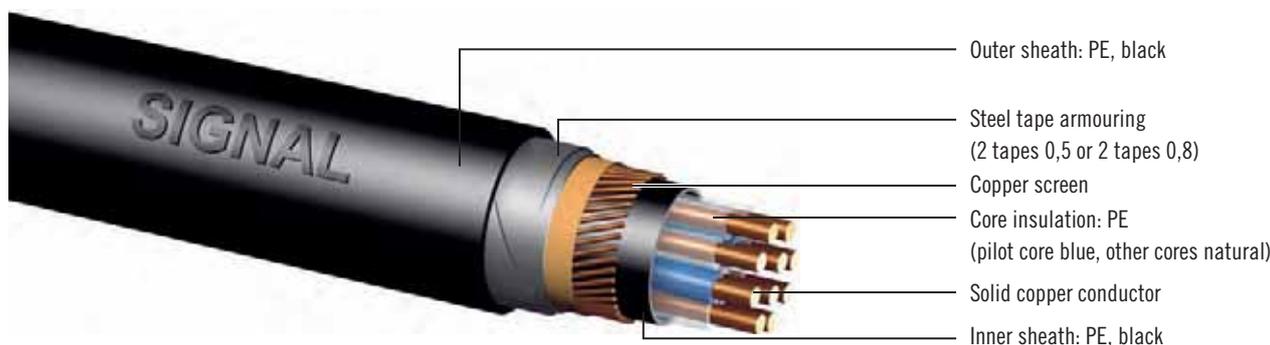
*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

AJ-2Y2YDB2Y - core-stranded, (H95), armoured, resp. with inductive protection

...x1x1,8 acc. to DB TL 416.0114 (until 2007)



Standards

Technical specifications 416.0114, edition 1.1 - 2007 *),
Engineering specifications 416.0116, edition 1.1 - 2007 *),
Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive)
and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation
No. 1907/2006 (REACH).

Technical Data

Conductor diameter mm	1,8
Conductor resistance Ω/km	≤ 7.2
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 95
For the central core nF/km	≤ 105
Alternating voltage test 50 Hz Core-core Veff	2500
Operating voltage peak value	
Direct current V	≤ 600
Alternating current Veff	≤ 420
Temperature range °C	
During laying, installing	-10 to +60
Before and after laying, installing	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
2Y	outer sheath made of polyethylene, reinforced
D	screen made of copper wires
B	armouring
2Y	outer protective sheath made of PE
S	signalling cable
(H95)	maximum mutual capacitance value at 800 Hz, 95 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2Y2YDB2Y 10x1x1,8 S (H95) - 10x1x1,8 to 50x1x1,8

- Use www.bayka.de or this QR-Code for our full portfolio:



*)

In 2007, the technical specifications for unfilled, core-stranded signalling cables TL 416.0113 and 416.0114 were replaced by the technical specifications for filled, longitudinal and transverse watertight signalling cables. The Deutsche Bahn AG no longer uses the old, unfilled cables, the approval has expired.

BayRail® - Signalling cables

A-2YY - core-stranded, PVC sheath

...x1x0,9 acc. to DB Dlk 1.013.102y



Standards

Dlk 1.013.102y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance (pair of cores) Ω/km	≤ 28,9
Insulation resistance GΩxkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 100
For the central cores and the cores in the outer layer	≤ 110
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +60
Before and after laying, installing °C	-30 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
Y	outer sheath made of PVC
S	signalling cable
(H100)	maximum mutual capacitance value at 800 Hz, 100 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- A-2YY from 2x... to 200x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2YY - core-stranded, PVC sheath

...x1x1,4 acc. to DB Dlk 1.013.102y



Standards

Dlk 1.013.102y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance (pair of cores) Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 120
For the central cores and the cores in the outer layer	≤ 130
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +60
Before and after laying, installing °C	-30 to +70

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
Y	outer sheath made of PVC
S	signalling cable
(H120)	maximum mutual capacitance value at 800 Hz, 120 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- A-2YY from 2x... to 200x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2YY - core-stranded, PVC sheath

...x1x1,8 acc. to DB Dlk 1.013.102y



Standards

Dlk 1.013.102y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,8
Conductor resistance (pair of cores) Ω/km	≤ 7,2
Insulation resistance GΩxkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 130
For the central cores and the cores in the outer layer	≤ 140
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C	-30 to +70

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
Y	outer sheath made of PVC
S	signalling cable
(H130)	maximum mutual capacitance value at 800 Hz, 130 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- A-2YY from 4x... to 200x...

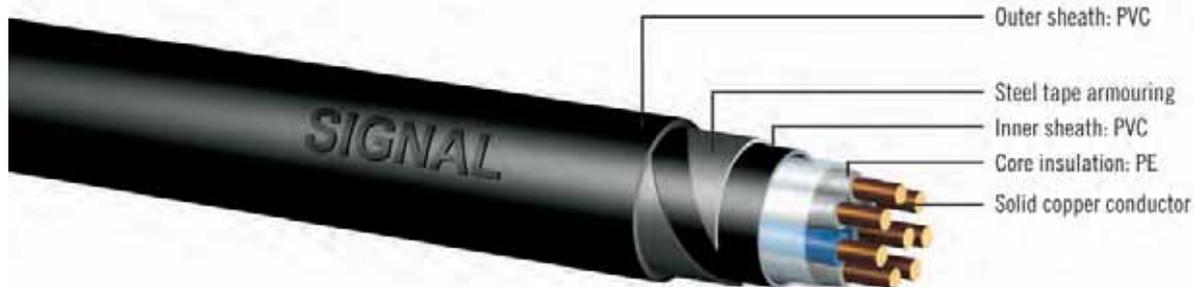
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2YYbY - core-stranded, armoured, PVC sheath

...x1x0,9 acc. to DB Dlk 1.013.102y



Standards

Dlk 1.013.102y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance Ω/km	≤ 28,9
Insulation resistance GΩxkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 100
For the central cores and the cores in the outer layer	≤ 110
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C	-30 to +70

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
Y	inner sheath made of PVC
b	armouring, one layer steel tape 0.3 mm (1B 0.3)
Y	outer sheath made of PVC
S	signalling cable
(H100)	maximum mutual capacitance value at 800 Hz, 100 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

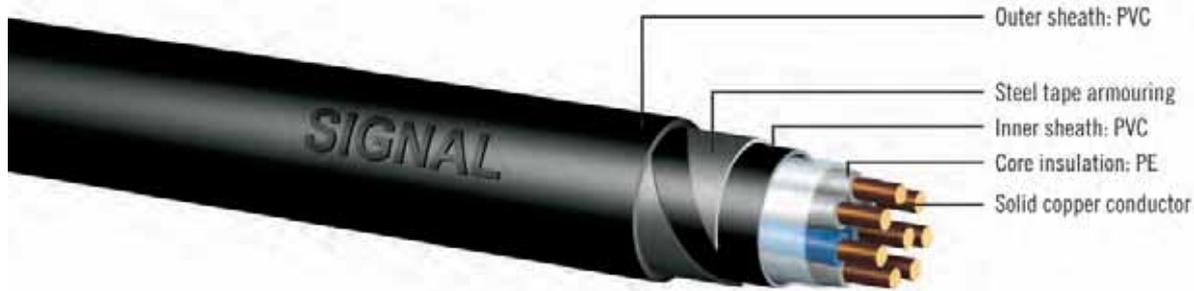
- A-2YYbY from 2x... to 200x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2YYbY - core-stranded, armoured, PVC sheath
 ...x1x1,4 acc. to DB Dlk 1.013.102y



Standards

Dlk 1.013.102y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 120
For the central cores and the cores in the outer layer	≤ 130
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C	-30 to +70

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
Y	inner sheath made of PVC
b	armouring, one layer steel tape 0.3 mm (1B 0.3)
Y	outer sheath made of PVC
S	signalling cable
(H120)	maximum mutual capacitance value at 800 Hz, 120 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- A-2YYbY from 2x... to 200x...

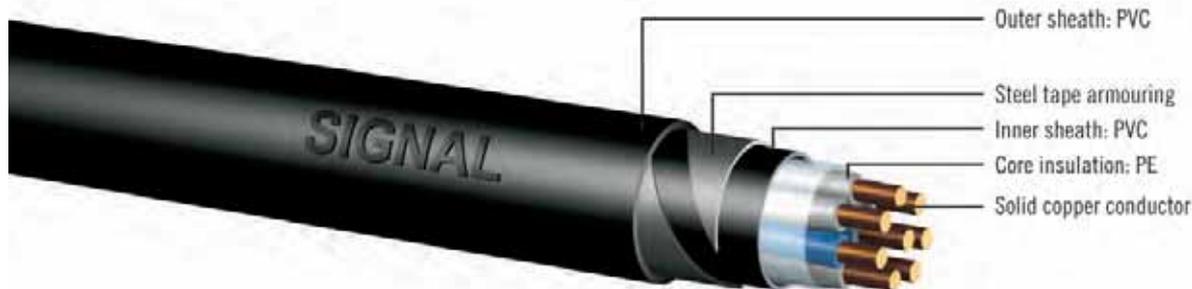
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2YYbY - core-stranded, armoured, PVC sheath

...x1x1,8 acc. to DB Dlk 1.013.102y



Standards

Dlk 1.013.102y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,8
Conductor resistance Ω/km	≤ 7,2
Insulation resistance GΩxkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 130
For the central cores and the cores in the outer layer	≤ 140
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C	-30 to +70

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
Y	inner sheath made of PVC
b	armouring, one layer steel tape 0.3 mm (1B 0.3)
Y	outer sheath made of PVC
S	signalling cable
(H130)	maximum mutual capacitance value at 800 Hz, 130 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- A-2YYbY from 4x... to 56x...

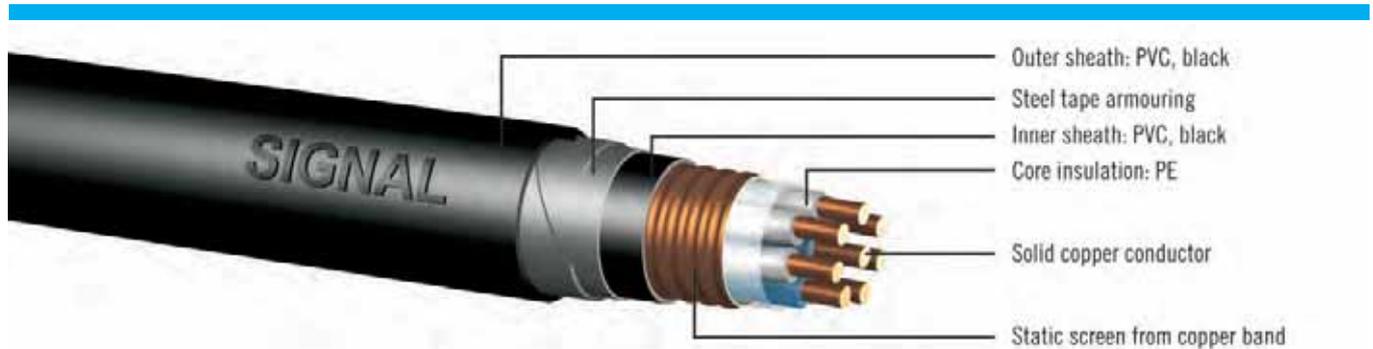
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2Y(St)YbY - core-stranded, screened, armoured, PVC sheath

...x4x0,9 acc. to DB Dlk 1.013.201y



Standards

Dlk 1.013.102y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance Ω/km	≤ 28,9
Insulation resistance GΩxkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 100
Capacitive couplings pF for 300 m at 800 Hz	
K ₁	≤ 400
K ₉₋₁₂	≤ 300
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C	-30 to +70

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
(St)	static screen
Y	inner sheath made of PVC
b	armouring, two layers steel tape 0.5 mm (2B 0.5) and/or 0.8 mm (2B 0.8))
Y	outer sheath made of PVC
S	signalling cable
(H45)	maximum mutual capacitance value at 800 Hz, 45 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- A-2Y(St)YbY from 1x... to 30x...

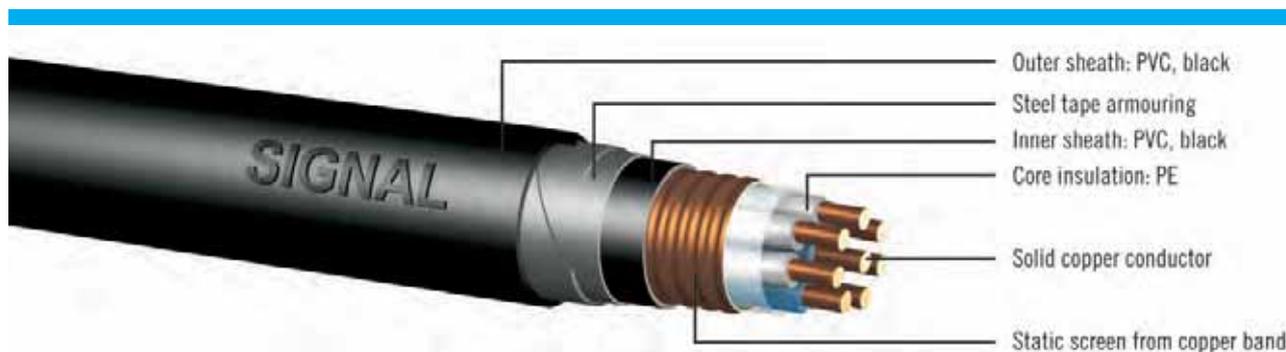
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2Y(St)YbY - core-stranded, screened, armoured, PVC sheath

...x4x1,4 acc. to DB Dlk 1.013.201y



Standards

Dlk 1.013.102y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω/km	≤ 23,4
Insulation resistance GΩxkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 50
Capacitive couplings pF for 300 m at 800 Hz	
K_1	≤ 400
K_{9-12}	≤ 300
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C	-30 to +70

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
(St)	static screen
Y	inner sheath made of PVC
b	armouring, two layers steel tape 0.5 mm (2B 0.5) and/or 0.8 mm (2B 0.8))
Y	outer sheath made of PVC
S	signalling cable
(H50)	maximum mutual capacitance value at 800 Hz, 50 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- A-2Y(St)YbY from 1x... to 30x...

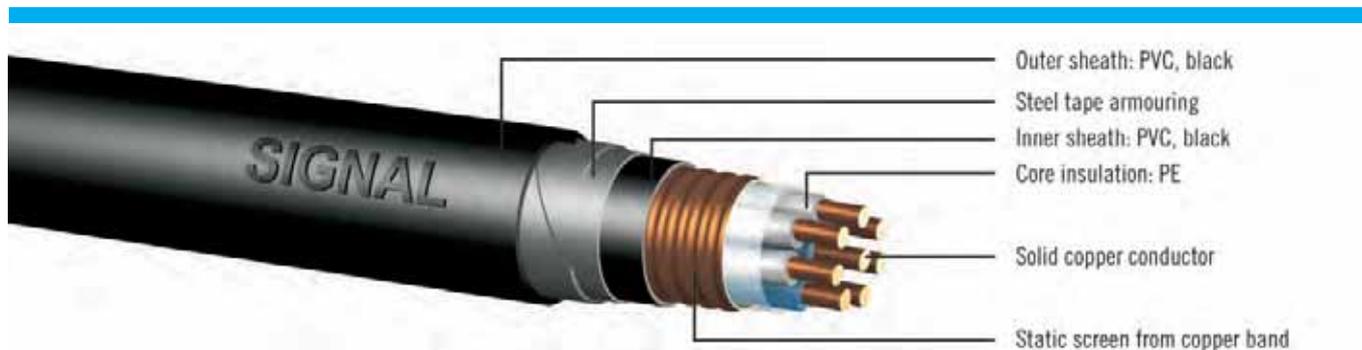
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

AJ-2Y(St)YbY - core-stranded, with inductive protection, PVC sheath

...x1x0,9 acc. to DB Dlk 1.013.102y



Standards

Dlk 1.013.102y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance Ω/km	≤ 28,9
Insulation resistance GΩxkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 100
For the central core nF/km	≤ 110
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C	-30 to +70

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
(St)	static screen
Y	inner sheath made of PVC
b	armouring, two layers steel tape 0.5 mm (2B 0.5) and/or 0.8 mm (2B 0.8))
Y	outer sheath made of PVC
S	signalling cable
(H100)	maximum mutual capacitance value at 800 Hz, 100 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- AJ-2Y(St)YbY from 8x... to 200x...

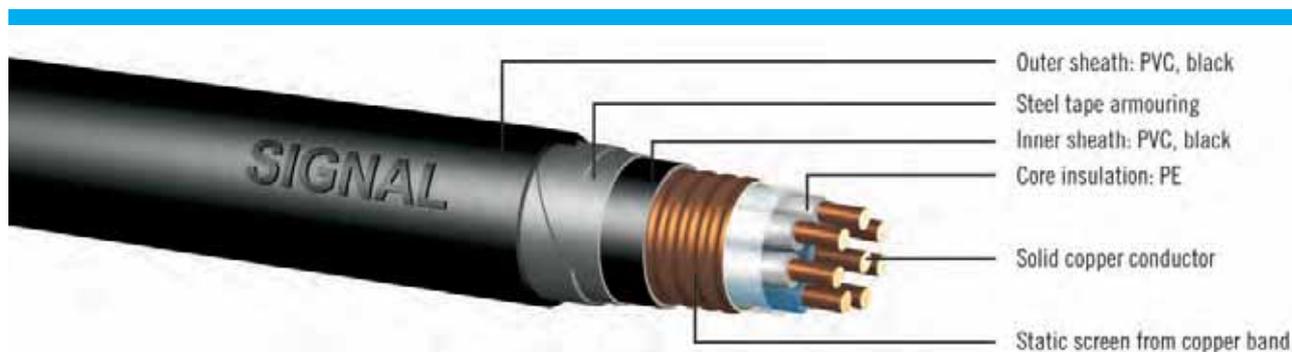
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

AJ-2Y(St)YbY - core-stranded, with inductive protection, PVC sheath

...x1x1,4 acc. to DB Dlk 1.013.102y



Standards

Dlk 1.013.102y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 120
For the central core nF/km	≤ 130
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C	-30 to +70

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
(St)	static screen
Y	inner sheath made of PVC
b	armouring, two layers steel tape 0.5 mm (2B 0.5) and/or 0.8 mm (2B 0.8))
Y	outer sheath made of PVC
S	signalling cable
(H120)	maximum mutual capacitance value at 800 Hz, 120 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- AJ-2Y(St)YbY from 8x... to 200x...

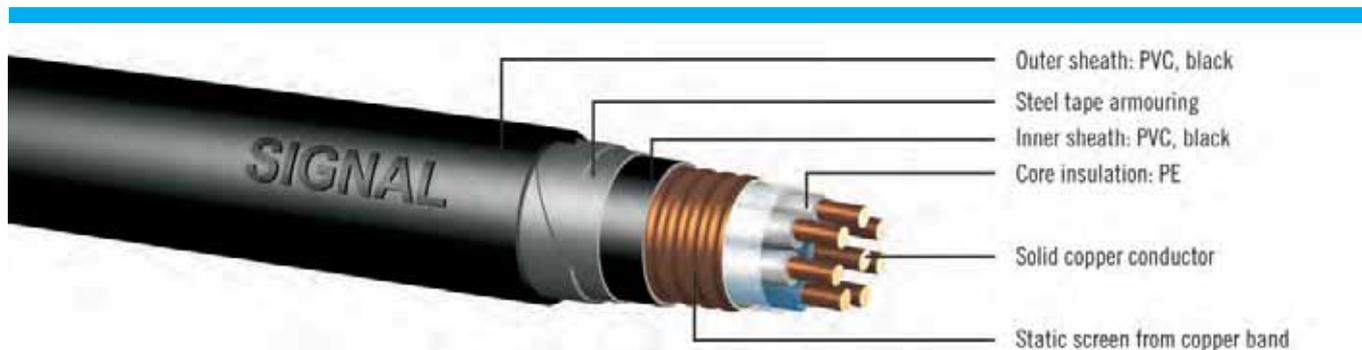
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

AJ-2Y(St)YbY - core-stranded, with inductive protection, PVC sheath

...x1x1,8 acc. to DB Dlk 1.013.102y



Standards

Dlk 1.013.102y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance Ω/km	≤ 7,2
Insulation resistance GΩxkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 130
For the central core nF/km	≤ 140
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C	-30 to +70

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
(St)	static screen
Y	inner sheath made of PVC
b	armouring, two layers steel tape 0.5 mm (2B 0.5) and/or 0.8 mm (2B 0.8))
Y	outer sheath made of PVC
S	signalling cable
(H120)	maximum mutual capacitance value at 800 Hz, 120 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- AJ-2Y(St)YbY from 4x... to 133x...

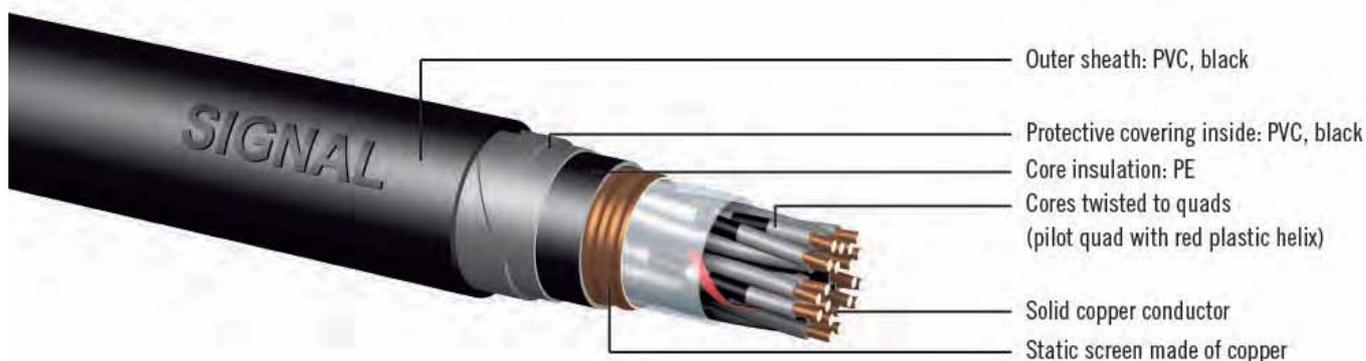
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

AJ-2Y(St)YbY - quad stranded, with inductive protection and PVC-sheath

...x4x0,9 acc. to DB Dlk 1.013.201y



Outer sheath: PVC, black

Protective covering inside: PVC, black

Core insulation: PE

Cores twisted to quads
(pilot quad with red plastic helix)

Solid copper conductor

Static screen made of copper



Standards

Dlk 1.013.201y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance Ω /km	$\leq 56,6$
Insulation resistance $G\Omega$ xkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 45
Capacitive couplings pF for 300 m at 800 Hz	
K_1	≤ 400
K_{9-12}	≤ 300
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C	-30 to +70

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
(St)	static screen
Y	inner sheath made of PVC
b	armouring, two layers steel tape 0.5 mm (2B 0.5) and/or 0.8 mm (2B 0.8)
Y	outer sheath made of PVC
S	signalling cable
(H45)	maximum mutual capacitance value at 800 Hz, 45 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2Y(St)YbY from 3x... to 40x...

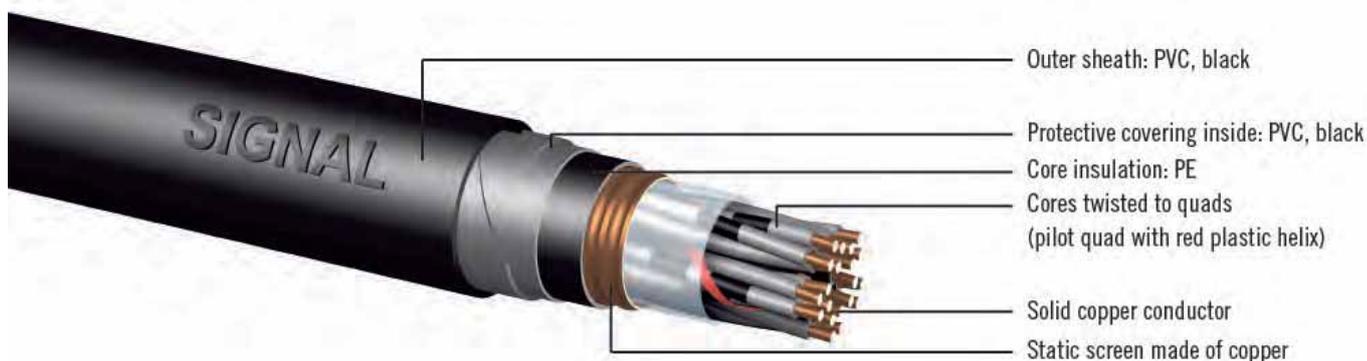
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

AJ-2Y(St)YbY - quad stranded, with inductive protection and PVC-sheath

...x4x1,4 acc. to DB Dlk 1.013.201y



Standards

Dlk 1.013.102y and/or DIN VDE 0816-part 2.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω/km	≤ 23,4
Insulation resistance GΩxkm	≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 50
Capacitive couplings pF for 300 m at 800 Hz	
K_1	≤ 400
K_{9-12}	≤ 300
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C	-30 to +70

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated.

Type Designation Codes

AJ	outdoor cable with inductive protection
2Y	insulating cover made of polyethylene (PE)
(St)	static screen
Y	inner sheath made of PVC
b	armouring, two layers steel tape 0.5 mm (2B 0.5) and/or 0.8 mm (2B 0.8))
Y	outer sheath made of PVC
S	signalling cable
(H50)	maximum mutual capacitance value at 800 Hz, 50 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- AJ-2Y(St)YbY from 3x... to 40x...

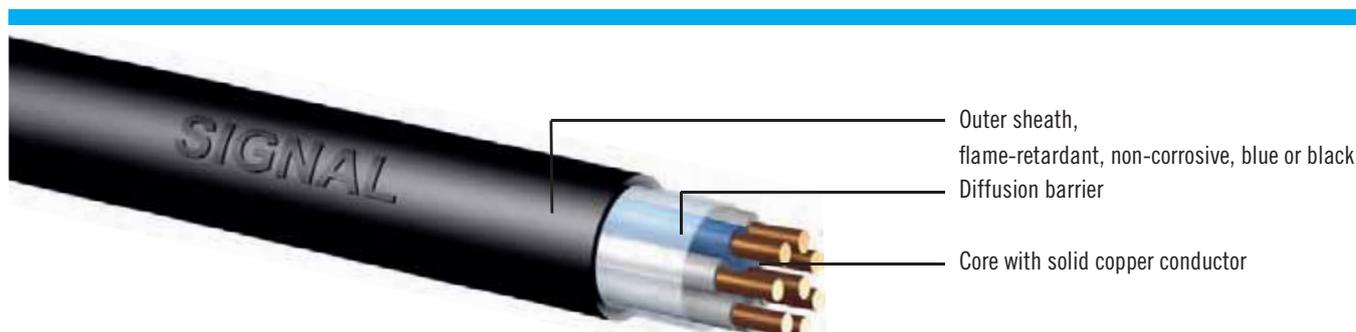
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-HHv - core-stranded, flame retardant, non corrosive, FRNC/LSOH

...x1x0,9 acc. to Bayka standard, based on DB Dlk 1.013.102y



Standards

Bayka company standard BayRail®, electrical properties based on Dlk 1.013.102y, flame propagation according to DIN VDE 0472, part 804, test method C, smoke density according to DIN VDE 0482, part 1034-2 (EN61034-2), corrosivity of fire gases according to DIN VDE 0482, part 267-2-2 (EN 50267-2-2), toxicity according to DIN VDE 0260, part 305 (EN50305), limit based on EN50306-1, 2 and 3 for hazard level: max. 5 (for insulation, extruded sheath, reinforcing outer sheath).

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance Ω/km	≤ 28,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km for cores in the inner layer	≤ 105 ≤ 110
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60
Integrated monitoring cores from 10x1 on	

Application

Signalling cable, optimised for installation, transversally water-tight, flame-retardant for railway control centres and surveillance systems, etc., suitable for installation in open air, in the ground, in cable tray channels, and for laying in tunnels and buildings.

The cable is halogen-free, flame-retardant, and with low smoke density, and therefore suitable for installation in areas with special hazards caused by fire propagation.

VDE approved and system-tested sleeves and conduits are available for this cable.

Type Designation Codes

A	outdoor cable
H	Core insulation halogen-free
Hv	outer sheath, reinforced, halogen-free, flame-retardant, cable with improved behaviour in the event of fire
S	signalling cable
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

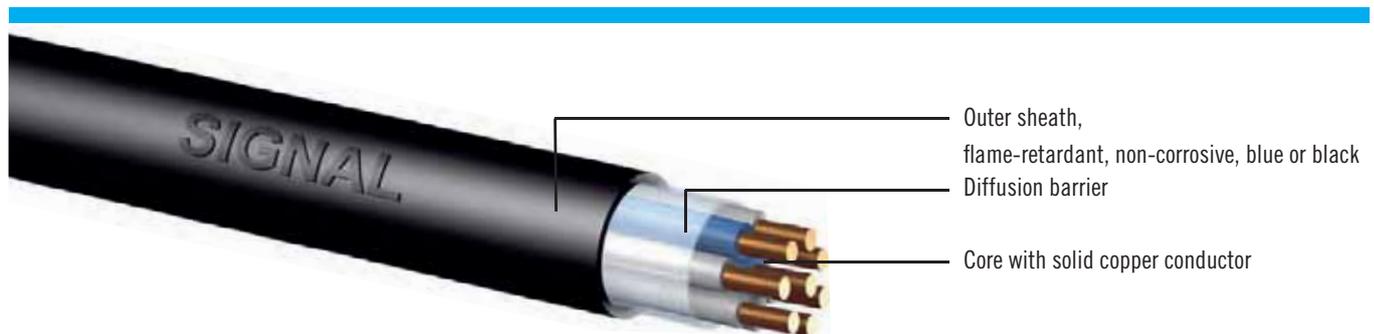
- A-HHV from 4x... to 200x...
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-HHv - core-stranded, flame retardant, non corrosive, FRNC/LSOH

...x1x1,4 acc. to DB Dlk 1.013.102y



Standards

Bayka company standard BayRail®, electrical properties based on Dlk 1.013.102y, flame propagation according to DIN VDE 0472, part 804, test method C, smoke density according to DIN VDE 0482, part 1034-2 (EN61034-2), corrosivity of fire gases according to DIN VDE 0482, part 267-2-2 (EN 50267-2-2), toxicity according to DIN VDE 0260, part 305 (EN50305), limit based on EN50306-1, 2 and 3 for hazard level: max. 5 (for insulation, extruded sheath, reinforcing outer sheath).

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω /km	$\leq 11,9$
Insulation resistance G Ω xkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 120
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60
Integrated monitoring cores from 10x1 on	

Application

Signalling cable, optimised for installation, transversally water-tight, flame-retardant for railway control centres and surveillance systems, etc., suitable for installation in open air, in the ground, in cable tray channels, and for laying in tunnels and buildings.

The cable is halogen-free, flame-retardant, and with low smoke density, and therefore suitable for installation in areas with special hazards caused by fire propagation.

VDE approved and system-tested sleeves and conduits are available for this cable.

Type Designation Codes

A	outdoor cable
H	core insulation halogen-free
Hv	outer sheath, reinforced, halogen-free, flame-retardant, cable with improved behaviour in the event of fire
S	signalling cable
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-HHV from 4x... to 200x...

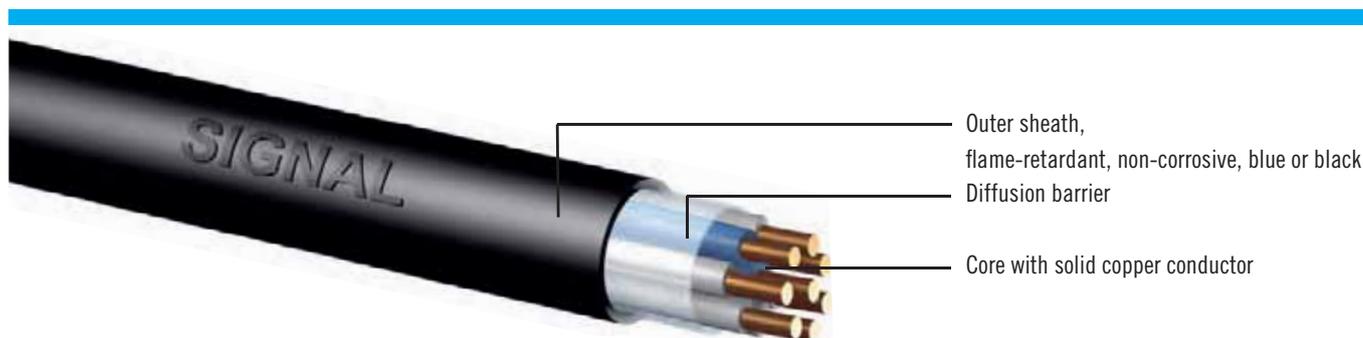
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-HHv - core-stranded, flame retardant, non corrosive, FRNC/LSOH

...x1x1,8 acc. to Bayka standard, based on DB Dlk 1.013.102y



similar to the illustration



Standards

Bayka company standard BayRail®, electrical properties based on Dlk 1.013.102y, flame propagation according to DIN VDE 0472, part 804, test method C, smoke density according to DIN VDE 0482, part 1034-2 (EN61034-2), corrosivity of fire gases according to DIN VDE 0482, part 267-2-2 (EN 50267-2-2), toxicity according to DIN VDE 0260, part 305 (EN50305), limit based on EN50306-1, 2 and 3 for hazard level: max. 5 (for insulation, extruded sheath, reinforcing outer sheath).

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,8
Conductor resistance Ω/km	≤ 7,2
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km for cores in the inner layer	≤ 120 ≤ 130
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60
Integrated monitoring cores from 10x1 on	

Application

Signalling cable, optimised for installation, transversally water-tight, flame-retardant for railway control centres and surveillance systems, etc., suitable for installation in open air, in the ground, in cable tray channels, and for laying in tunnels and buildings.

The cable is halogen-free, flame-retardant, and with low smoke density, and therefore suitable for installation in areas with special hazards caused by fire propagation.

VDE approved and system-tested sleeves and conduits are available for this cable.

Type Designation Codes

A	outdoor cable
H	conductor insulation, halogen-free
HHV	outer sheath, reinforced, halogen-free, flame-retardant, cable with improved behaviour in the event of fire
S	signalling cable
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

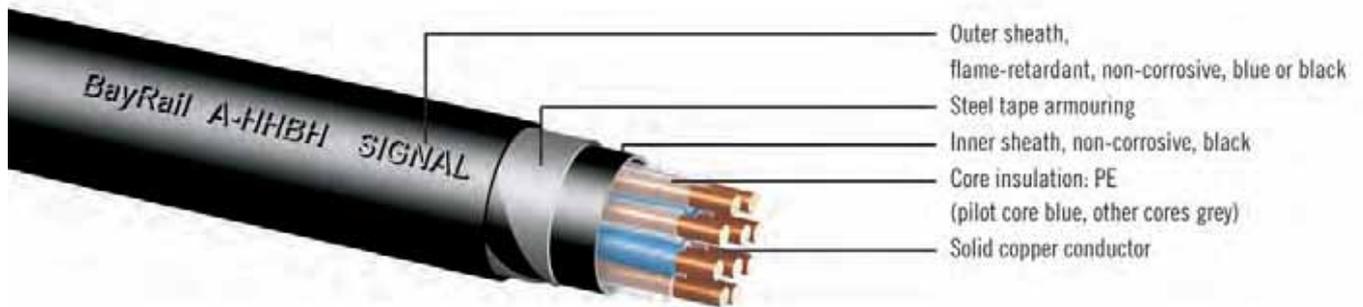
- A-HHV from 4x... to 80x...
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-HHBH - core-stranded, armoured, flame retardant, non corrosive, FRNC/LSOH

...x1x0,9 acc. to Bayka standard, based on DB Dlk 1.013.102y



Standards

Bayka company standard BayRail®, electrical properties based on Dlk 1.013.102y, flame propagation according to DIN VDE 0472, part 804, test method C, smoke density according to DIN VDE 0482, part 1034-2 (EN61034-2), corrosivity of fire gases according to DIN VDE 0482, part 267-2-2 (EN 50267-2-2), toxicity according to DIN VDE 0260, part 305 (EN50305), limit based on EN50306-1, 2 and 3 for hazard level: max. 5 (for insulation, inner sheath, outer sheath).

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance Ω/km	≤ 28,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 105
Cores in the inner layer	≤ 110
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60
Integrated monitoring cores from 10x1 on	

Application

Signalling cable, optimised for installation, transversally water-tight, flame-retardant for railway control centres and surveillance systems, etc., suitable for installation in open air, in the ground, in cable tray channels, and for laying in tunnels and buildings.

The cable is halogen-free, flame-retardant, and with low smoke density, and therefore suitable for installation in areas with special hazards caused by fire propagation.

VDE approved and system-tested sleeves and conduits are available for this cable.

Type Designation Codes

A	outdoor cable
H	conductor insulation, halogen-free
H	inner sheath, halogen-free
B	armouring, 2 layers, steel tape 0.1 or 0.2 mm
H	outer sheath, halogen-free, flame-retardant
S	signalling cable
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-HHBH from 4x... to 200x...

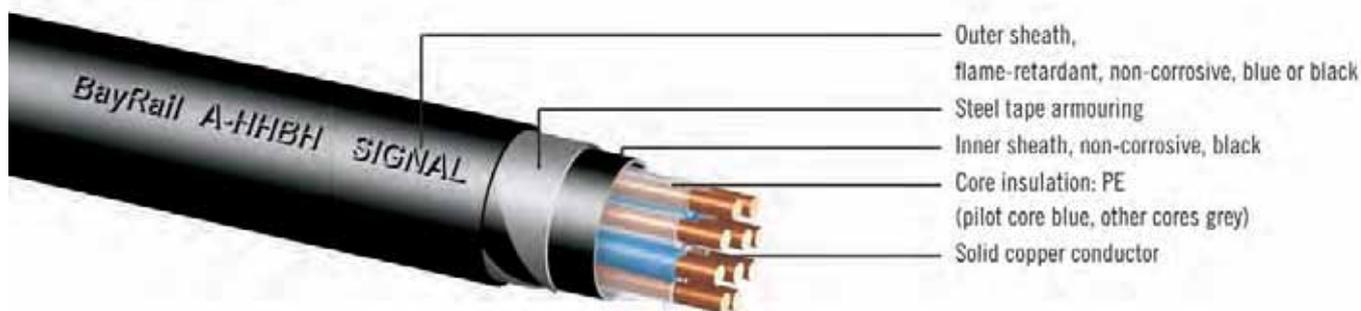
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-HHBH - core-stranded, armoured, flame retardant, non corrosive, FRNC/LSOH

...x1x1,4 acc. to Bayka standard, based on DB Dlk 1.013.102y



similar to the illustration



Standards

Bayka company standard BayRail®, electrical properties based on Dlk 1.013.102y, flame propagation according to DIN VDE 0472, part 804, test method C, smoke density according to DIN VDE 0482, part 1034-2 (EN61034-2), corrosivity of fire gases according to DIN VDE 0482, part 267-2-2 (EN 50267-2-2), toxicity according to DIN VDE 0260, part 305 (EN50305), limit based on EN50306-1, 2 and 3 for hazard level: max. 5 (for insulation, inner sheath, outer sheath).

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω/km	≤ 11,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 120

Alternating voltage test 50 Hz

Core-core Veff	2500
Core-screen Veff	2500

Temperature ranges

During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Integrated monitoring cores from 10x1 on

Application

Signalling cable, optimised for installation, transversally water-tight, flame-retardant and rodent-proof for railway control centres and surveillance systems, etc., suitable for installation in open air, in the ground, in cable tray channels, and for laying in tunnels and buildings.

The cable is halogen-free, flame-retardant, and with low smoke density, and therefore suitable for installation in areas with special hazards caused by fire propagation.

VDE approved and system-tested sleeves and conduits are available for this cable.

Type Designation Codes

A	outdoor cable
H	conductor insulation, halogen-free
H	inner sheath, halogen-free
B	armouring, 2 layers, steel tape 0.1 or 0.2 mm
H	outer sheath, halogen-free, flame-retardant
S	signalling cable
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

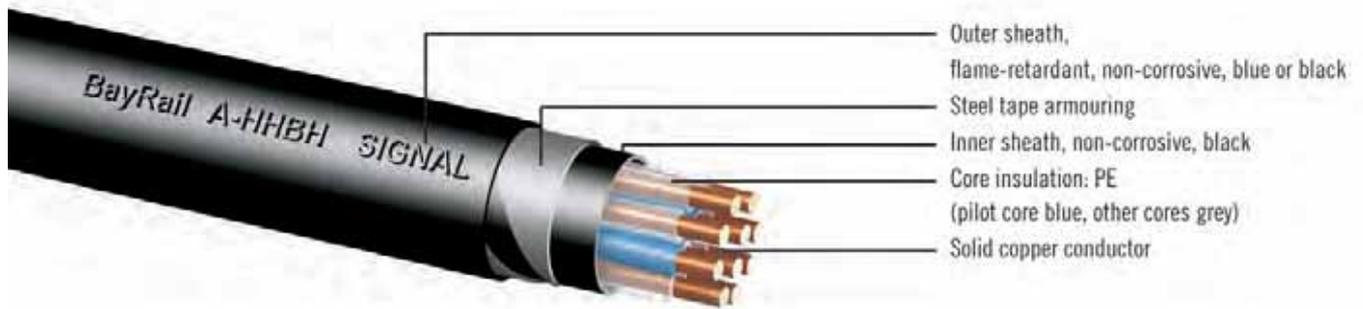
- A-HHBH from 4x... to 200x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-HHBH - core-stranded, armoured, flame retardant, non corrosive, FRNC/LSOH
 ...x1x1,8 acc. to Bayka standard, based on DB Dlk 1.013.102y



- Outer sheath, flame-retardant, non-corrosive, blue or black
- Steel tape armouring
- Inner sheath, non-corrosive, black
- Core insulation: PE (pilot core blue, other cores grey)
- Solid copper conductor



Standards

Bayka company standard BayRail®, electrical properties based on Dlk 1.013.102y, flame propagation according to DIN VDE 0472, part 804, test method C, smoke density according to DIN VDE 0482, part 1034-2 (EN61034-2), corrosivity of fire gases according to DIN VDE 0482, part 267-2-2 (EN 50267-2-2), toxicity according to DIN VDE 0260, part 305 (EN50305), limit based on EN50306-1, 2 and 3 for hazard level: max. 5 (for insulation, inner sheath, outer sheath).

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,8
Conductor resistance Ω/km	≤ 7,2
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 120
Cores in the inner layer	≤ 130
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60
Integrated monitoring cores from 10x1 on	

Application

Signalling cable, optimised for installation, transversally water-tight, flame-retardant for railway control centres and surveillance systems, etc., suitable for installation in open air, in the ground, in cable tray channels, and for laying in tunnels and buildings.

The cable is halogen-free, flame-retardant, and with low smoke density, and therefore suitable for installation in areas with special hazards caused by fire propagation.

VDE approved and system-tested sleeves and conduits are available for this cable.

Type Designation Codes

A	outdoor cable
H	conductor insulation, halogen-free
H	inner sheath, halogen-free
B	armouring, 2 layers, steel tape 0.1 or 0.2 mm
H	outer sheath, halogen-free, flame-retardant
S	signalling cable
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-HHBH 4x... to 30x...

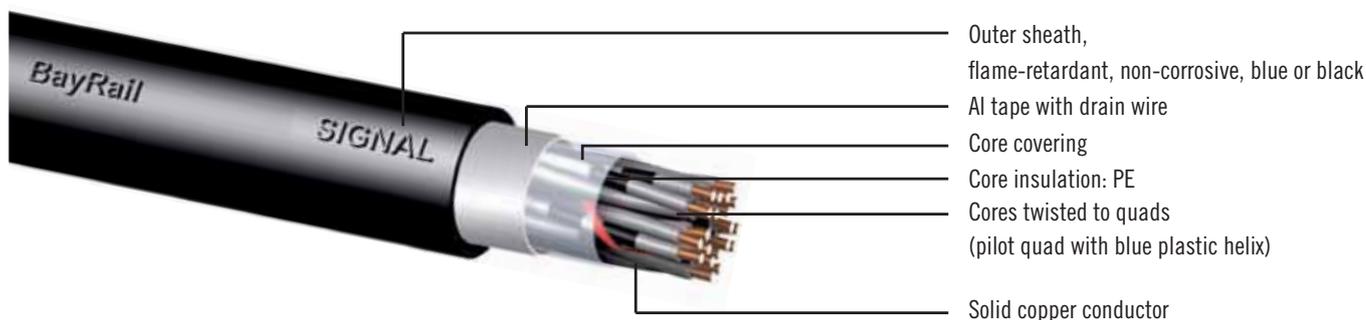
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-H(L)HV - quad stranded, flame retardant, non corrosive, FRNC/LSOH

...x4x0,9 acc. to Bayka standard, based on DB Dlk 1.013.201y



similar to the illustration



Standards

Bayka company standard BayRail®, electrical properties based on Dlk 1.013.201y, flame propagation according to DIN VDE 0472, part 804, test method C, smoke density according to DIN VDE 0482, part 1034-2 (EN61034-2), corrosivity of fire gases according to DIN VDE 0482, part 267-2-2 (EN 50267-2-2), toxicity according to DIN VDE 0260, part 305 (EN50305), limit based on EN50306-1, 2 and 3 for hazard level: max. 5 (for insulation, extruded sheath, reinforcing outer sheath).

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance Ω/km	≤ 56,6
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 45
Capacitive couplings at 800 Hz pF/300m	
k_1	≤ 400
k_{9-12} neighbouring/next to neighbouring	≤ 300/100
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60
Integrated monitoring cores from 5x4 on	

Application

As signalling cable in railway control centres and surveillance systems, etc., suitable for laying in the ground optimised for installation, transversally watertight, flame-retardant and in cable ducts, as well as for threading into cable conduits.

The cable is halogen-free, flame retardant and with low smoke density. It is suitable for installation in tunnels and in areas with special hazards caused by fire propagation.

VDE approved and system-tested sleeves are available for this cable.

Type Designation Codes

A	outdoor cable
H	conductor insulation, halogen-free
(L)HV	laminated sheath, reinforced, halogen-free, flame retardant
S	signalling cable
LG	quads stranded in layers
(H45)	maximum mutual capacitance value at 800 Hz
(M-SW)	outer sheath, black

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-H(L)Hv from 1x... to 30x...

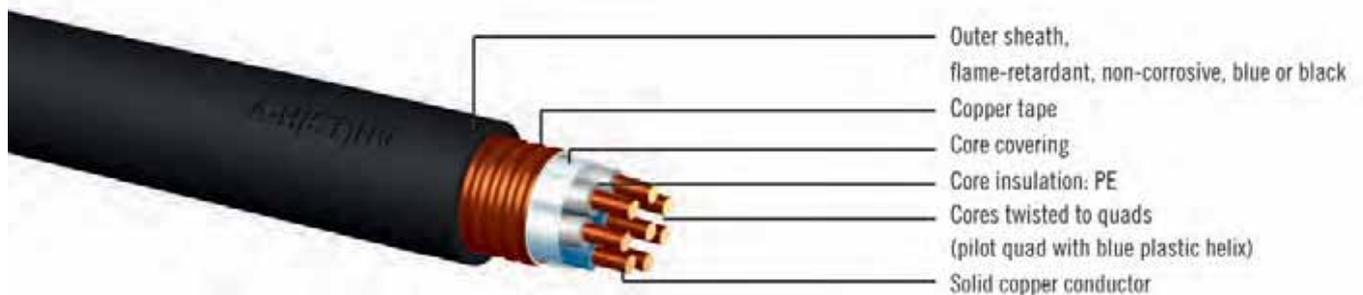
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-H(St)HV - quad stranded, flame retardant, non corrosive, FRNC/LSOH

...x4x0,9 acc. to Bayka standard, based on DB Dlk 1.013.201y



Standards

Bayka company standard BayRail®, electrical properties based on Dlk 1.013.201y, flame propagation according to DIN VDE 0472, part 804, test method C, smoke density according to DIN VDE 0482, part 1034-2 (EN61034-2), corrosivity of fire gases according to DIN VDE 0482, part 267-2-2 (EN 50267-2-2), toxicity according to DIN VDE 0260, part 305 (EN50305), limit based on EN50306-1, 2 and 3 for hazard level: max. 5 (for insulation, extruded sheath, reinforcing outer sheath).

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance (pair of cores) Ω/km	≤ 56,6
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 45
Capacitive couplings pF (for 300 m at 800 Hz)	
k_1	≤ 400
k_{9-12} neighbouring/next to neighbouring	≤ 300/100
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60
Integrated monitoring cores from 5x4 on	

Application

Signalling cable, optimised for installation, transversally water-tight, flame-retardant for railway control centres and surveillance systems, etc., suitable for installation in open air, in the ground, in cable tray channels, and for laying in tunnels and buildings.

The cable is halogen-free, flame-retardant, and with low smoke density, and therefore suitable for installation in areas with special hazards caused by fire propagation.

VDE approved and system-tested sleeves and conduits are available for this cable.

Type Designation Codes

A	outdoor cable
H	conductor insulation, halogen-free
(ST)	static screen (Cu tape)
HV	outer sheath, reinforced, halogen-free, flame retardant
S	signalling cable
LG	quads stranded in layers
(H45)	maximum mutual capacitance value at 800 Hz
(M-SW)	outer sheath, black

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-H(St)Hv from 1x... to 30x...

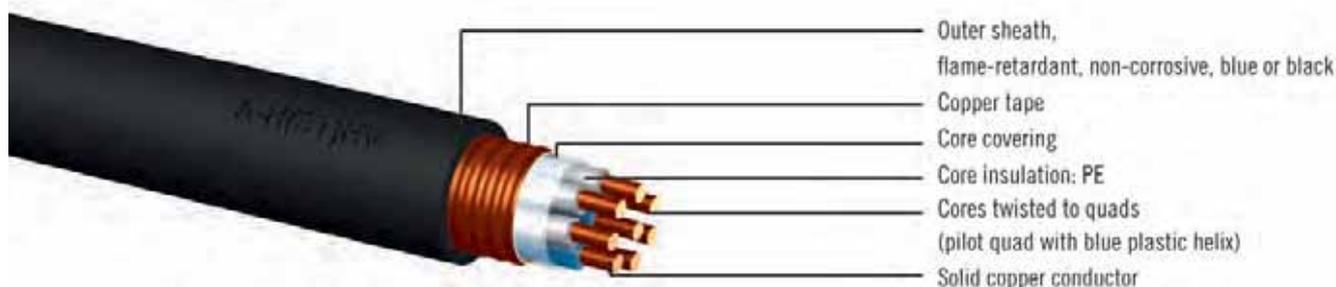
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-H(St)HV - quad stranded, flame retardant, non corrosive, FRNC/LSOH

...x4x1,4 acc. to Bayka standard, based on DB Dlk 1.013.201y



similar to the illustration



Standards

Bayka company standard BayRail®, electrical properties based on Dlk 1.013.201y, flame propagation according to DIN VDE 0472, part 804, test method C, smoke density according to DIN VDE 0482, part 1034-2 (EN61034-2), corrosivity of fire gases according to DIN VDE 0482, part 267-2-2 (EN 50267-2-2), toxicity according to DIN VDE 0260, part 305 (EN50305), limit based on EN50306-1, 2 and 3 for hazard level: max. 5 (for insulation, extruded sheath, reinforcing outer sheath).

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance Ω/km	≤ 23,4
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 45
Capacitive couplings at 800 Hz pF/300m	
k_1	≤ 400
k_{9-12} neighbouring/next to neighbouring	≤ 300/100
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60
Integrated monitoring cores from 5x4 on	

Application

As signalling cable in railway control centres and surveillance systems, etc., suitable for laying in the ground and in cable ducts, as well as for threading into cable conduits.

The cable is halogen-free, flame retardant and with low smoke density. It is suitable for installation in tunnels and in areas with special hazards caused by fire propagation.

VDE approved and system-tested sleeves are available for this cable.

Type Designation Codes

A	outdoor cable
H	conductor insulation, halogen-free
(ST)	static screen (Cu tape)
HV	outer sheath, reinforced, halogen-free, flame retardant
S	signalling cable
LG	quads stranded in layers
(H45)	maximum mutual capacitance value at 800 Hz
(M-SW)	outer sheath, black

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-H(St)Hv from 1x... to 30x...

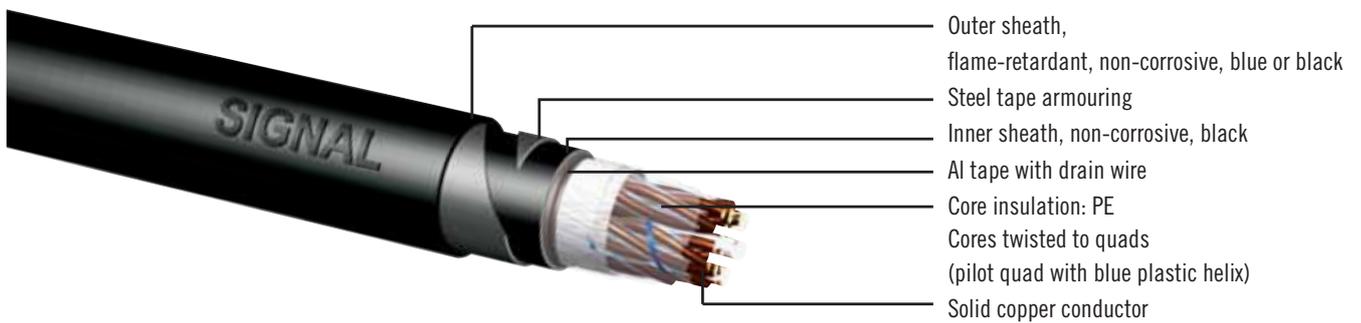
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-H(L)HBH - quad stranded, armoured, flame retardant, non corrosive, FRNC/LSOH

...x4x0,9 acc. to Bayka standard, based on DB Dlk 1.013.201y



Standards

Bayka company standard BayRail®, electrical properties based on Dlk 1.013.201y, flame propagation according to DIN VDE 0472, part 804, test method C, smoke density according to DIN VDE 0482, part 1034-2 (EN61034-2), corrosivity of fire gases according to DIN VDE 0482, part 267-2-2 (EN 50267-2-2), toxicity according to DIN VDE 0260, part 305 (EN50305), limit based on EN50306-1, 2 and 3 for hazard level: max. 5 (for insulation, inner sheath, outer sheath).

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,9
Conductor resistance (pair of cores) Ω/km	≤ 56,6
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 45
Capacitive couplings pF (for 300 m at 800 Hz)	
k_1	≤ 400
k_{9-12} neighbouring/next to neighbouring	≤ 300/100
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60
Integrated monitoring cores from 5x4 on	

Application

Signalling cable, optimised for installation, transversally water-tight, flame-retardant for railway control centres and surveillance systems, etc., suitable for installation in open air, in the ground, in cable tray channels, and for laying in tunnels and buildings.

The cable is halogen-free, flame-retardant, and with low smoke density, and therefore suitable for installation in areas with special hazards caused by fire propagation.

VDE approved and system-tested sleeves and conduits are available for this cable.

Type Designation Codes

- A** outdoor cable
- H** conductor insulation, halogen-free
- (L)H** inner sheath, halogene-free, with Al tape
- B** armouring, 2 layers, steel tape 0.1 or 0.2 mm
- H** outer sheath, halogen-free, frame-retardant
- S** signalling cable
- Lg** stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-H(L)HBH from 1x... to 30x...

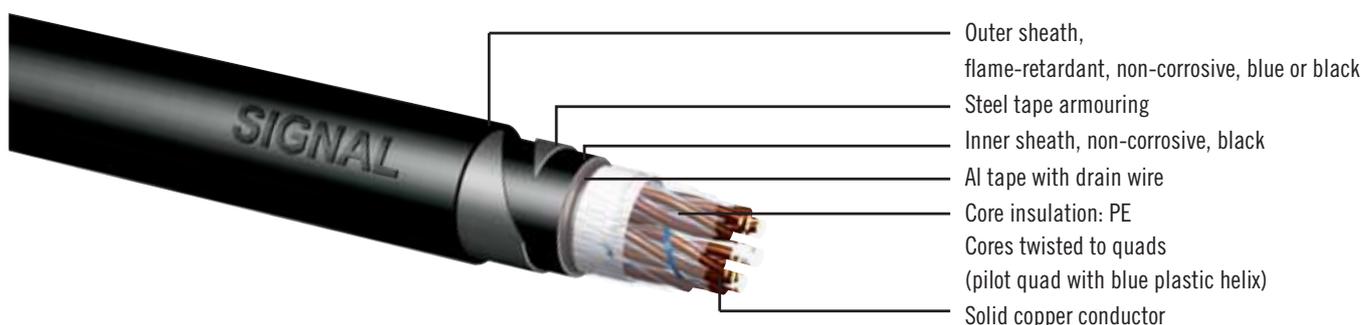
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-H(L)HBH - quad stranded, armoured, flame retardant, non corrosive, FRNC/LSOH

...x4x1,4 acc. to Bayka standard, based on DB Dlk 1.013.201y



similar to the illustration



Standards

Bayka company standard BayRail®, electrical properties based on Dlk 1.013.201y, flame propagation according to DIN VDE 0472, part 804, test method C, smoke density according to DIN VDE 0482, part 1034-2 (EN61034-2), corrosivity of fire gases according to DIN VDE 0482, part 267-2-2 (EN 50267-2-2), toxicity according to DIN VDE 0260, part 305 (EN50305), limit based on EN50306-1, 2 and 3 for hazard level: max. 5 (for insulation, inner sheath, reinforcing outer sheath).

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor resistance (pair of cores) Ω/km	≤ 23,4
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 45
Capacitive couplings pF (for 300 m at 800 Hz)	
k_1	≤ 400
k_{9-12} neighbouring/next to neighbouring	≤ 300/100
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60
Integrated monitoring cores from 5x4 on	

Application

Signalling cable, optimised for installation, transversally water-tight, flame-retardant for railway control centres and surveillance systems, etc., suitable for installation in open air, in the ground, in cable tray channels, and for laying in tunnels and buildings.

The cable is halogen-free, flame-retardant, and with low smoke density, and therefore suitable for installation in areas with special hazards caused by fire propagation.

VDE approved and system-tested sleeves and conduits are available for this cable.

Type Designation Codes

A	outdoor cable
H	conductor insulation, halogen-free
(L)H	inner sheath, halogene-free, with Al tape
B	armouring, 2 layers, steel tape 0.1 or 0.2 mm
H	outer sheath, halogen-free, frame-retardant
S	signalling cable
Lg	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-H(L)HBH from 1x... to 30x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2Y(L)2Y... - rail foot

Rail foot cable acc. to DB TL 416.0111



- Outer sheath: PE, black
- Steel tape armoring
- Al-laminated sheath: PE, black
- Core insulation: PE
- Finely stranded copper conductor



Standards

Technical specifications 416.0111, Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor cross-section mm ²	0,7	1,5	2,5
Conductor resistance of the pair of cores Ω/km	≤ 56,6	≤ 23,4	≤ 7,2
Core resistance Ω/km			
Insulation resistance GΩxkm	≥ 10	≥ 10	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 45	≤ 45	approx. 120 ¹⁾
¹⁾ applies to the single conductors			
≤ 52 applies to 1x4x...			
Alternating voltage test 50 Hz			
Core-core Veff	2500		
Core-screen Veff	2500		
Temperature ranges			
During laying, installing °C	+5 to +25		
In the ground, pipe conduits and trough channels °C	-5 to +50		
Before and after laying, installing °C	-5 to +70		

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated. The cables are preferred for laying along the rail foot at train speeds ≤ 160 km/h, but are also suitable for laying in the ground, in pipe conduits and trough channels.

Type Designation Codes

- A** outdoor cable
- 2Y** conductor insulation made of PE
- (L)2Y** laminated sheath made of PE
- (L)2YV** laminated sheath made of PE, reinforced
- B** armoring made of band steel
- (SR)** armoring made of steel channel binding
- 2Y** outer sheath made of PE
- (H45)** maximum mutual capacitance value at 800 Hz, 45 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-2Y(L)2Y... from 1x... to 5x...

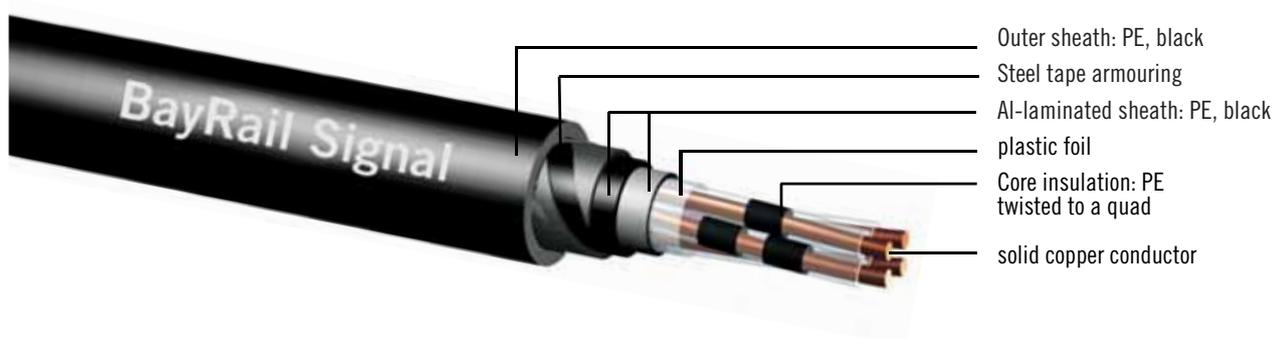
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Balise cables

A-2Y(L)2YB2Y / AJ-2Y(L)2YDB2Y - Balise Cables

...x4x1,4 acc. to DB TL 416.0120



- Outer sheath: PE, black
- Steel tape armouring
- Al-laminated sheath: PE, black plastic foil
- Core insulation: PE twisted to a quad
- solid copper conductor



Standards

Technical specifications 416.0120, Bayka BayRail company standard:

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,4
Conductor loop resistance Ω/km	≤ 23,4
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 52
Capacitive couplings at 800 Hz pF/500 m	
K_1	≤ 650
ea1/2	≤ 1300
Characteristic impedance Ω	
at 8.8 kHz	147 ± 15 %
at 200 ... 600 kHz	120 ± 10 %
Wave attenuation dB/km	
at 8.8 kHz	≤ 2
at 280 kHz	≤ 5
at 560 kHz	≤ 7
Alternating voltage test 50 Hz	
Core-core Veff / Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-10 to +60
Before and after laying, installing °C	-40 to +60

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated. As balise cable for permanent laying in the ground or trough channels, or on cable holders in shaft and tunnel walls.

The balise cable is suitable:

- preferably for the transmission of alternating currents in systems requiring a high symmetry towards one another, against external interference and against earth potential.
- for the connection of an Euro balise and/or two Euro balises to an actuation unit (LEU) as cable distributor/Euro balise(s) - LEU connection

Designs:

Short distances up to 500 m A-2Y(L)2YB2Y 1x4x1.4

Type Designation Codes

A	outdoor cable
AJ	outdoor cable with inductive protection
2Y	conductor insulation, sheath made from PE
(L)2Y	laminated sheath made of polyethylene
D	screen made of Cu wires
B	armouring
2Y	outer sheath made of PE

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- AJ-2Y(L)2YDB2Y 1x4x1,4
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Balise cables

A-2Y(L)2YB2Y / AJ-2Y(L)2YDB2Y - Balise Cables

...x4x1,53 acc. to DB TL 416.0120



- Outer sheath: PE, black
- Steel tape armouring
- Al-laminated sheath: PE, black plastic foil
- Core insulation: PE twisted to a quad
- solid copper conductor



Standards

Technical specifications 416.0120, Bayka BayRail company standard:

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1,53
Conductor loop resistance Ω/km	≤ 19,8
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 43
Capacitive couplings at 800 Hz pF/500 m	
K_1	≤ 240
ea1/2	≤ 650
Characteristic impedance Ω	147 ± 15 %
at 8.8 kHz	
at 200 ... 600 kHz	120 ± 10 %
at 1.8 MHz	120 ± 10 %
Wave attenuation dB/km	
at 8.8 kHz	≤ 0.8
at 280 kHz	≤ 3 *)
at 560 kHz	≤ 4.2
at 1.8 MHz	≤ 8
*) Attenuation at 280 kHz must not be smaller than the wave attenuation at 560 kHz by more than 1.8 dB/km	
Alternating voltage test 50 Hz	
Core-core Veff / Core-screen Veff	2500
Temperature ranges	-10 to +60
During laying, installing °C	-40 to +60
Before and after laying, installing °C	

Application

As a railway signalling cable, in railway control centres, surveillance systems and similar facilities, provided that the use of special signalling technology cables (e.g. PZB cables) is not stipulated. As balise cable for permanent laying in the ground or trough channels, or on cable holders in shaft and tunnel walls.

The balise cable is suitable:

- preferably for the transmission of alternating currents in systems requiring a high symmetry towards one another, against external interference and against earth potential.
- for the connection of an Euro balise and/or two Euro balises to an actuation unit (LEU) as cable distributor/Euro balise(s) - LEU connection

Designs:

Standard up to 2000 m A-2Y(L)2YB2Y 1x4x1.53

Type Designation Codes

A	outdoor cable
AJ	outdoor cable with inductive protection
2Y	conductor insulation, sheath made from PE
(L)2Y	laminated sheath made of polyethylene
D	screen made of Cu wires
B	armouring
2Y	outer sheath made of PE

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- AJ-2Y(L)2YDB2Y 1x4x1,53

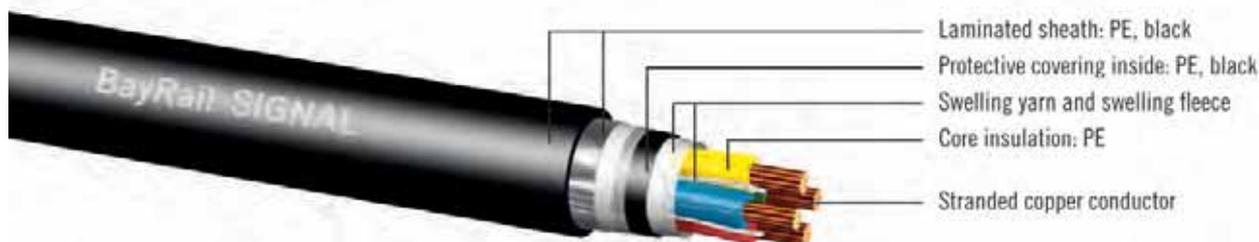
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

A-2YTF(L)... / A-02YSTF(L)... - rail foot, permanent laying, connection cable

PZB Cable acc. to DB Dik 1.013.168y, TL 416.0119, TL 416.0121



Standards

Dik 1.013.168y, TL 416.0119, TL 416.0121, Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor cross-section mm ² A-2YTF2Y(L)2Y 1x4x0.75 mm ² A-2YTF(L)2YV 1x4x0.75 mm ²	0,75
Conductor diameter mm A-02YSTF(L)2YB2Y/...(SR)2Y 1x4x0.8	0,8
Conductor resistance of the pair of cores Ω/km	≥ 51,4 ≥ 73,2
Resistance difference Ω/km	≤ 0,9 ≤ 0,69
Insulation resistance GΩxkm	≥ 5 ≥ 5
Mutual capacitance at 800 Hz nF/km	≤ 38 ≤ 30
Alternating voltage test 50 Hz	
Core-core Veff	2500
Core-screen Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C (PZB control cable to +80)	-30 to +70

Application

PZB control cables according to Dik 1.013.168y are used for controlling the track and switching magnets of the PZB. The cables are permitted for laying along the rail foot for train speeds ≤ 160 km/h.

PZB control cables according to TL 416.0119 are used for controlling the track and switching magnets of the PZB. Cables with solid conductors can be laid in the ground, in trough channels, in pipe conduits, and on cable holders in shaft and tunnel walls.

PZB connection cables according to TL 416.0121 are used for directly connecting the track and switching magnets, and/or the relay and switching units of the intermittent train running control (PZB track-side equipment).

The PZB cables must be used according to the effective maintenance guidelines.

Type Designation Codes

A	outdoor cable
2Y	insulating cover made of polyethylene (PE)
02YS	conductor insulation made of foam skin
TF	C=cable dry filled with swelling yarns and swelling fleeces
(L)2Y	laminated sheath made of polyethylene
(L)2YV	laminated sheath made from polyethylene, reinforced
B	armouring made of band steel
(SR)	armouring made of steel channel binding
2Y	outer sheath made of PE

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

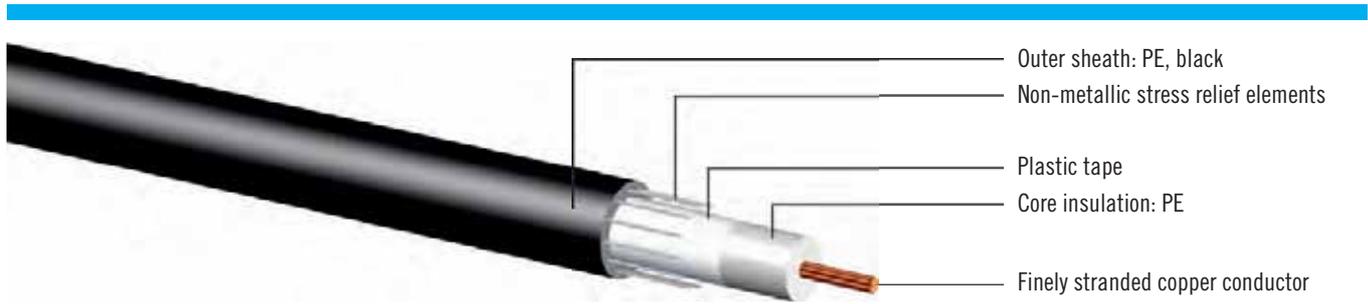
- PZB A-2YTF(L)... / A-02YSTF(L)... 1x...
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Line conductor cable

A-2Y(ZG)2Y / A-H(ZG)H - Line conductor cables for the LZB system

LZB Line conductor cable acc. to DB TL 416.0101



Standards

Technical specifications 416.0101, Bayka BayRail company standard.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	2
Conductor resistance Ω/km	≤ 9
Alternating voltage test 50 Hz	
Core-core Veff	2500
Temperature ranges	
During laying, installing °C	-5 to +50
Before and after laying, installing °C	-40 to +70

Application

Line conductor cable for the LZB (continuous train control) system. The standard design, A-2Y(ZG)2Y, is for laying on free sections, and the flame-retardant FRNC design, A-H(ZG)H, is for laying in tunnels.

Type Designation Codes

- A** outdoor cable
- 2Y** conductor insulation made of polyethylene (PE)
- H** conductor insulation made of halogen-free material
- (ZG)** non-metallic stress relief elements in the PE sheath
- 2Y** outer sheath made of PE
- H** outer sheath made of halogen-free material

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- Linienleiterkabel A-2Y(ZG)2Y 1x...

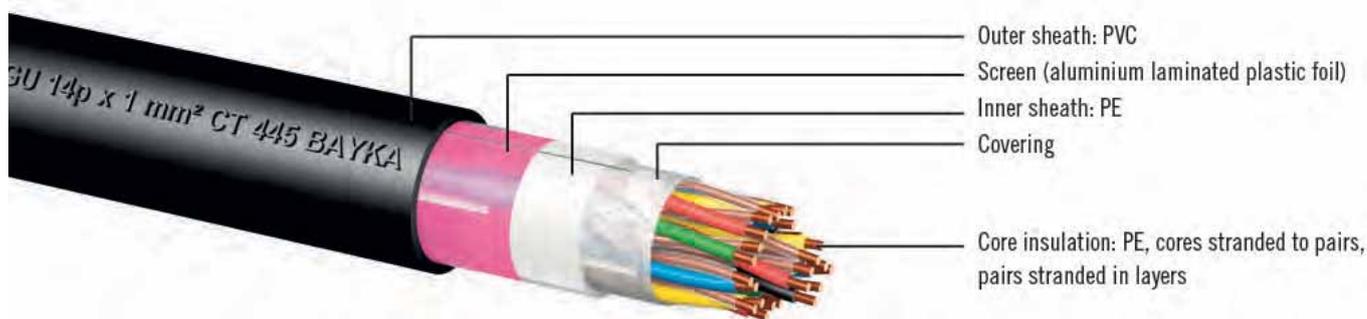
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BayRail® - Signalling cables

ZPGU - stranded pairs

...px1mm² acc. to SNCF CT 445



Standards

SNCF CT 445

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor cross-section mm ²	1,0
Conductor resistance Ω/km	≤ 18,1
Insulation resistance GΩxkm	≥ 5
Mutual capacitance nF/km	≤ 55

Temperature ranges °C

(acc. to DIN VDE0891, part06)

in operation	≤ 70
when laying, installing °C	-20 to +50

Application

Railway signalling cable, stranded pairs, in railway control centres and surveillance systems.

Design

Cu-conductor solid 1mm²
Core insulation made of polyethylene (PE)
Cores stranded in pairs
Wrapping
Inner sheath made of polyethylene (PE)
Screen made of Al-coated plastic foil
Outer sheath made of PVC, black

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with improved electrical properties
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- ZPGU 14px1,0 qmm

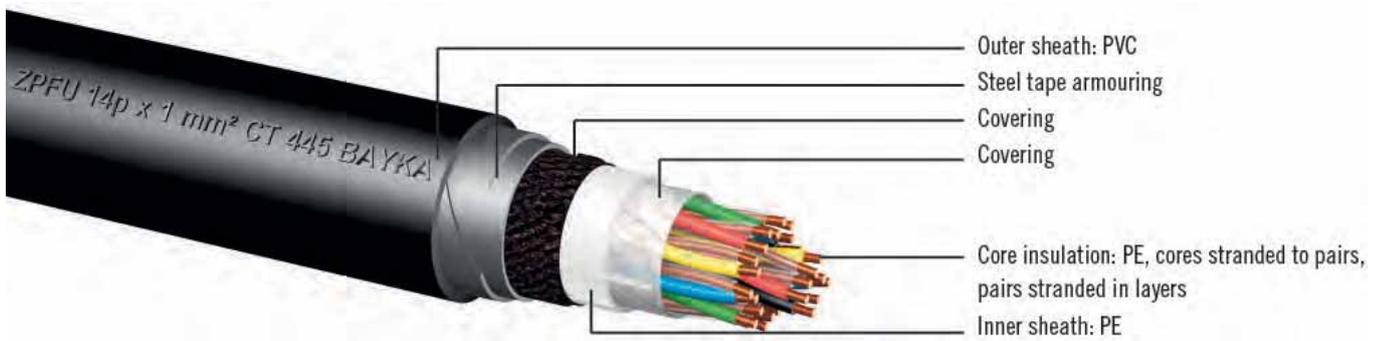
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BayRail® - Signalling cables

ZPFU - stranded pairs

...px1mm² acc. to SNCF CT 445



Standards

SNCF CT 445

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor cross-section mm ²	1,0
Conductor resistance Ω/km	≤ 18,1
Insulation resistance GΩxkm	≥ 5
Mutual capacitance nF/km	≤ 55
Temperature ranges °C	
(acc. to DIN VDE0891, part06)	
in operation	≤ 70
when laying, installing °C	-20 to +50

Application

Railway signalling cable with armouring (rodent protection), stranded pairs, in railway control centres and surveillance systems.

Design

Cu-conductor solid 1mm²
 Core insulation made of polyethylene (PE)
 Cores stranded in pairs
 Wrapping
 Inner sheath made of polyethylene (PE)
 Steel tape armouring
 Outer sheath made of PVC, black

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with improved electrical properties
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- ZPFU 14px 1mm²

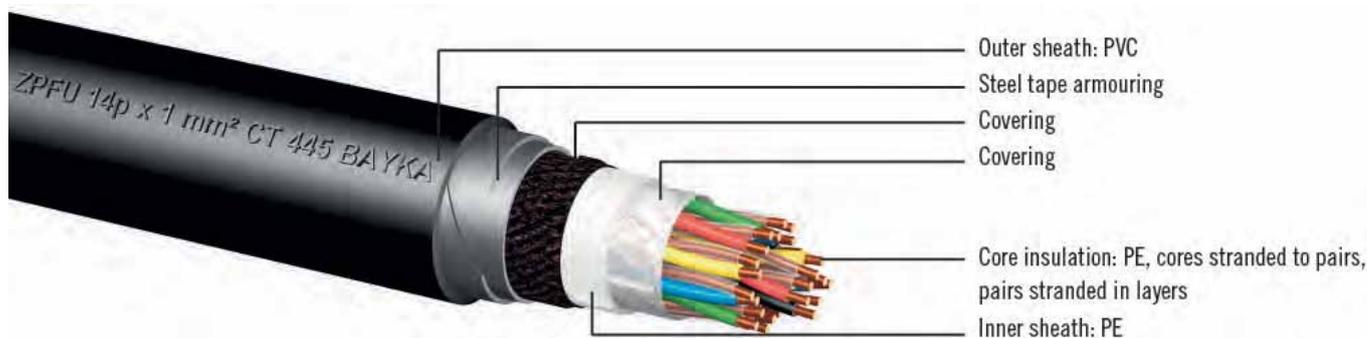
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BayRail® - Signalling cables

ZPAU - stranded pairs

...px1mm² acc. to SNCF CT 445



Standards

SNCF CT 445

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor cross-section mm ²	1,0
Conductor resistance Ω/km	≤ 18,1
Insulation resistance GΩxkm	≥ 5
Mutual capacitance nF/km	≤ 55
Temperature ranges °C	
(acc. to DIN VDE0891, part06)	
in operation	≤ 70
when laying, installing °C	-20 to +50

Application

Railway signalling cable with low reduction factor, stranded pairs, in railway control centres and surveillance systems.

Design

Cu-conductor solid 1mm²
 Core insulation made of polyethylene (PE)
 Cores stranded in pairs
 Wrapping
 Inner sheath made of polyethylene (PE)
 Cu screen
 Steel tape armouring
 Outer sheath made of PVC, black

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with improved electrical properties
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- ZPAU from 4... to 14...

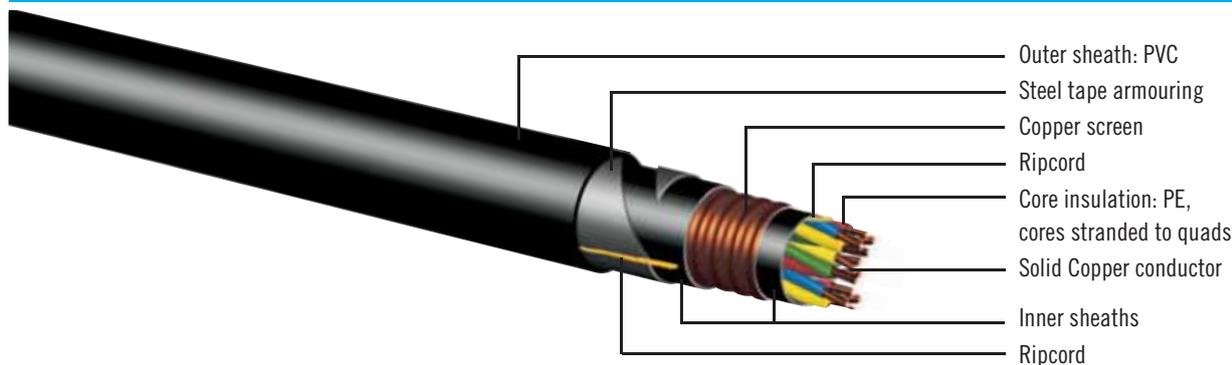
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BayRail® - Signalling cables

ZC03 - quad stranded

4qx1mm² (4qx1,13mm) acc. to SNCF CT 445



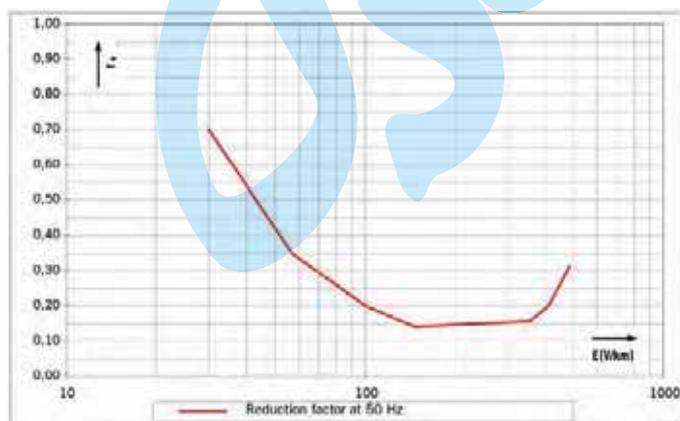
Standards

SNCF CT 445

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	1.13
Conductor cross-section mm ²	1.0
Conductor resistance Ω/km	≤ 18,1
Insulation resistance GΩxkm	≥ 5
Mutual capacitance nF/km	≤ 40
Reduction factor at 50 Hz	see chart



Application

Railway signalling cable, quad stranded, induction-protected with low reduction factor, for railway control centres and surveillance systems in high speed railway networks.

Design

Cu-conductor solid 1mm²
 Core insulation made of polyethylene (PE)
 Cores stranded in quads
 Wrapping
 1st inner sheath made of polyethylene (PE)
 Screen made of corrugated copper tape, longitudinally applied
 2nd inner sheath
 Steel tape armouring
 Outer sheath made of PVC, black

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with improved electrical properties
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- ZC03 4qx1,0mm² (2B0,8)

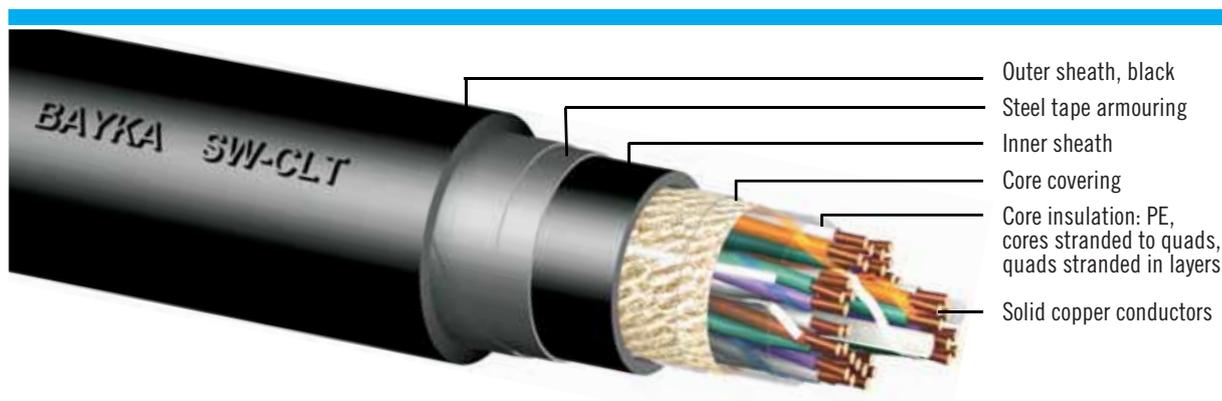
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

SW-CLT - quad stranded, steel tape armouring

...x4x1,5 acc. to SBB (Swiss Federal Railways) 3001.82.1000



- Outer sheath, black
- Steel tape armouring
- Inner sheath
- Core covering
- Core insulation: PE, cores stranded to quads, quads stranded in layers
- Solid copper conductors



Standards

Swiss Federal Railway SBB 3001.82.1000
halogen-free acc. to IEC 60754-1 and IEC 60754-2
smoke density acc. to IEC 61034-2

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	1,5
Conductor loop resistance Ω/km (DC at 20°C)	≤ 20,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	52
Capacitive couplings pF/300 m at 800 Hz	
k_1	≤ 400
$k_9 \dots k_{12}$	≤ 400
$ea_1 \dots ea_2$	≤ 650
Operating voltage	
AC Veff 16,7 Hz	500
DC V	800
Alternating voltage test Veff	
Core/core	2000
Core/armouring	4000
Temperature ranges °C when laying, installing °C	-10 to +50

Quad	a-core	b-core	c-core	d-core
Pilot quad	white	orange	turquoise	violet
Direction quad	white	green	turquoise	violet
Standard quad 1	white	white	turquoise	violet
Standard quad 2	white	blue	turquoise	violet

Application

As railway signalling cable for railways, remote control, signalisation, control and safety signals.

Design

- Solid Cu-conductor
- Conductor insulation made of PE
- Cores stranded to quads
- Quads stranded in layers
- Inner sheath made of PE, black
- Steel tape armouring (CL)
- Outer sheath made of PE, black (T)

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with improved electrical properties
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- SW-CLT from 4... to 30...

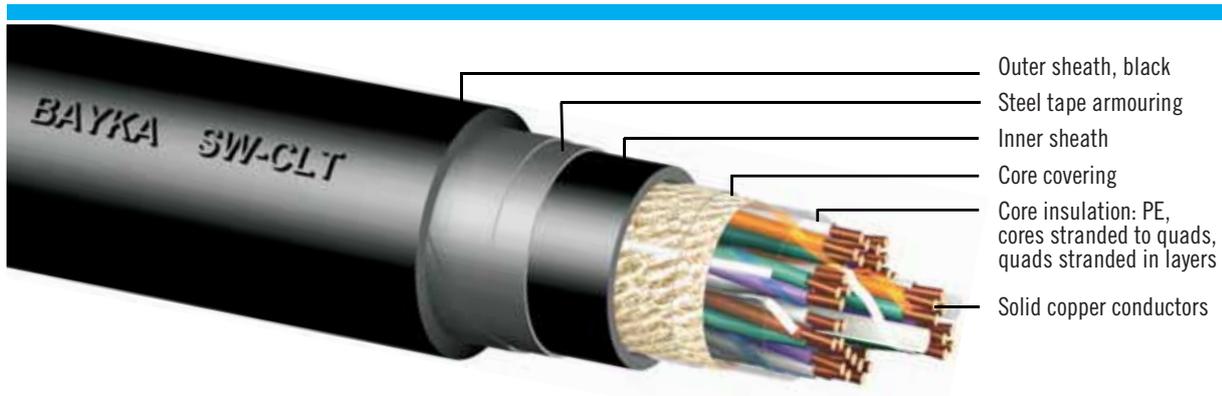
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BayRail® - Signalling cables

SW-CLT - quad stranded, steel tape armouring

...x4x2,2 acc. to SBB (Swiss Federal Railways) 3001.82.1000



- Outer sheath, black
- Steel tape armouring
- Inner sheath
- Core covering
- Core insulation: PE, cores stranded to quads, quads stranded in layers
- Solid copper conductors



Standards

Swiss Federal Railway SBB 3001.82.1000
halogen-free acc. to IEC 60754-1 and IEC 60754-2
smoke density acc. to IEC 61034-2

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	2,2
Conductor loop resistance Ω/km (DC at 20°C)	≤ 20,9
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	60
Capacitive couplings pF/300 m at 800 Hz	
k ₁	≤ 400
k ₉ ... k ₁₂	≤ 400
ea ₁ ... ea ₂	≤ 650
Operating voltage	
AC Veff 16,7 Hz	500
DC V	800
Alternating voltage test Veff	
Core/core	2000
Core/armouring	4000
Temperature ranges °C when laying, installing °C	-10 to +50

Quad	a-core	b-core	c-core	d-core
Pilot quad	white	orange	turquoise	violet
Direction quad	white	green	turquoise	violet
Standard quad 1	white	white	turquoise	violet
Standard quad 2	white	blue	turquoise	violet

Application

As railway signalling cable for railways, remote control, signalisation, control and safety signals.

Design

- Solid Cu-conductor
- Conductor insulation made of PE
- Cores stranded to quads
- Quads stranded in layers
- Inner sheath made of PE, black
- Steel tape armouring (CL)
- Outer sheath made of PE, black (T)

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with improved electrical properties
- Flame retardant, non corrosive cables (FRNC, LSOH)

Product range

- SW-CLT from 1... to 30...

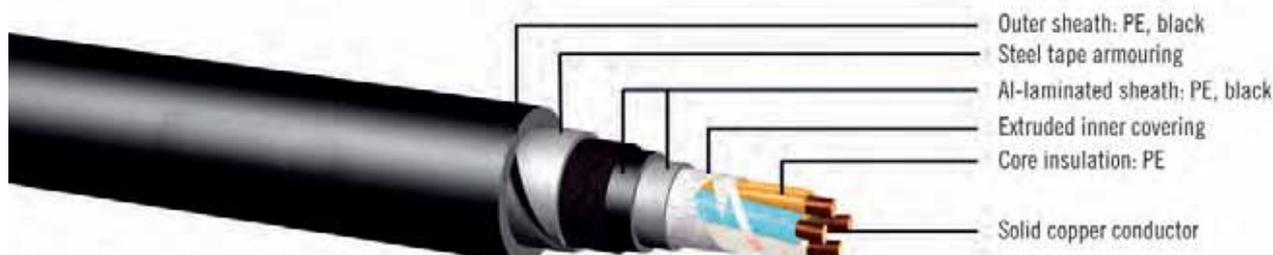
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BayRail® - Balise cables

PE-ALT-CLT - quad stranded, steel tape armouring

...x4x1,53 acc. to SBB (Swiss Federal Railways) 3001.52.2000



Standards

Swiss Federal Railway SBB 3001.52.2000
halogen-free acc. to IEC 60754-1 and IEC 60754-2
smoke density acc. to IEC 61034-2

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	1,53
Loop resistance (DC at 20° C) Ω/km	≤ 19,8
Insulation resistance GΩxkm	≥ 10
Mutual capacitance at 800 Hz nF/km	42.3 (±15 %)
Capacitive couplings pF/300 m at 800 Hz	
k_1	≤ 240
$ea_1 \dots ea_2$	≤ 650
Operating voltage	
AC V_{eff} / DC V	420 / 600
Alternating voltage test V_{eff}	
core/core / core/Al tape	2500
Impedance Ω	
f=0.56 / 0.80 MHz	120±10 %
f=1.80 MHz	120±5 %
Attenuation dB/100m	
f=8.82 kHz	≤ 0.08
f=0.56 MHz	≤ 0.40
f=0.80 MHz	≤ 0.50
f=1.80 MHz	≤ 0.80
Temperature range	
during laying	-5 to +50
during storage	-30 to +70
Core marking	white/orange/turquoise/purple

Application

PE-insulation signalling cable as connection between ETCS balises and a Lineside Equipment Unit LEU for ERTMS (European Rail Traffic Management System).

Design

Solid Cu-conductor
Conductor insulation made of PE
Cores stranded to quads
Quads stranded in layers
laminated sheath made of PE with aluminium foil, black (ALT)
Steel tape armouring (CL)
Outer sheath made of PE, black (T)

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- PE-ALT-CLT 1x4x1,53 mm

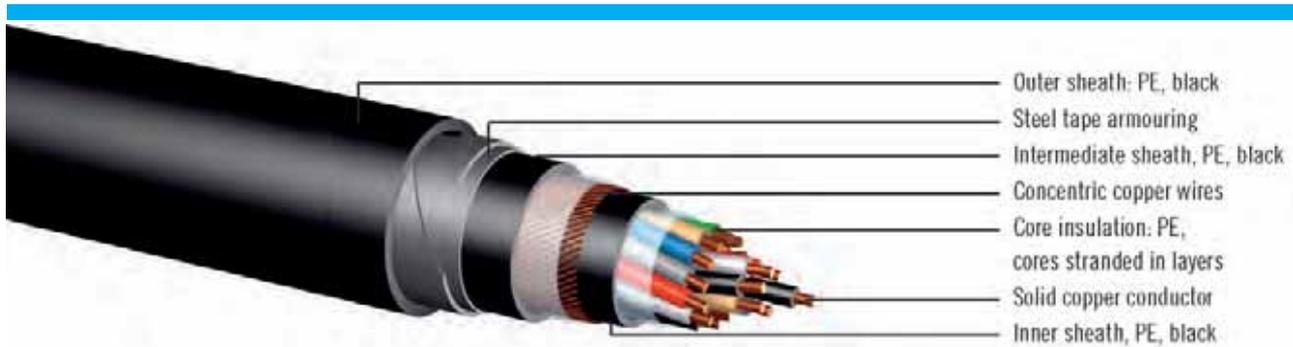
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

CCPSSP - stranded cores, steel tape armouring

CCPSSP-H acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	1,4
Conductor resistance (pair of cores) Ω/km	
Mean value	11.2±0.5
Maximum value	≤ 11.9
Insulation resistance MΩxkm	≥ 35000
50 Hz alternating voltage test	
Core-core Veff	2100
Core-screen Veff	2500

Application

Railway signalling cable, stranded cores, in railway control centres and surveillance systems.

Design

...H	number of the single conductors
...mm	conductor diameter
CC	screen made of copper wires or tapes
P	inner sheath made of PE
SS	armouring made of steel tapes
P	outer sheath made of PE
FR	reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- CCPSSP-H from 4... to 61...

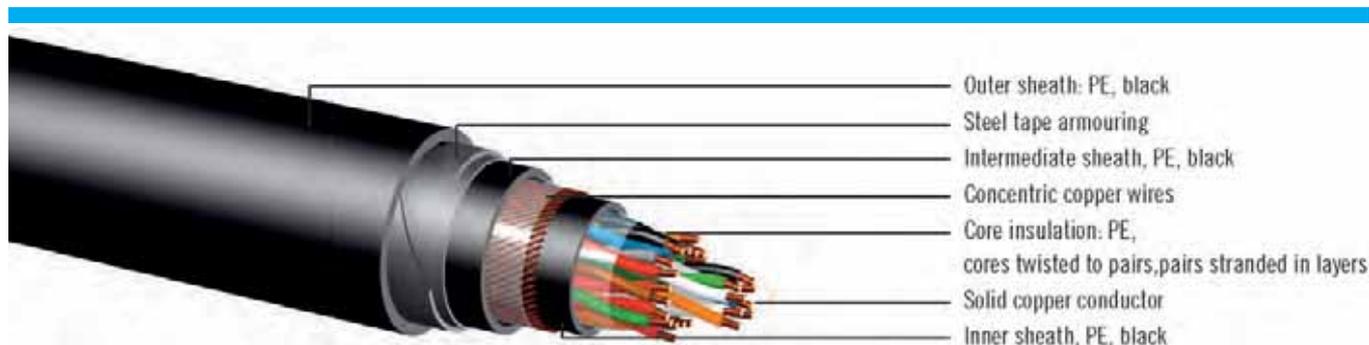
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

CCPSSP - cores twisted to pairs, pairs stranded in layers, steel tape armouring

CCPSSP-P acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	0,9
Conductor resistance Ω/km	
Mean value	27,5±1,0
Maximum value	≤ 29,0
Mutual capacitance at 1000±200 Hz nF/km	
Mean value	52±4
Maximum value	≤ 58
Capacitance difference at 1000±200 Hz pF/km	
Pair-pair mean value	45
Pair-pair maximum value	260
Pair-earth mean value	650
Pair-earth maximum value	2625
Attenuation at 1000 Hz dB/km	12,8
Insulation resistance MΩxkm	≥ 35000
50 Hz alternating voltage test	
Core-core Veff	2100
Core-screen Veff	2500

Application

As a railway signalling cable, in railway control centres and surveillance systems.

Design

...P	number of the pairs
...mm	conductor diameter
CC	screen made of copper wires or tapes
P	inner sheath made of PE
SS	armouring made of steel tapes
P	outer sheath made of PE
FR	reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

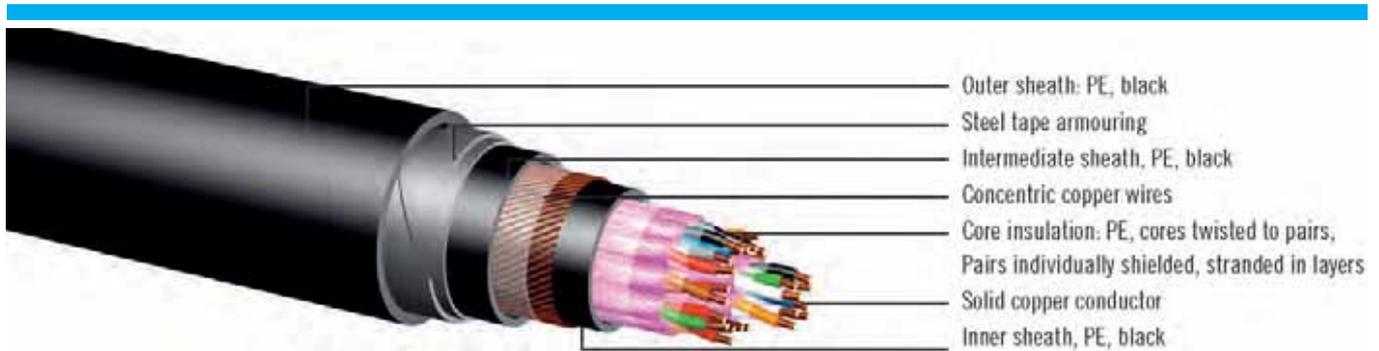
- ...P 0,9mm CCPSSP from 7... to 50...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

CCPSSP - cores twisted to pairs, pairs shielded, stranded in layers, steel tape armouring
 CCPSSP-PI acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	1,4
Conductor resistance Ω/km	
Mean value	11.2±0.5
Maximum value	≤ 11.9
Mutual capacitance at 1000±200 Hz nF/km	
Mean value	59±3
Maximum value	≤ 65
Near-end crosstalk attenuation dB at 10 kHz	≥ 75
Far-end crosstalk attenuation dB at 10 kHz	≥ 65
Insulation resistance MΩxkm	≥ 35000
50 Hz alternating voltage test	
Core/core	4500
Core/screen	1500

Application

As a railway signalling cable, in railway control centres and surveillance systems.

Design

...PI	number of the pairs in foil
...mm	conductor diameter
CC	screen made of copper wires or tapes
P	inner sheath made of PE
SS	armouring made of steel tapes
P	outer sheath made of PE
FR	reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- ...PI 0,9mm CCPSSP from 2... to 28...

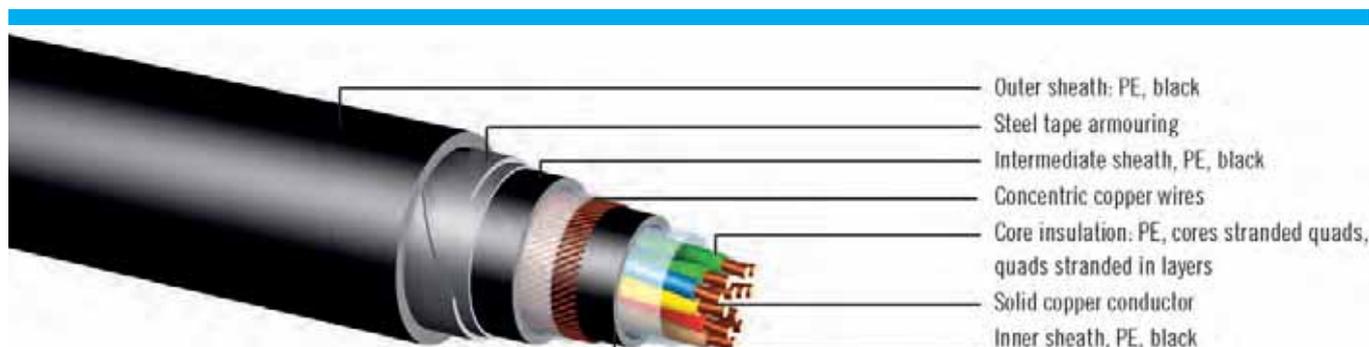
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BayRail® - Signalling cables

CCPSSP - cores stranded quads, quads stranded in layers, steel tape armouring

CCPSSP-X acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	0,9	1,4
Conductor resistance Ω/km		
Mean value	27.5±1	11.2±0.5
Maximum value	≤ 29.0	≤ 11.9
Mutual capacitance at 1000±200 Hz nF/km		
Mean value	38±3	41±4
Maximum value	≤ 45	≤ 48
Capacitance difference at 1000±200 Hz pF/km		
Pair-pair mean value	35	35
Pair-pair maximum value	250	250
Pair-earth mean value	320	320
Pair-earth maximum value	1200	1200
Attenuation at 1000 Hz dB/km	0,7	0,46
Insulation resistance at 1000 Hz MΩ/km	≥ 35000	≥ 35000
50 Hz alternating voltage test		
Core-core Veff	2100	2100
Core-screen Veff	2500	2500

Application

As a railway signalling cable, in railway control centres and surveillance systems.

Design

...X	number of the quads
...mm	conductor diameter
CC	screen made of copper wires or tapes
P	inner sheath made of PE
SS	armouring made of steel tapes
P	outer sheath made of PE
FR	reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

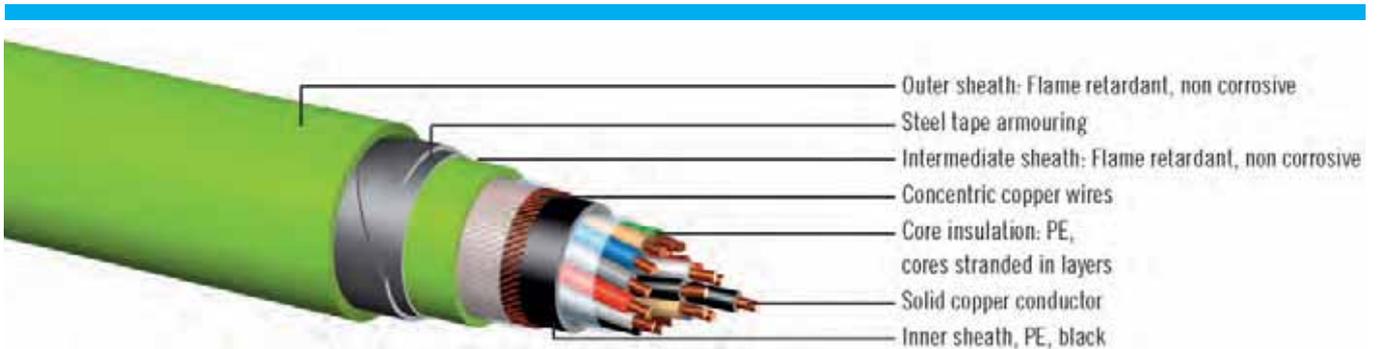
- ...X 1,4mm CCPSSP from 1... to 48...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

CCTSST - cores stranded in layers, steel tape armouring, flame retardant, non corrosive
 CCTSST-H acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	1,4
Conductor resistance (pair of cores) Ω/km	11.2±0.5
Mean value	≤ 11.9
Maximum value	
Insulation resistance MΩxkm	≥ 35000
50 Hz alternating voltage test	
Core-core Veff	2100
Core-screen Veff	2500

Application

Railway signalling cable, stranded cores, in railway control centres and surveillance systems.

Design

...H	number of single conductors
...mm	conductor diameter
CC	screen made of copper wires or tapes
T	inner sheath made of halogen-free, flame retardant copolymer
SS	armouring made of steel tapes
T	outer sheath made of halogen-free, flame retardant copolymer
FR	reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- ...H 1,4mm CCTSST from 4... to 61...

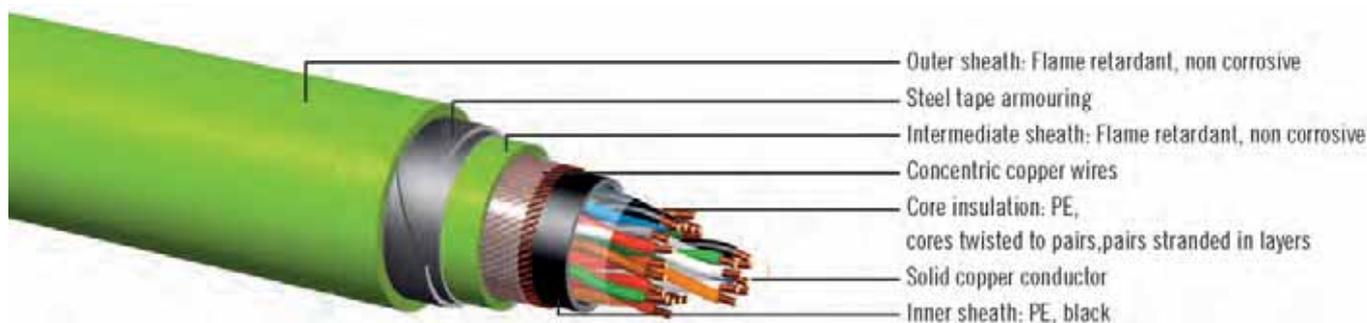
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

CCTSST - cores twisted to pairs, steel tape armouring, flame retardant, non corrosive

CCTSST-P acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	0,9
Conductor resistance Ω/km	
Mean value	27.5±1.0
Maximum value	≤ 29.0
Mutual capacitance at 1000±200 Hz nF/km	
Mean value	52±4
Maximum value	≤ 58
Capacitance difference at 1000±200 Hz pF/km	
Pair-pair mean value	45
Pair-pair maximum value	260
Pair-earth mean value	650
Pair-earth maximum value	2625
Attenuation at 1000Hz dB/km	12,8
Insulation resistance MΩxkm	≥ 35000
50 Hz alternating voltage test	
Core-core Veff	2100
Core-screen Veff	2500

Application

As a railway signalling cable, in railway control centres and surveillance systems.

Design

...P	number of the pairs
...mm	conductor diameter
CC	screen made of copper wires or tapes
T	inner sheath made of halogen-free, flame retardant copolymer
SS	armouring made of steel tapes
T	outer sheath made of halogen-free, flame retardant copolymer
FR	reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

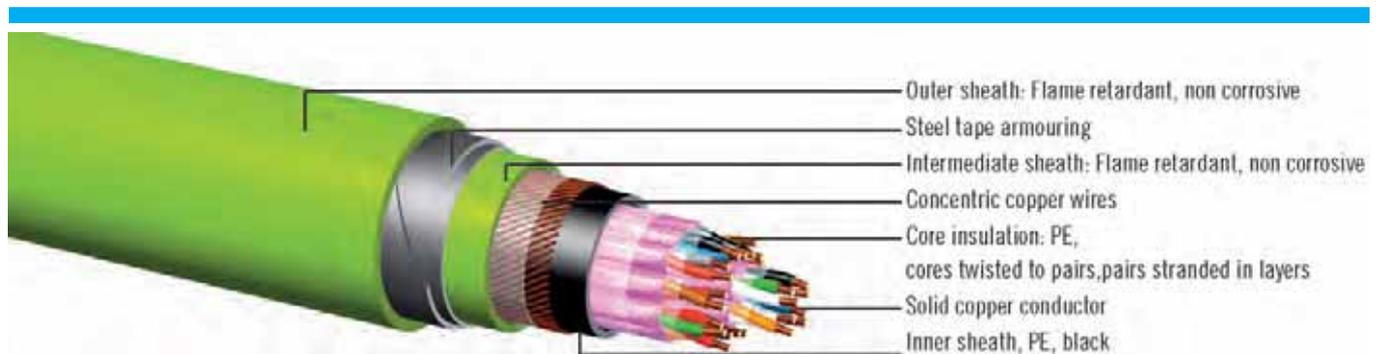
- ...P 0,9mm CCTSST

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

CCTSST - cores twisted to pairs, steel tape armouring, flame retardant, non corrosive
 CCTSST-PI acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	1,4
Conductor resistance Ω/km	
Mean value	11.2±0.5
Maximum value	≤ 11.9
Mutual capacitance at 1000±200 Hz nF/km	
Mean value	59±3
Maximum value	≤ 65
Near-end crosstalk attenuation dB at 10 kHz	≥ 75
Far-end crosstalk attenuation dB at 10 kHz	≥ 65
Insulation resistance MΩxkm	≥ 35000
50 Hz alternating voltage test	
Core-core Veff 2,500	4500
Core-screen Veff	1500

Application

As a railway signalling cable, in railway control centres and surveillance systems.

Design

...PI	number of pairs in foil
...mm	conductor diameter
CC	screen made of copper wires or tapes
T	inner sheath made of halogen-free, flame retardant copolymer
SS	armouring made of steel tapes
T	outer sheath made of halogen-free, flame retardant copolymer
FR	reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- ...PI 0,9mm CCTSST from 6... to 14...

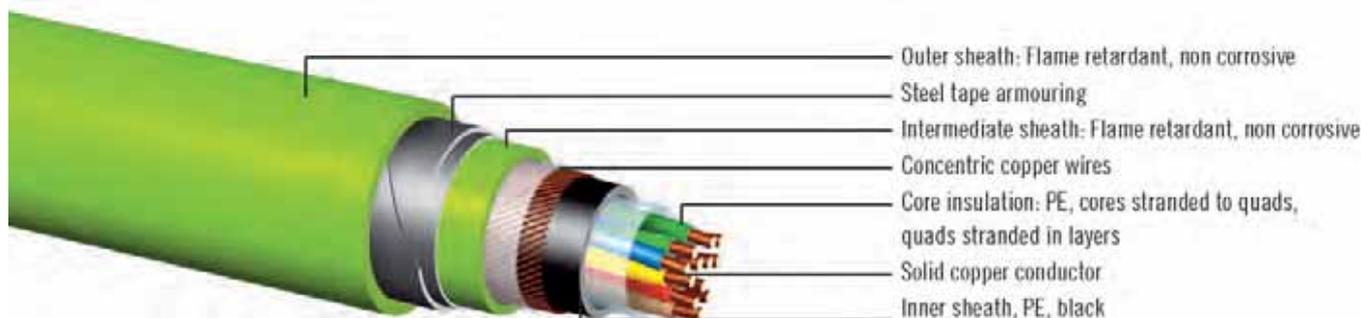
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

CCTSST - cores stranded to quads, steel tape armouring, flame retardant, non corrosive

CCTSST-X acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	0,9	1,4
Conductor resistance Ω/km		
Mean value	27.5±1	11.2±0.5
Maximum value	≤29.0	≤11.9
Mutual capacitance at 1000±200 Hz nF/km	38±3	41±4
Mean value	≤45	≤48
Maximum value		
Capacitance difference at 1000±200 Hz pF/km		
Pair-pair mean value	35	35
Pair-pair maximum value	250	250
Pair-earth mean value	320	320
Pair-earth maximum value	1200	1200
Attenuation at 1000 Hz dB/km	0.7	0.46
Insulation resistance at 1000 Hz MΩ/km	≥35000	≥35000
50 Hz alternating voltage test		
Core-core Veff	2100	2100
Core-screen Veff	2500	2500

Application

As a railway signalling cable, in railway control centres and surveillance systems.

Design

- ...X number of the quads
- ...mm conductor diameter
- CC screen made of copper wires or tapes
- T inner sheath made of halogen-free, flame retardant copolymer
- SS armouring made of steel tapes
- T outer sheath made of halogen-free, flame retardant copolymer
- FR reduction factor characteristic

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- ...X 0,9mm CCTSST

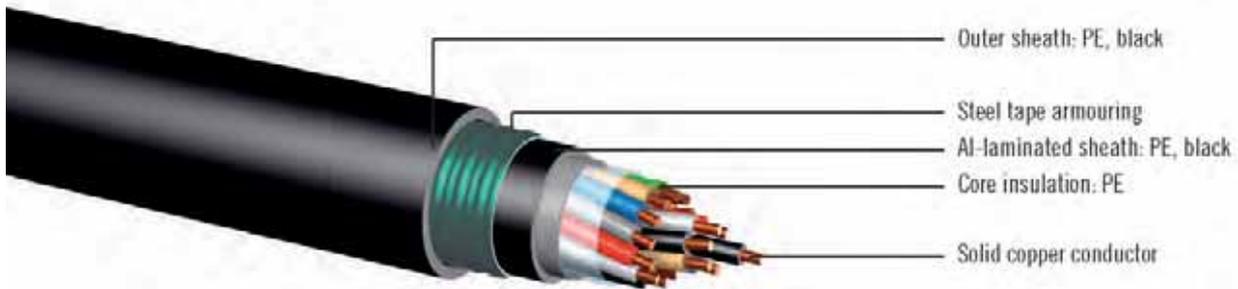
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

EAPSP - single conductors, Al-laminated inner sheath, steel tape armouring

EAPSP-H acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	1,4
Conductor resistance Ω/km	
Mean value	11.2±0.5
Maximum value	≤ 11.9
Insulation resistance GΩxkm	≥ 35000
50 Hz alternating voltage test	
Core/core	2100
Core/screen	2500

Application

Railway signalling cable, stranded cores, in railway control centres and surveillance systems.

Design

- ...H number of the single conductors
- ...mm conductor diameter
- EA Al tape
- P inner sheath made of PE
- S armouring made of steel tape
- P outer sheath made of PE

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- ...H 1,4mm EAPSP from 4... to 48...

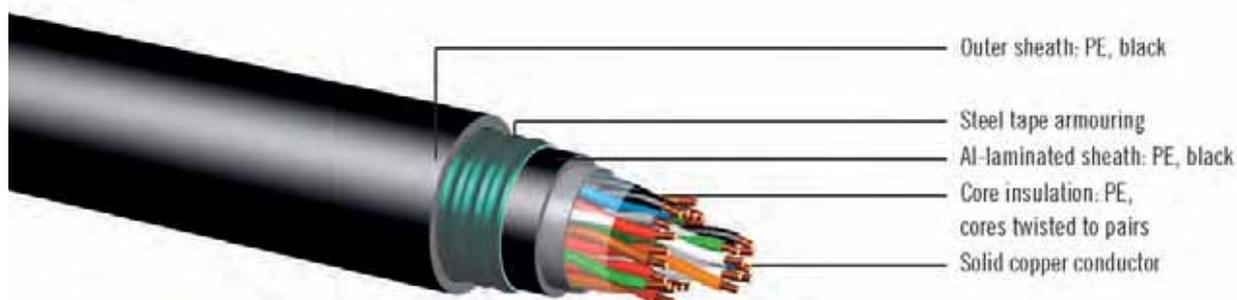
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

EAPSP - cores twisted to pairs, Al-laminated inner sheath, steel tape armouring

EAPSP-P acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	0,9
Conductor resistance Ω/km	
Mean value	27.5±1.0
Maximum value	≤ 29.0
Mutual capacitance at 1000±200Hz nF/km	
Mean value	52±4
Maximum value	≤ 58
Capacitance difference at 1000±200 Hz pF/km	
Pair-pair mean value	45
Pair-pair maximum value	260
Pair-earth mean value	650
Pair-earth maximum value	2625
Attenuation at 1000Hz dB/km	< 12,8
Insulation resistance MΩxkm	≥ 35000
50 Hz alternating voltage test	
Core/core	2100
Core/screen	2500

Application

As a railway signalling cable, in railway control centres and surveillance systems.

Design

...P	number of the pairs
...mm	conductor diameter
P	inner sheath made of PE
S	armouring made of steeltape
P	outer sheath made of PE

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- ...P 0,9mm EAPSP

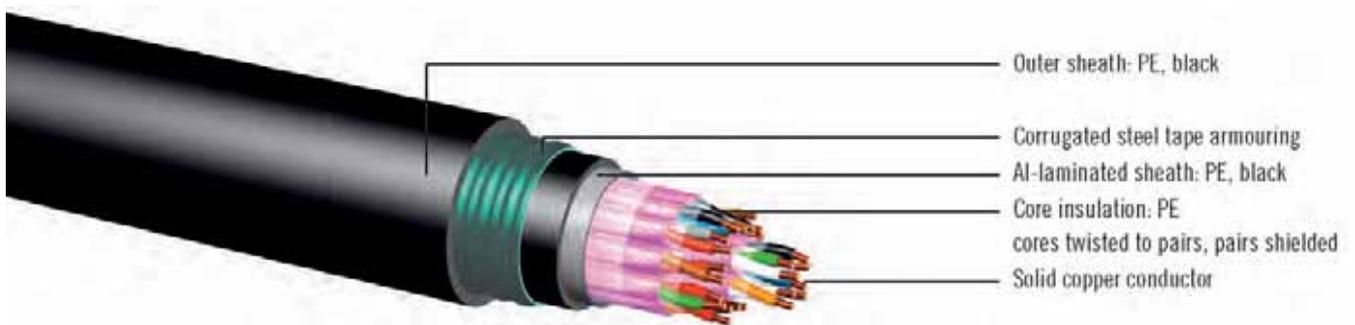
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

EAPSP - cores twisted to pairs, Al-laminated inner sheath, steel tape armouring

EAPSP-PI acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	1,4
Conductor resistance Ω/km	
Mean value	11.2±0.5
Maximum value	≤ 11.9
Mutual capacitance at 1000±200 Hz nF/km	
Mean value	59±3
Maximum value	≤ 65
Near-end crosstalk attenuation dB at 10 kHz	≥ 75
Far-end crosstalk attenuation dB at 10 kHz	≥ 65
Insulation resistance MΩxkm	≥ 35000
50 Hz alternating voltage test	
Core/core	4500
Core/screen	1500

Application

As a railway signalling cable, in railway control centres and surveillance systems.

Design

...PI	number of the shielded pairs
...mm	conductor diameter
EA	Al tape
P	inner sheath made of PE
S	armouring made of steeltape
P	outer sheath made of PE

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- ...PI 0,9mm EAPSP from 3... to 20...

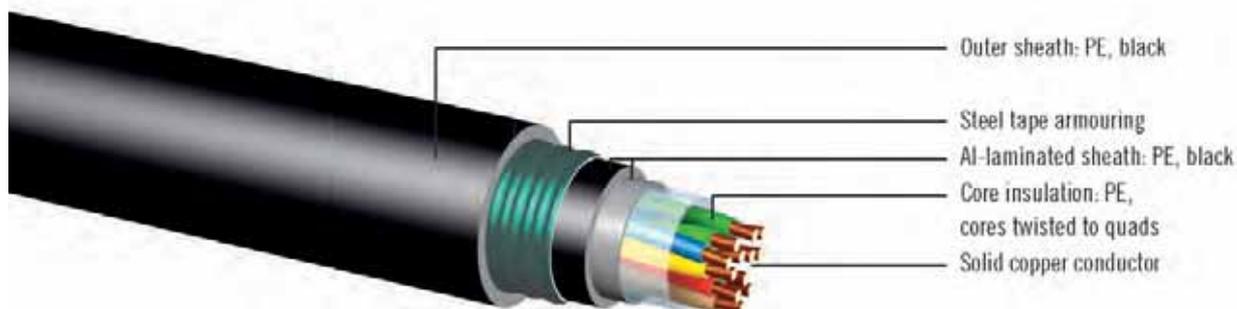
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

EAPSP - cores twisted to pairs, Al-laminated inner sheath, steel tape armouring

EAPSP-X acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	0,9	1,4
Conductor resistance Ω/km		
Mean value	27.5±1	11.2±0.5
Maximum value	≤ 29.0	≤ 11.9
Mutual capacitance at 1000±200 Hz nF/km		
Mean value	38±3	41±4
Maximum value	≤ 45	≤ 48
Capacitance difference at 1000±200 Hz pF/km		
Pair-pair mean value	35	35
Pair-pair maximum value	250	250
Pair-earth mean value	320	320
Pair-earth maximum value	1200	1200
Attenuation at 1000 Hz dB/km	0.7	0.46
Insulation resistance at 1000 Hz MΩxkm	≥ 35000	≥ 35000
50 Hz alternating voltage test		
Core/core	2100	2100
Core/screen	2500	2500

Application

As a railway signalling cable, in railway control centres and surveillance systems.

Design

- ...X number of the quads
- ...mm conductor diameter
- EA Al tape
- P inner sheath made of PE
- S armouring made of steeltape
- P outer sheath made of PE

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

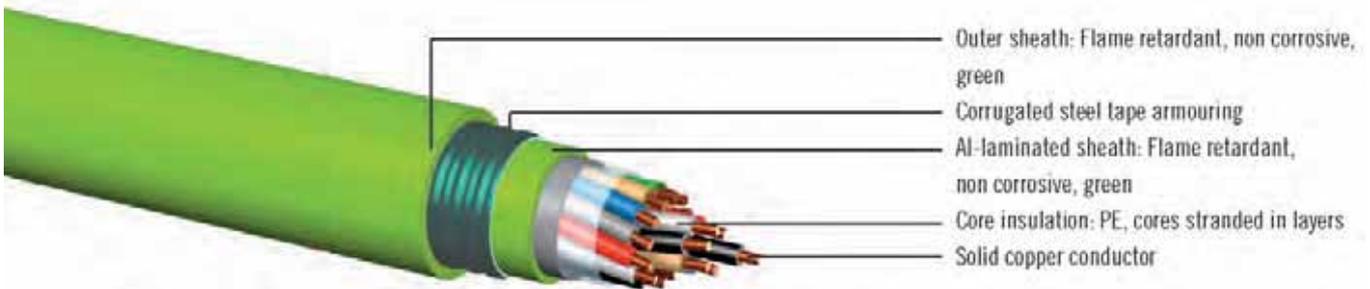
- ...X 0,9mm EAPSP from 1... to 27...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

EATST - Al-laminated inner sheath, steel tape armouring, Flame retardant, non corrosive
 EATST-H acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Outer sheath: Flame retardant, non corrosive, green
 Corrugated steel tape armouring
 Al-laminated sheath: Flame retardant, non corrosive, green
 Core insulation: PE, cores stranded in layers
 Solid copper conductor



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	1,4
Conductor resistance Ω/km	
Mean value	11.2±0.5
Maximum value	≤ 11.9
Insulation resistance at 1000 Hz MΩxkm	≥ 35000
50 Hz alternating voltage test	
Core/core	2100
Core/screen	2500

Application

Railway signalling cable, stranded cores, in railway control centres and surveillance systems.

Design

...H	number of the single conductors
...mm	conductor diameter
EA	Al tape
T	inner sheath made of halogen-free, flame retardant copolymer
S	armouring made of steel tape
T	outer sheath made of halogen-free, flame retardant copolymer

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- ...H 1,4mm EAPSP from 4... to 75...

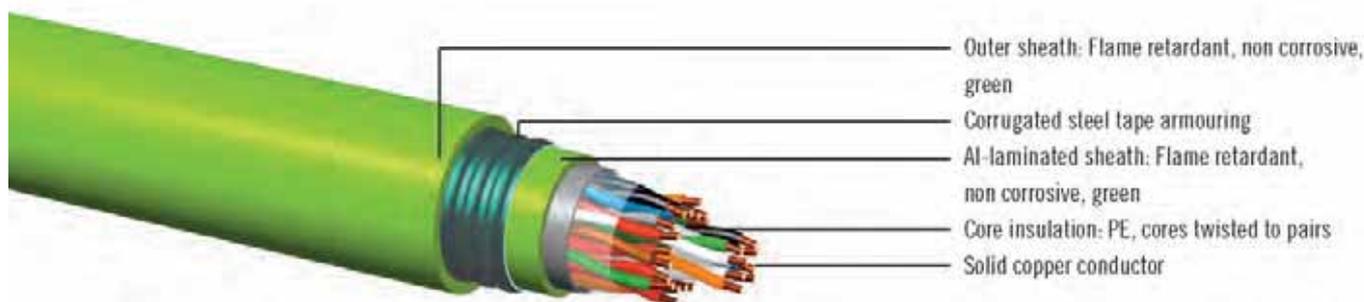
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

EATST - cores twisted to pairs, Al-laminated inner sheath, steel tape armouring

EATST-P acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	0,9
Conductor resistance Ω/km	
Mean value	27.5±1.0
Maximum value	≤ 29.0
Mutual capacitance at 1000±200 Hz nF/km	
Mean value	52±4
Maximum value	≤ 58
Capacitance difference at 1000±200 Hz pF/km	
Pair-pair mean value	45
Pair-pair maximum value	260
Pair-earth mean value	650
Pair-earth maximum value	2625
Attenuation at 1000 Hz dB/km	12.8
Insulation resistance MΩxkm	≥ 35000
50 Hz alternating voltage test	
Core/core	2100
Core/screen	2500

Application

As a railway signalling cable, in railway control centres and surveillance systems.

Design

...P	number of the pairs
...mm	conductor diameter
T	inner sheath made of halogen-free, flame retardant copolymer
S	armouring made of steel tape
T	outer sheath made of halogen-free, flame retardant copolymer

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

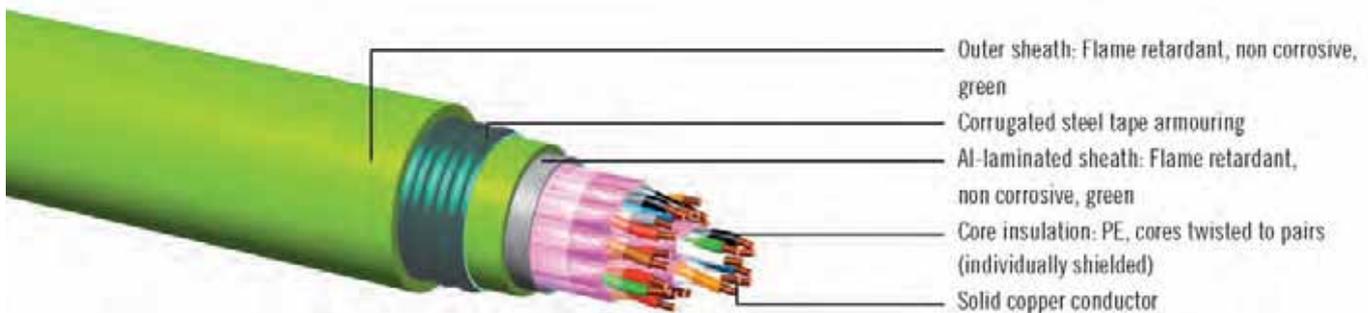
- ...P 0,9mm EAPSP

- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

EATST - Al-laminated inner sheath, steel tape armouring, Flame retardant, non corrosive
 EATST-PI acc. to E. T. 03.365.051.6 (RENFE / ADIF)



- Outer sheath: Flame retardant, non corrosive, green
- Corrugated steel tape armouring
- Al-laminated sheath: Flame retardant, non corrosive, green
- Core insulation: PE, cores twisted to pairs (individually shielded)
- Solid copper conductor



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	1,4
Conductor resistance Ω/km	
Mean value	11.2±0.5
Maximum value	≤ 11.9
Mutual capacitance at 1000±200 Hz nF/km	
Mean value	59±3
Maximum value	≤ 65
Near-end crosstalk attenuation dB at 10 kHz	≥ 75
Far-end crosstalk attenuation dB at 10 kHz	≥ 65
Insulation resistance MΩxkm	≥ 35000
50 Hz alternating voltage test	
Core/core	4500
Core/screen	1500

Application

As a railway signalling cable, in railway control centres and surveillance systems.

Design

- ...PI number of the shielded pairs
- ...mm conductor diameter
- EA Al tape
- T inner sheath made of halogen-free, flame retardant copolymer
- S armouring made of steel tape
- T outer sheath made of halogen-free, flame retardant copolymer

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- ...PI 0,9mm EATST

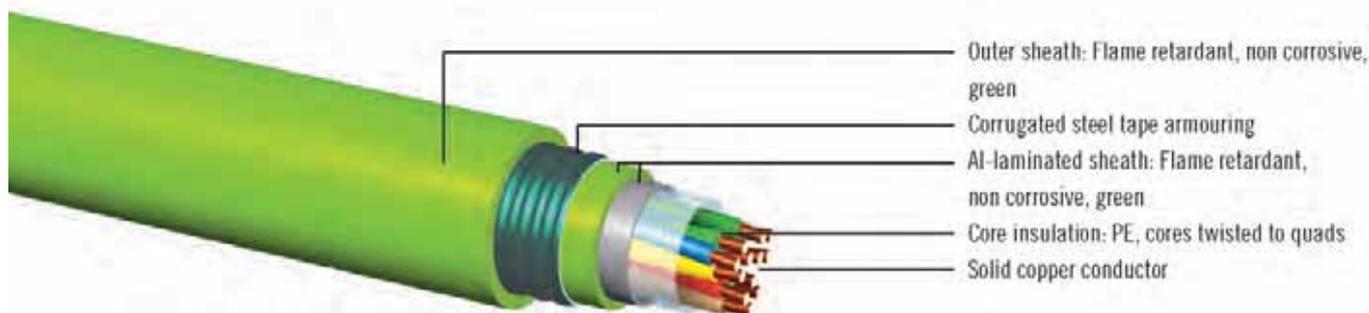
- Use www.bayka.de or this QR-Code for our full portfolio:



BayRail® - Signalling cables

EATST - cores twisted to pairs, Al-laminated inner sheath, steel tape armouring

EATST-X acc. to E. T. 03.365.051.6 (RENFE / ADIF)



Outer sheath: Flame retardant, non corrosive, green
 Corrugated steel tape armouring
 Al-laminated sheath: Flame retardant, non corrosive, green
 Core insulation: PE, cores twisted to quads
 Solid copper conductor



Standards

adif E.T. 03.365.051.6

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm ²	0,9	1,4
Conductor resistance Ω/km		
Mean value	27.5±1	11.2±0.5
Maximum value	≤ 29.0	≤ 11.9
Mutual capacitance at 1000±200 Hz nF/km		
Mean value	38±3	41±4
Maximum value	≤ 45	≤ 48
Capacitance difference at 1000±200 Hz pF/km		
Pair-pair mean value	35	35
Pair-pair maximum value	250	250
Pair-earth mean value	320	320
Pair-earth maximum value	1200	1200
Attenuation at 1000 Hz dB/km	0.7	0.46
Insulation resistance at 1000 Hz MΩxkm	≥ 35000	≥ 35000
50 Hz alternating voltage test		
Core/core	2100	2100
Core/screen	2500	2500

Application

As a railway signalling cable, in railway control centres and surveillance systems.

Design

- ...X number of the quads
- ...mm conductor diameter
- EA Al tape
- T inner sheath made of halogen-free, flame retardant copolymer
- S armouring made of steel tape
- T outer sheath made of halogen-free, flame retardant copolymer

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- ...X 0,9mm EAPSP

- Use www.bayka.de or this QR-Code for our full portfolio:



Telecommunication



BayCom®

Telecommunication cables

Telecommunication cables with copper

98 - 104



BayCom®

Telecommunication cables - rail foot

Telecommunication cables with copper - rail foot

105



BayCom®

Telecommunication cables - aerial cable

Telecommunication cables with copper - aerial cable

106



BayCom®

Telecommunication cables - Fibre Optic (FOC)

Telecommunication cables with fibre optic

107-108



BayCom®

Telecommunication cables - FO aerial cable

Telecommunication cables with fibre optic - aerial cable

109



BayCom®

Telecommunication cables - FO indoor cable

Telecommunication cables with fibre optic - indoor cable

110-111



RailOptic®

Telecommunication cables - FO RailOptic®

Telecommunication cables with fibre optic - rail foot cable - RailOptic®

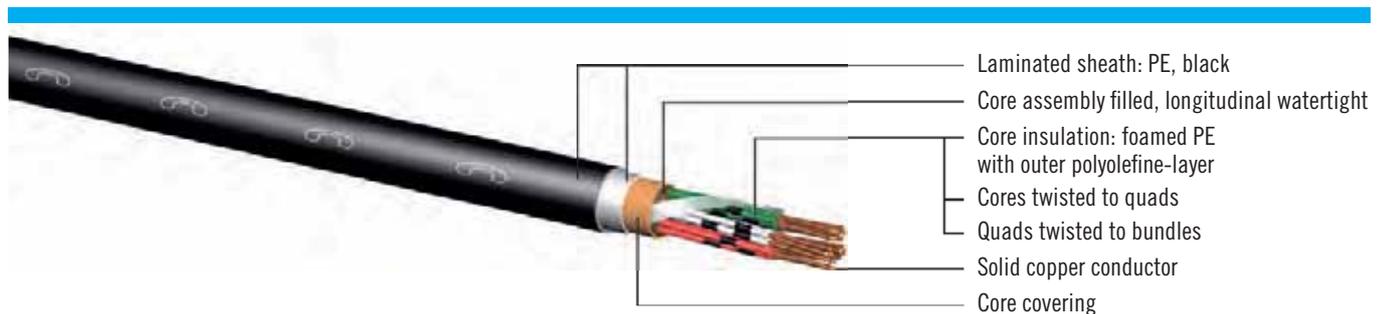
112



BayCom[®] - Railway telecommunication cables

A-02YSF(L)2Y ... Still - cores twisted to quads, Al-laminated sheath

...x2x0,6 acc. to DB Dlk 1.013.151y



Standards

Dlk 1.013.151y and/or DIN VDE 0816-part 1.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,6
Conductor resistance (pair of cores) Ω/km	≤130
Resistance difference Ω/km	≥ 5
Mutual capacitance at 800Hz nF/km	≤ 42
Capacitive couplings pF/km at 800 Hz	
k1 (98%/100% of all values)	≤ 1333/2666
k9-12 (98%/100% of all values)	≤ 333/1000
Operating voltage V	≤ 225
Alternating voltage test 50 Hz	
core-core Veff	500
core-screen Veff	2000
Temperature ranges	
during laying, installing °C	-20 to +50
before and after laying, installing °C	-40 to +70

Application

As connection cable in subscriber networks and private branch exchanges, for telephony and data transmission. Suitable for laying in the ground and in cable ducts, as well as for threading into cable conduits. The cables are approved by VDE (certificate with production monitoring) and released for use in the area of operation of Deutsche Bahn AG.

Type Designation Codes

A	outdoor cable
02YS	conductor insulation made from cell PE with outer polyolefin layer
F	cable core filled with petroleum jelly, longitudinally watertight
(L)2Y	laminated sheath, transversally watertight
St III	starquad in the local cable
Bd	stranded in bundles
(H42)	Mutual capacitance max value 42 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-02YSF(L)2Y from 6x... to 200x...

- Use www.bayka.de or this QR-Code for our full portfolio:

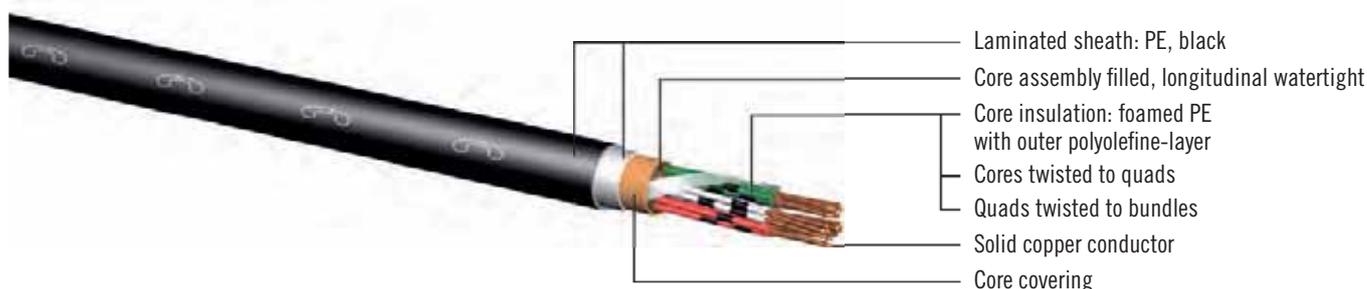


Edition: 05/2016

BayCom® - Railway telecommunication cables

A-02YSF(L)2Y ... StIII - cores twisted to quads, Al-laminated sheath

...x2x0,8 acc. to DB Dlk 1.013.151y



Standards

Dlk 1.013.151y and/or DIN VDE 0816-part 1.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,8
Conductor resistance (pair of cores) Ω/km	≤73.2
Resistance difference Ω/km	≥ 5
Mutual capacitance at 800Hz nF/km	≤ 42
Capacitive couplings pF/km at 800 Hz	
k1 (98%/100% of all values)	≤ 1333/2666
k9-12 (98%/100% of all values)	≤ 333/1000
Operating voltage V	≤ 225
Alternating voltage test 50 Hz	
core-core Veff	500
core-screen Veff	2000
Temperature ranges	
during laying, installing °C	-20 to +50
before and after laying, installing °C	-40 to +70

Application

As connection cable in subscriber networks and private branch exchanges, for telephony and data transmission. Suitable for laying in the ground and in cable ducts, as well as for threading into cable conduits. The cables are approved by VDE (certificate with production monitoring) and released for use in the area of operation of Deutsche Bahn AG.

Type Designation Codes

A	outdoor cable
02YS	conductor insulation made from cell PE with outer polyolefin layer
F	cable core filled with petroleum jelly, longitudinally watertight
(L)2Y	laminated sheath, transversally watertight
St III	starquad in the local cable
Bd	stranded in bundles
(H42)	Mutual capacitance max value 42 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

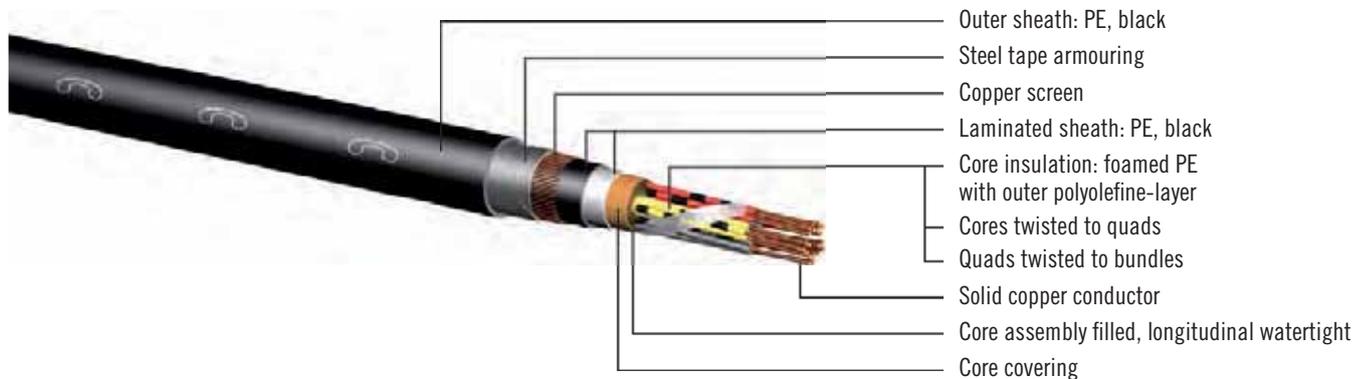
- A-02YSF(L)2Y from 10x... to 200x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayCom® - Railway telecommunication cables

AJ-02YSF(L)2Y ... StIII - cores twisted to quads, Al-laminated sheath, Copper screen
 ...x2x0,8 acc. to DB Dlk 1.013.151y



Standards

DIK 1.013.151y and/or DIN VDE 0816-part 1.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Conductor diameter mm	0,8
Conductor resistance (pair of cores) Ω/km	≤73,2
Resistance difference Ω/km	≥ 5
Mutual capacitance at 800Hz nF/km	≤ 42
Capacitive couplings pF/km at 800 Hz	
k1 (98%/100% of all values)	≤ 1333/2666
k9-12 (98%/100% of all values)	≤ 333/1000
Operating voltage V	≤ 225
Alternating voltage test 50 Hz	
core-core Veff	500
core-screen Veff	2000
Temperature ranges	
during laying, installing °C	-20 to +50
before and after laying, installing °C	-40 to +70

Application

As induction-protected connection cable in subscriber networks and private branch exchanges, for telephony and data transfer. Suitable for laying in the ground and in cable ducts, as well as for threading into cable conduits.

The cables are approved by VDE (certificate with production monitoring) and released for the use in the area of operation of Deutsche Bahn AG.

Type Designation Codes

AJ	outdoor cable with inductive protection
02YS	conductor insulation made from cell PE with outer polyolefin layer
F	cable core filled with petroleum jelly, longitudinally watertight
(L)2Y	laminated sheath, transversally watertight
St III	starquad in the local cable
Bd	stranded in bundles
(H42)	Mutual capacitance max value 42 nF/km

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

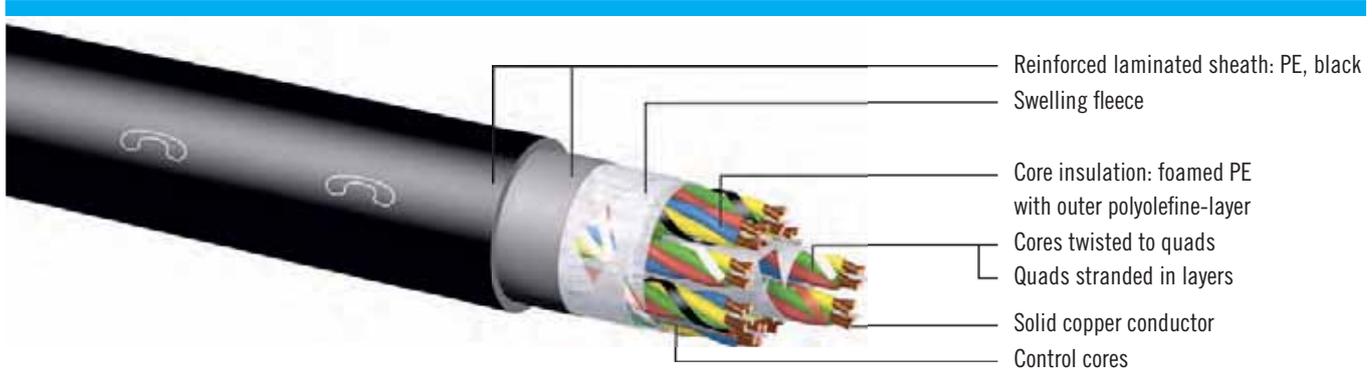
- AJ-02YSF(L)2YDB2Y from 10x... to 200x...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayCom® - Railway telecommunication cables

A-02YSTF(L)2YV - cores twisted to quads, Reinforced sheath, control cores
reinforced laminated sheath acc. to Arcor TNPO2 (DB AG)



Standards

Arcor TNP 02, Bayka company standard BayCom®

Technical Data

(Values for BayCom®★ in parentheses)

Conductor diameter mm	0,9	1,4
Conductor resistance (pair of cores) Ω/km	≤ 56.6	≤ 23.4
Resistance difference Ω/km (for conductors 0.9: BayCom®★: max. 20 % of the values ≤ 0.25)	≤ 0.30 (0.15)	≤ 0.20 (0.18)
Insulation resistance GΩxkm	≥ 10	≥ 10
Mutual capacitance at 800 Hz nF/km (for 1.4 mm conductor diameter: 15 % of the values ≤ 40.3)	≤ 34	≤ 36
Capacitive coupling k_1 pF (at 800 Hz)		
100 % of all values	≤ 400 (300)	≤ 400 (300)
80 % of all values	≤ 110	≤ 110
Capacitive coupling $k_{9,12}$ pF (at 800 Hz)		
100 % of all values	≤ 400 (250)	≤ 400 (250)
80 % of all values	≤ 110	≤ 110
Wave attenuation dB/km (at 1 MHz)		
100 % of all values	≤ 9,0 (8,5)	
80 % of all values	≤ 8,5	
Near-end crosstalk attenuation NEXT dB (HF-quad at 1 MHz)		
within the quad	≥ 45 (48)	
quad/quad within the group	≥ 55	
quad/quad between the groups	≥ 62	
for 2 HF quads	≥ 64	
for 4 HF quads	≥ 66	
for 6 HF quads	≥ 68	
for 8 HF quads		
LF quads dB (at 1 MHz, BayCom®★ only)		
within the quad	≥ 45	
quad/quad within the group	≥ 40	
Far-end crosstalk attenuation ELFEXT dB/km (at 1 MHz)		
within the HF quad	≥ 45	
within the LF quad (BayCom®★ only)	≥ 45	

Application

For general cabling at railway tracks. In the new construction case, as replacement types for the paper-insulated cables with F, TF, TFS and coax construction elements according to Dlk 1.01.106 of Deutsche Bahn AG. For laying in the ground, in pipe conduits and trough channels in accordance with the applicable regulations.

All trunk lines of the cables can be interconnected surge-free with trunk lines of the same nominal conductor diameter of the cables according to Dlk 1.01.106 (paper-metal sheath cables of the existing network).

BayCom®★ long-distance cables offer increased interference resistance and improved HF and LF properties compared to cables according to Arcor TNP 02.

Type Designation Codes

A	outdoor cable according to standard
02YS	conductor insulation made from cell PE with outer polyolefin layer (foam skin)
TF	cable core dry filled, longitudinally watertight
(L)2YV	reinforced laminated sheath, transversally watertight
STI	starquad in track cable quality (increased electrical properties)
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

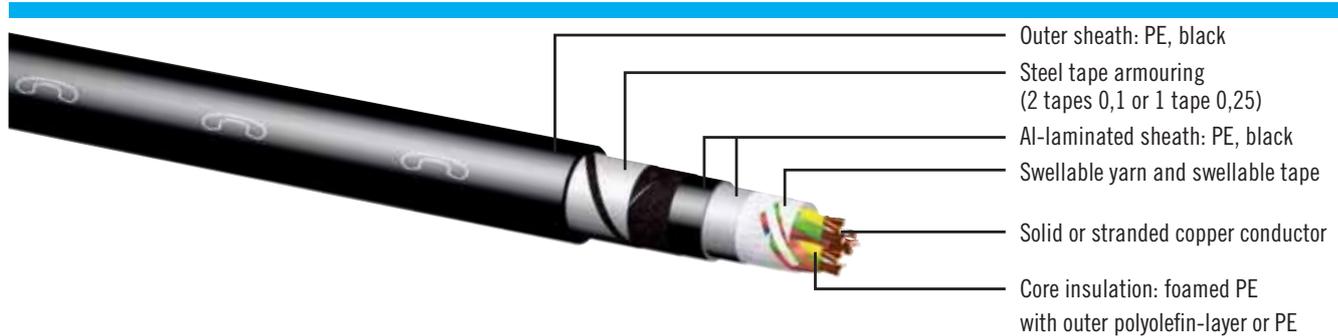
Product range

- A-02YSTF(L)2YV from 5x... to 30x...
- Use www.bayka.de or this QR-Code for our full portfolio:



BayCom® - Railway telecommunication cables

A-02YSTF(L)2YB2Y / A-02YSTF(L)2Y(SR)2Y - starquad, steel tape armouring with armouring acc. to Arcor TNP02 (DB AG)



Standards

Arcor TNP 02, Bayka company standard BayCom®

Technical Data

(Values for BayCom®★ in parentheses)

Conductor diameter mm	0,9	1,4
Conductor resistance (pair of cores) Ω/km	≤ 56.6	≤ 23.4
Resistance difference Ω/km (for conductors 0.9: BayCom®★: max. 20 % of the values ≤ 0.25)	≤ 0.30 (0.15)	≤ 0.20 (0.18)
Insulation resistance GΩxkm	≥ 10	≥ 10
Mutual capacitance at 800 Hz nF/km (for 1.4 mm conductor diameter: 15 % of the values ≤ 40.3)	≤ 34	≤ 36
Capacitive coupling k_1 pF (at 800 Hz)		
100 % of all values	≤ 400 (300)	≤ 400 (300)
80 % of all values	≤ 110	≤ 110
Capacitive coupling $k_{9,12}$ pF (at 800 Hz)		
100 % of all values	≤ 400 (250)	≤ 400 (250)
80 % of all values	≤ 110	≤ 110
Wave attenuation dB/km (at 1 MHz)		
100 % of all values	≤ 9,0 (8,5)	
80 % of all values	≤ 8,5	
Near-end crosstalk attenuation NEXT dB (HF-quad at 1 MHz)		
within the quad	≥ 45 (48)	
quad/quad within the group	≥ 55	
quad/quad between the groups	≥ 62	
for 2 HF quads	≥ 64	
for 4 HF quads	≥ 66	
for 6 HF quads	≥ 68	
for 8 HF quads		
LF quads dB (at 1 MHz, BayCom®★ only)		
within the quad	≥ 45	
quad/quad within the group	≥ 40	
Far-end crosstalk attenuation ELFEXT dB/km (at 1 MHz)		
within the HF quad	≥ 45	
within the LF quad (BayCom®★ only)	≥ 45	

Application

For general cabling at railway tracks. In the new construction case, as replacement types for the paper-insulated cables with F, TF, TFS and coax construction elements according to Dlk 1.01.106 of Deutsche Bahn AG. For laying in the ground, in pipe conduits and trough channels in accordance with the applicable regulations.

All trunk lines of the cables can be interconnected surge-free with trunk lines of the same nominal conductor diameter of the cables according to Dlk 1.01.106 (paper-metal sheath cables of the existing network).

BayCom®★ long-distance cables offer increased interference resistance and improved HF and LF properties compared to cables according to Arcor TNP 02.

Type Designation Codes

A	outdoor cable according to standard
02YS	conductor insulation made from cell PE with outer polyolefin layer (foam skin)
TF	cable core dry filled, longitudinally watertight
(L)2Y	laminated sheath, transversally watertight
B	steel tape armouring
(SR)	steel channel sheath
2Y	outer sheath made of PE
STI	starquad in track cable quality (increased electrical properties)
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

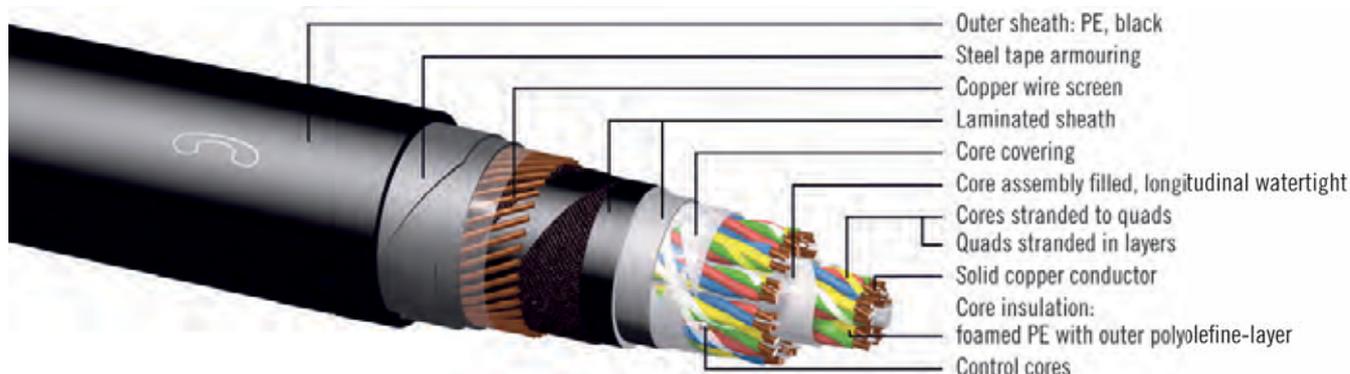
Product range

- A-02YSTF(L)2YB2Y 5x4x0,9 STI
- Use www.bayka.de or this QR-Code for our full portfolio:



BayCom® - Railway telecommunication cables

AJ-02YSTF(L)2YDB2Y - cores stranded quads, copper wire screen, control cores
with inductive protection acc. to Arcor TNPO2 (DB AG)



Standards

Arcor TNP 02, Bayka company standard BayCom®

Technical Data

(Values for BayCom®★ in parentheses)

Conductor diameter mm	0,9	1,4
Conductor resistance (pair of cores) Ω/km	≤ 56.6	≤ 23.4
Resistance difference Ω/km (for conductors 0.9: BayCom®★: max. 20 % of the values ≤ 0.25)	≤ 0.30 (0.15)	≤ 0.20 (0.18)
Insulation resistance GΩxkm	≥ 10	≥ 10
Mutual capacitance at 800 Hz nF/km (for 1.4 mm conductor diameter: 15 % of the values ≤ 40.3)	≤ 34	≤ 36
Capacitive coupling k1 pF (at 800 Hz)		
100 % of all values	≤ 400 (300)	≤ 400 (300)
80 % of all values	≤ 110	≤ 110
Capacitive coupling k9-12 pF (at 800 Hz)		
100 % of all values	≤ 400 (250)	≤ 400 (250)
80 % of all values	≤ 110	≤ 110
Wave attenuation dB/km (at 1 MHz)		
100 % of all values	≤ 9,0 (8,5)	
80 % of all values	≤ 8,5	
Near-end crosstalk attenuation NEXT dB (HF-quad at 1 MHz)		
within the quad	≥ 45 (48)	
quad/quad within the group	≥ 55	
quad/quad between the groups		
for 2 HF quads	≥ 62	
for 4 HF quads	≥ 64	
for 6 HF quads	≥ 66	
for 8 HF quads	≥ 68	
LF quads dB (at 1 MHz, BayCom®★ only)		
within the quad	≥ 45	
quad/quad within the group	≥ 40	
Far-end crosstalk attenuation ELFEXT dB/km (at 1 MHz)		
within the HF quad	≥ 45	
within the LF quad (BayCom®★ only)	≥ 45	

Application

For general cabling at railway tracks. In the new construction case, as replacement types for the paper-insulated cables with F, TF, TFS and coax construction elements according to Dlk 1.01.106 of Deutsche Bahn AG. For laying in the ground, in pipe conduits and trough channels in accordance with the applicable regulations.

All trunk lines of the cables can be interconnected surge-free with trunk lines of the same nominal conductor diameter of the cables according to Dlk 1.01.106 (paper-metal sheath cables of the existing network).

BayCom®★ long-distance cables offer increased interference resistance and improved HF and LF properties compared to cables according to Arcor TNP 02.

Type Designation Codes

AJ	outdoor cable with inductive protection
02YS	conductor insulation made from cell PE with outer polyolefin layer (foam skin)
TF	cable core dry filled, longitudinally watertight
(L)2Y	laminated sheath, transversally watertight
D	inductive protection made of copper wires
B	steel tape armouring
2Y	outer sheath made of PE
STI	starquad in track cable quality (increased electrical properties)
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

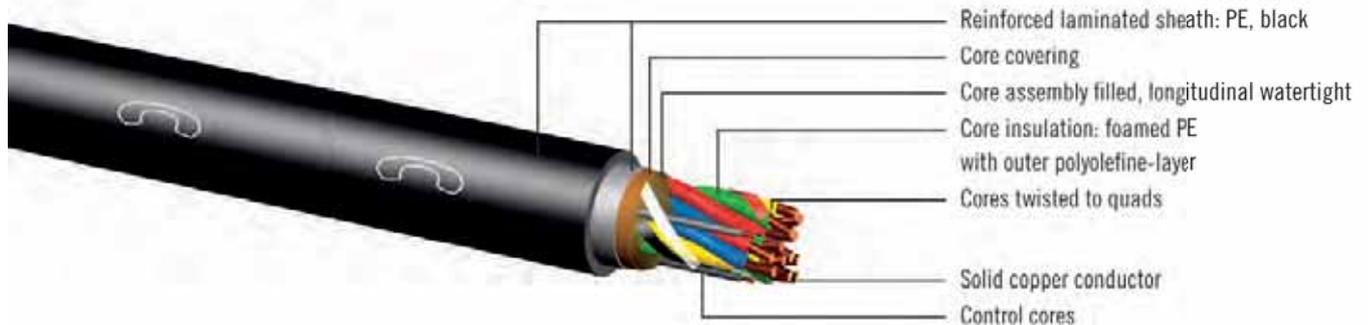
- AJ-02YSTF(L)2YDB2Y from 1x... to 30x...
- Use www.bayka.de or this QR-Code for our full portfolio:



BayCom® - Railway telecommunication cables

A-02YSF(L)2YV / A-02YSF(L)2YB2Y / A-02YSF(L)2Y(SR)2Y - branch cable

acc. to Arcor TNPO6 (DB AG)



Standards

Arcor TNP 06

Technical Data

(Values for BayCom®★ in parentheses)

Conductor diameter mm	0,9	1,4
Conductor resistance (pair of cores) Ω/km	≤ 56.6	≤ 23.4
Insulation resistance GΩxkm	≥ 10	≥ 10
Mutual capacitance at 800 Hz nF/km		
100 % of all values	≤ 38	≤ 40.3
85 % of all values	≤ 34	≤ 36
Capacitive coupling k_1 pF (at 800 Hz)		
100 % of all values	≤ 400	≤ 400
80 % of all values	≤ 110	≤ 110
Capacitive coupling k_{9-12} pF (at 800 Hz)		
100 % of all values	≤ 400	≤ 400
80 % of all values	≤ 110	≤ 110
Alternating voltage test 50 Hz		
core-core Veff	500	500
ore-screen Veff	2000	2000

Application

For general application as standardised branch cane in existing track communication cable systems in paper-metal sheath design (according to DIK. 1.01.106 - Deutsche Bahn AG) and in new systems installed using cables according to technical data sheet Arcor TNP 05.

For laying in the ground, in pipe conduits and trough channels in accordance with the applicable regulations. All trunk lines of the cables can be interconnected surge-free with trunk lines of the same nominal conductor diameter of the cables according to DIK 1.01.106 (paper-metal sheath cables of the existing network).

Type Designation Codes

A	outdoor cable according to standard
02YS	conductor insulation made from cell PE with outer polyolefin layer (foam skin)
F	cable core filled with petroleum jelly, longitudinally watertight
0F	cable core filled with filling material with low relative permittivity, longitudinally watertight
TF	cable core dry filled with swelling yarns and swelling fleeces, longitudinally watertight
(L)2Y	laminated sheath, transversally watertight
(L)2YV	reinforced laminated sheath, transversally watertight
B	steel tape armouring
(SR)	steel channel sheath
2Y	outer sheath made of PE
STI	starquad in track cable quality (increased electrical properties)
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-02YSF(L)B2Y from 2... to 3...

- Use www.bayka.de or this QR-Code for our full portfolio:

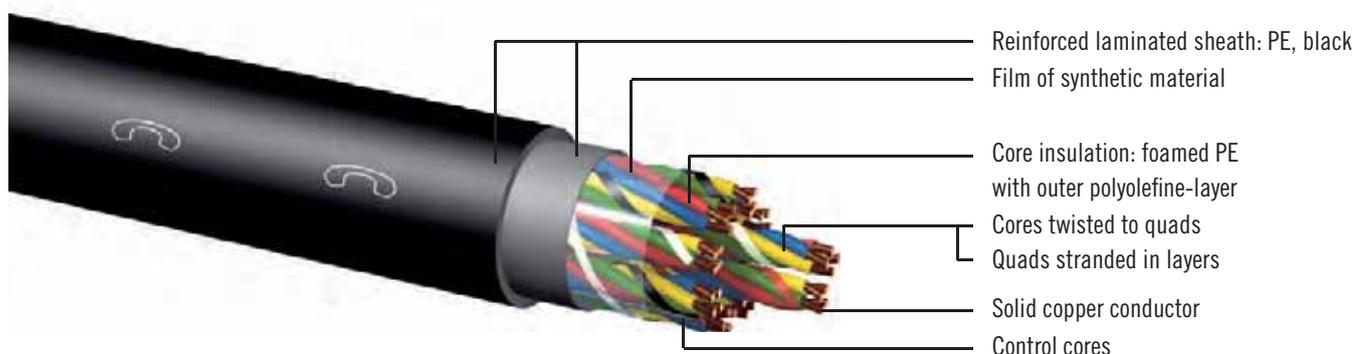


Edition: 05/2016

BayCom® - Railway telecommunication cables

A-02YSTF(L)2YV / A-02YSTF(L)2YB2Y / A-02YSTF(L)2Y(SR)2Y - ST I, rail-foot cables

acc. to DB TL 416.0520



Standards

DB TL 416.0520

Technical Data

Conductor diameter mm	0,7	1,5
Conductor resistance (pair of cores) Ω/km	≤ 54.5	≤ 22.5
Insulation resistance GΩxkm	≥ 10	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 34	≤ 38
Characteristic impedance Ω		
at 800 Hz	≈ 565	≈ 350
at 1 Mhz	≈ 150	≈ 150
Wave attenuation dB/km		
at 800 Hz	≤ 0.6	≤ 0.4
at 1 MHz	≤ 8.6	≤ 8.5
Near-end crosstalk attenuation HF quad dB		
at 1 MHz	≥ 45	≥ 45
an (within the quad)	≥ 55	≥ 55
an (quad/quad within the groups)		
Far-end crosstalk attenuation HF quad dB/km		
at 1 MHz	≥ 45	≥ 45

Application

For general cabling in telecommunication systems of DB AG, in particularly along tracks.

The cable is to be preferred for laying along or in the rail foot at train speeds up to 160 km/h or in further areas with increased vibration loads according to the applicable regulations, but also for laying in the ground, in pipe conduits and trough channels.

Not approved for use as overland line.

The cable is resistant against impact, vibration, and shock loads and features an UV-resistant outer sheath.

Type Designation Codes

A	outdoor cable according to standard
02YS	conductor insulation made from cell PE with outer polyolefin layer (foam skin)
TF	cable core dry filled, longitudinally watertight
(L)2Y	laminated sheath, transversally watertight
(L)2YV	reinforced laminated sheath, transversally watertight
B	steel tape armouring
(SR)	steel channel sheath
2Y	outer sheath made of PE
STI	starquad in track cable quality (increased electrical properties)
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

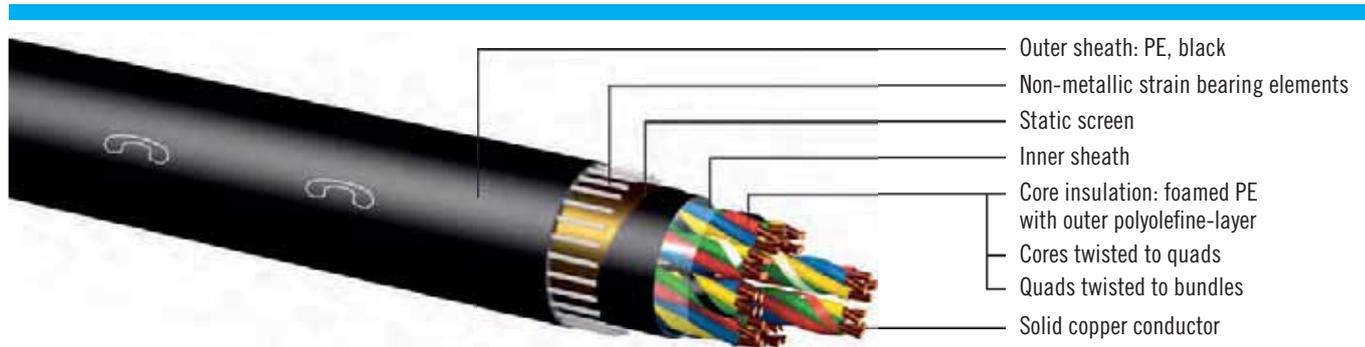
- A-02YSTF(L)2YB2Y from 3x... to 5x...
- Use www.bayka.de or this QR-Code for our full portfolio:



BayCom® - Railway telecommunication cables

A-02YS2Y(ST)(ZG)2Y - ST I, aerial cables

acc. to Arcor TNPO4 (DB AG)



Standards

Arcor TNP 04

Technical Data

Conductor diameter mm	0,9
Conductor resistance (pair of cores) Ohm/km	≤ 56.6
Resistance difference Ohm/km	≤ 0.30
Insulation resistance GOhm·km	≥ 10
Mutual capacitance at 800 Hz nF/km	≤ 36
Capacitive coupling k1 pF at 800 Hz	
100 % of all values	≤ 400
80 % of all values	≤ 100
Capacitive coupling k9-12 pF at 800 Hz	
100 % of all values	≤ 400
80 % of all values	≤ 100
Wave attenuation at 1 MHz dB/km	
100 % of all values	≤ 9.0
80 % of all values	≤ 8.5
Near-end crosstalk attenuation NEXT HF quad dB at 1 MHz	
an (quad)	≥ 45
an (quad/quad within a group)	≥ 55
an (quad/quad between the groups)	≥ 62
Far-end crosstalk attenuation ELFEXT HF quad dB/km at 1 MHz	
af (quad)	≥ 45

Application

For general cabling at railway tracks for the new construction case. For mounting to rods and further nodes of above-ground track construction according to the applicable regulations.

Not approved as rail foot cable. All trunk lines of the cables can be interconnected surge-free with trunk lines of the same nominal conductor diameter of the cables according to Dlk 1.01.106 - Deutsche Bahn AG (paper-metal sheath cables of the existing network).

Type Designation Codes

A	outdoor cable according to standard
02YS	conductor insulation made from cell PE with outer polyolefin layer (foam skin)
(ST)	static screen
(ZG)	composite construction: PE sheath with force-fittingly embedded glass yarns
2Y	outer sheath made of PE
STI	starquad in track cable quality (increased electrical properties)
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-02YS(ST)(ZG)2Y from 5... to 16...

- Use www.bayka.de or this QR-Code for our full portfolio:

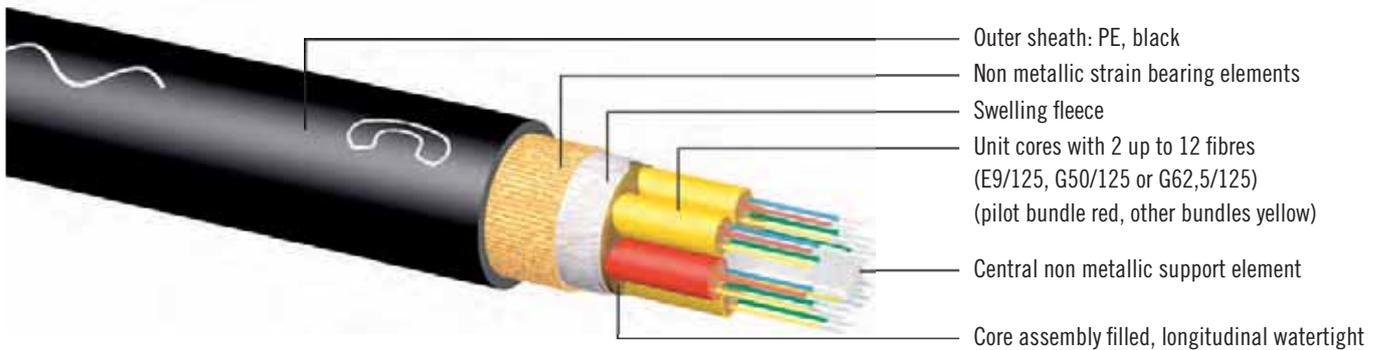


Edition: 05/2016

BayCom® - Railway telecommunication cables

A-DF(ZN)2Y - Outdoor FO-cable

acc. to DB Dik 1.011.003y



Standards

DB Dik 1.011.003y
The cables are compliant to RoHS EU Directive 2011/65/EU - RoHS 2.0 and Regulation no. 1907/2006 (REACH), current as of 20.06.2013.

Technical Data

Type of fibre	E9/125
Field diameter µm	9-10
Cladding diameter µm	125
Attenuation dB/km	
at 1310 nm	≤ 0,36
at 1550 nm	≤ 0,23
Chromatic dispersion ps/[nm x km]	
at 1310 +30/-15 nm	≤ 3,5
at 1550 +30/-70 nm	≤ 18
Permissible temperature range °C	
transport and storage	-40 to +70
laying	-10 to +60
operation	-30 to +70

Application

The FO outdoor cable according to this standard can be laid

- for laying in the ground,
- in the ground by pulling or blowing into a previously installed HDPE pipe or
- in trays along railway lines.

Use, planning and laying shall be carried out according to the applicable guidelines of the DB AG. The cables are approved for use in the DB AG network.

Type Designation Codes

A	outdoor cable
D	loose tube, filled
F	cable core filled with petrojelly - longitudinally watertight
(ZN)	non-metallic strength members
2Y	outer sheath made of polyethylene, PE

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

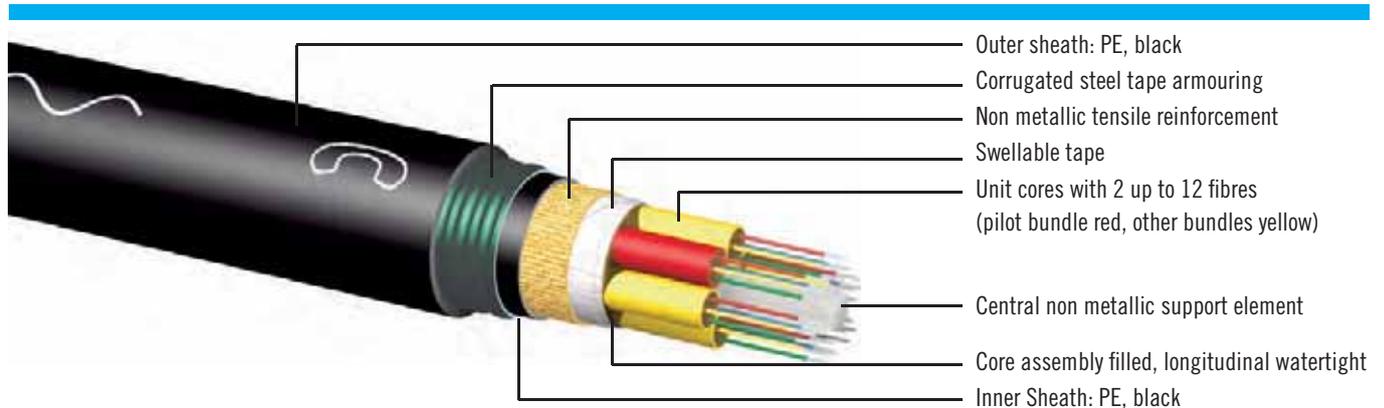
- A-DF(ZN)2Y from 6x2... to 16x12...

- Use www.bayka.de or this QR-Code for our full portfolio:



BayCom® - Railway telecommunication cables

A-DF(ZN)2Y(SR)2Y - with metallic armouring, longitudinally watertight, stranded loose tube
acc. DB Dlk 1.011.003y



Standards

DB Dlk 1.011.003y
 The cables are compliant to RoHS EU Directive 2011/65/EU -
 RoHS 2.0 and Regulation no. 1907/2006 (REACH), current as of
 20.06.2013.

Technical Data

Type of fibre	E9/125
Field diameter µm	9-10
Cladding diameter µm	125
Attenuation dB/km	
at 1310 nm	≤ 0,36
at 1550 nm	≤ 0,23
Chromatic dispersion ps/[nm x km]	
at 1310 +30/-15 nm	≤ 3,5
at 1550 +30/-70 nm	≤ 18
Permissible temperature range °C	
transport and storage	-40 to +70
laying	-10 to +60
operation	-30 to +70

Application

The FO outdoor cable according to this standard can be laid

- in the ground by pulling into a previously installed HDPE pipe or
- in trays along railway lines.

Use, planning and laying shall be carried out according to the applicable guidelines of the DB AG. The cables are approved for use in the DB AG network.

Type Designation Codes

A	outdoor cable
D	loose tube, filled
F	cable core filled with petrojelly - longitudinally watertight
(ZN)	non-metallic strength members
2Y	inner sheath made of polyethylene, PE
(SR)	corrugated steel tape armouring
2Y	outer sheath made of polyethylene, PE
LG	stranded in layers

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-DF(ZN)2Y(SR)2Y from 6x2... to 12x12...

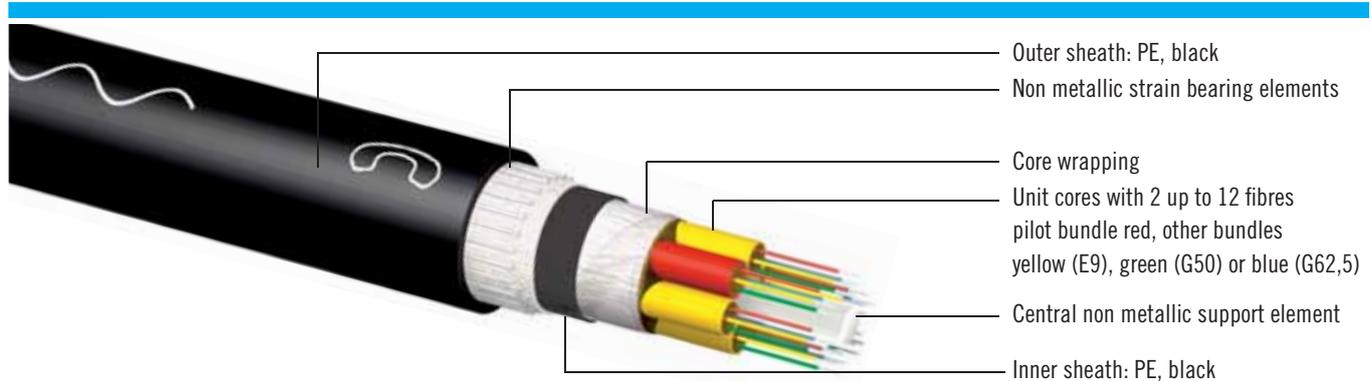
- Use www.bayka.de or this QR-Code for our full portfolio:



BayCom® - Railway telecommunication cables

A-D2Y(ZN)2Y - FO aerial cables, selfsupporting

acc. to DB Dik 1.011.003y



Standards

acc. to DB Dik 1.011.005y

The cables are compliant to RoHS EU Directive 2011/65/EU - RoHS 2.0 and Regulation no. 1907/2006 (REACH), current as of 20.06.2013.

Technical Data

Type of fibre	E9/125
Field diameter µm	9-10
Cladding diameter µm	125
Attenuation dB/km	
at 1310 nm	≤ 0,36
at 1550 nm	≤ 0,23
Chromatic dispersion ps/[nm x km]	
at 1310 +30/-15 nm	≤ 3,5
at 1550 +30/-70 nm	≤ 18
Permissible temperature range °C	
transport and storage	-25 to +60
laying	-15 to +50
operation	-40 to +60

Application

FO aerial cable ADSS (All-Dielectric Self-Supporting) for installation on overhead contact line poles, wood and other poles of DB AG. For planning and installation of this cable the directive „planning, construction, maintenance and inspection of fibre optic aerial cables at overhead contact line poles“ applies.

The cable is UV-resistant, resistant against shotgun pellets and suitable for use with high tensile, lateral pressure, vibration, bending and impact loading.

Type Designation Codes

A	outdoor cable
D	loose tube, filled
2Y	inner sheath made of polyethylene, PE
(ZN)	non-metallic strength members
2Y	outer sheath made of polyethylene, PE

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- A-DF(ZN)2Y from 6x2... to 12x12...

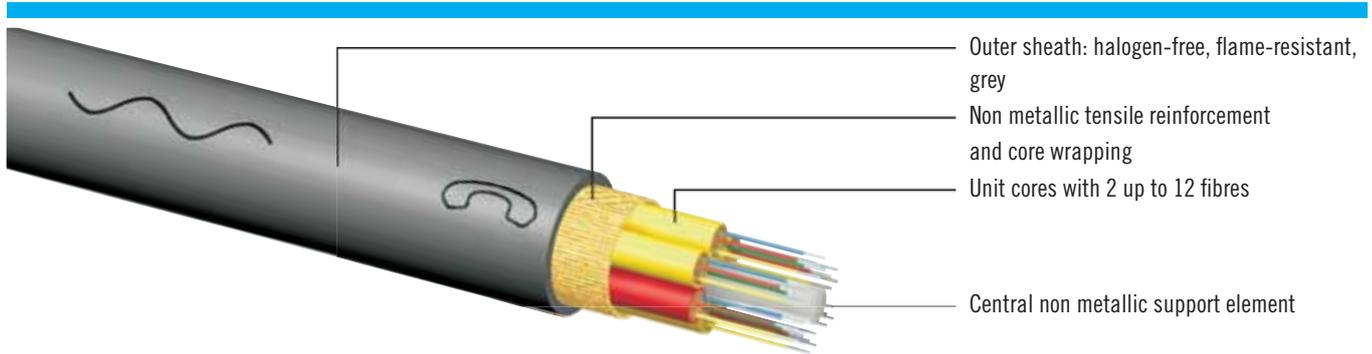
- Use www.bayka.de or this QR-Code for our full portfolio:



BayCom® - Railway telecommunication cables

I-D(ZN)H Arcor TNP07 E9/125 - FO indoor cables (FRNC/LSOH)

acc. to Arcor TNP07 (DB AG)



Outer sheath: halogen-free, flame-resistant, grey

Non metallic tensile reinforcement and core wrapping

Unit cores with 2 up to 12 fibres

Central non metallic support element



Standards

acc. to Arcor TNP 07.

The cables are in compliance with RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Type of fibre	E9/125
Field diameter μm	8,6-9,5
Cladding diameter μm	125
Attenuation dB/km	
at 1310 nm	$\leq 0,40$
at 1550 nm	$\leq 0,30$
Chromatic dispersion ps/[nm x km]	
at 1310 +60/-30 nm	≤ 5
at 1550 +30/-70 nm	≤ 21
at 1550 nm	≤ 19
Permissible temperature range °C	
transport and storage	-25 to +70
laying	-5 to +50
operation	-5 to +70

Application

FO indoor cable for installation in buildings

- as continuation of outdoor cables up to the cable termination equipment, and
- from cable termination equipment to distributors (in special cases)
- for in-house networks (multi-mode with graded index fibres)

This indoor cable is designed for laying on cable grids, grid routes, cable channels and raised floors. It is not designed for laying in the ground nor for outdoor installations.

FO indoor cables are available with central loose tube or with stranded loose tubes.

Type Designation Codes

- I** indoor cable
- D** loose tube, filled
- (ZN)** non-metallic tensile reinforcement
- H** outer sheath made of halogen-free, flame retardant copolymer

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- I-D(ZN)H from 1x4... to 6x12...

- Use www.bayka.de or this QR-Code for our full portfolio:

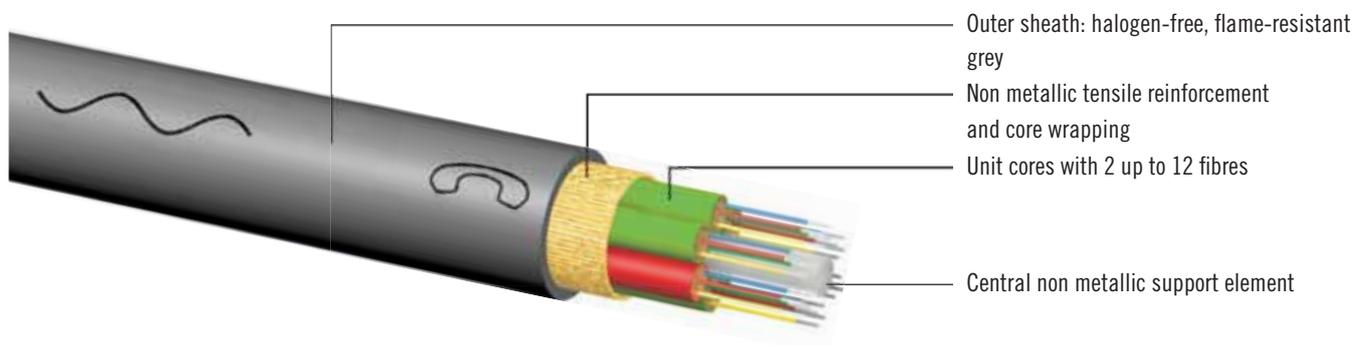


Edition: 05/2016

BayCom® - Railway telecommunication cables

I-D(ZN)H Arcor TNP07 G50/125 - FO indoor cables (FRNC/LSOH)

acc. to Arcor TNP07 (DB AG)



Standards

acc. to Arcor TNP 07

The cables are in compliance with RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Type of fibre	G50/125
Core diameter µm	50±0.3
Sheath diameter µm	125±0.3
Fibre attenuation dB/km	
at 850 nm	≤ 2,5
at 1300 nm	≤ 1,0
Bandwidth MHz x km	
at 850 nm	≥ 500
at 1300 nm	≥ 500
Permissible temperature range °C	
transport and storage	-25 to +70
laying	-5 to +50
operation	-5 to +70

Application

FO indoor cable for installation in buildings

- as continuation of outdoor cables up to the cable termination equipment, and
- from cable termination equipment to distributors (in special cases)
- for in-house networks (multi-mode with graded index fibres)

This indoor cable is designed for laying on cable grids, grid routes, cable channels and raised floors. It is not designed for laying in the ground nor for outdoor installations.

FO indoor cables are available with central loose tube or with stranded loose tubes.

Type Designation Codes

I	indoor cable
D	loose tube, filled
(ZN)	non-metallic tensile reinforcement
H	outer sheath made of halogen-free, flame retardant copolymer

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- I-D(ZN)H from 1x4... to 6x12...

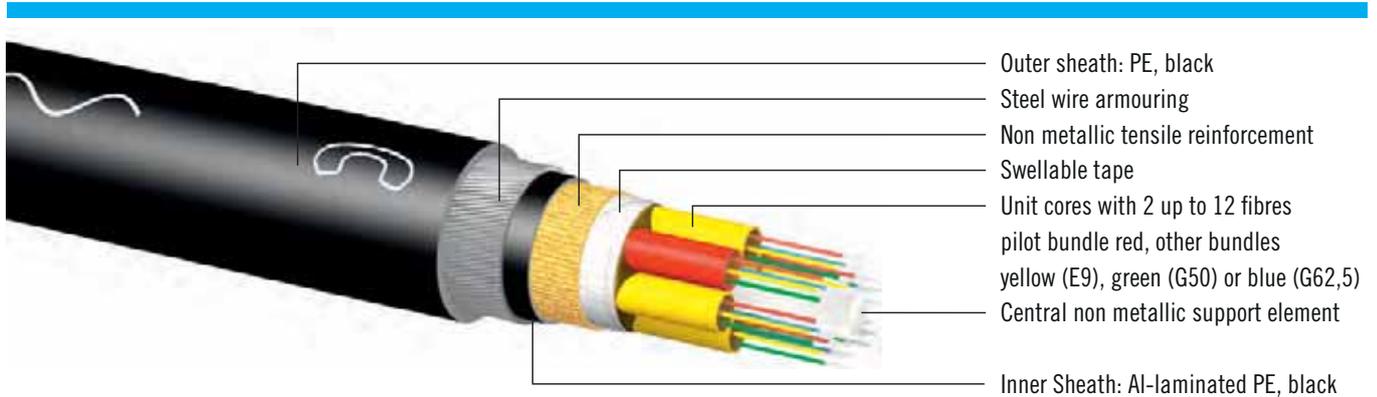
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RailOptic® - SFK FO rail foot cable

A-DQ(ZN)(L)2YRG2Y - rail foot cable

acc. to DB TL 416.0510



Standards

Technical specifications DB TL 416.0510, Bayka RailOptic SFK company standard.

The cables are in compliance with EU LVD (Low Voltage Directive 73/23/EEC) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Fibre type single-mode fibre	E9...10
Core diameter µm	9
Sheath diameter µm	125
Fibre attenuation dB/km	
at 1310 nm	≤ 0,36
at 1550 nm	≤ 0,23
Chromatic dispersion ps/[nm x km]	
at 1310 +30/-15 nm	≤ 3,5
at 1550 +30/-70 nm	≤ 18
Temperature ranges	
During laying, installing along the rail foot °C	+5 to +25 (+35)
Additional laying specification must be observed starting from 25 °C	
Operating °C	-25 to +60

The specifications in the technical bulletins of DB AG apply for planning and construction.

Application

RailOptic® SFK FO rail foot cables are suitable for the use in telecommunication systems. They are preferred for laying directly along the rail foot or other areas with vibration and impact loads. They are also suitable for laying in the ground, in trough channels and pipe conduits.

The laying of cables along the rail foot is an economical variation for cable systems for regional and branch lines, for site clearance and troubleshooting. Compared to traditional cable lines, the design and installation expense is considerably reduced, since no civil engineering work is required.

The installation can be carried out by qualified companies without special vehicles, tools and with standard rail foot clamps. The cable accessories (joints, final boxes) come from the standard program of Tyco Electronics.

Rail Optic ® SFK FO rail foot cables are universal and can be installed together with BayRail® Cu rail foot cables.

Type Designation Codes

A	outdoor cable
D	loose tube, filled
Q	cable core dry filled, longitudinally watertight
(ZN)	non-metallic stress relief elements
(L)2Y	laminated sheath, transversally watertight
RG	steel wire armouring, rodent-proof
2Y	outer sheath made of PE

Special Designs

- Design according to national and international standards
- Design according to customer specifications

Product range

- RailOptic® A-DQ(ZN)(L)2YRG2Y from 6x4 to 6x12
- Use www.bayka.de or this QR-Code for our full portfolio:



Edition: 05/2016

Bayka

Grounding & power cables



Grounding Cables

Grounding cables

116-117



Power Cables ≤ 1 kV

Power cables ≤ 1 kV

118-121



Power Cables 3-6 kV

Power cables 3-6 kV

122-124



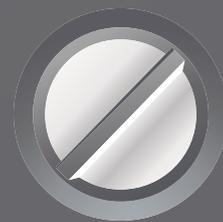
KILOWATT-HOURS



POWER



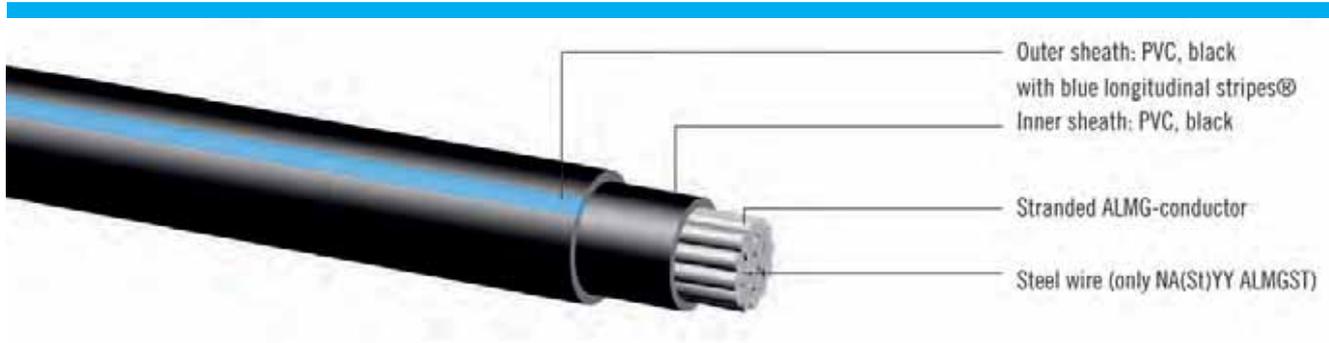
METER



BayEnergy® Railway grounding cables

(N)AYY / (N)A(St)YY / (N)A(St)2XH - 1-core, theft defence

acc. to Bayka standard BayEnergy 01, resp. 02



Optional:



Standards

Bayka company standard BayEnergy 02.
 The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

The design with improved behaviour in the event of fire is halogen-free according to DIN EN 50267-2-2, flame retardant according to DIN EN 60332-1-2.

Technical Data

Rated voltage U_0/U kV	0,6/1		
Nominal cross section mm ²	75	100	110
Conductor resistance Ω /km	≤ 0.468	≤ 0.365	≤ 0.32

Short-circuit current according to Deutsche Bahn standard 997.0205A01 (1.3.2003) paragraph 2 "current carrying capability"

Vibration resistance according to DIK 1.013.168y (sinusoidal oscillation load type 1)

Permissible temperature range °C during laying, installing and similar before and after laying

-10 to +60
-30 to +60

Application

BayEnergy® aluminium railway grounding cables are used as grounding connection resistant to short-circuit current, for potential equalisation between rails and conductive parts not under voltage (e.g. posts, brackets of train preheating equipment, acoustic barriers, handrails). The advanced and improved railway grounding cables are marked using two blue Bayka identification strips® on the outer sheath, and document Bayka quality „made in Germany“.

BayEnergy® aluminium railway grounding cables are approved by Germany's Federal Railway Office (EBA) and released for use in the area of operation of Deutsche Bahn AG. The imprint „Property of DB“ or „Property of the Transport Services“ is used as property notice and as theft defence. BayEnergy® aluminium railway grounding cables can be easily differentiated from copper grounding cables keeping potential thieves away. Further properties:

- Resistant against impact, vibration and shock loads
- UV-resistant
- Torsion-free laying can be easily checked
- Easy laying and installation, handling with standard tools

In the case of DB AG, the EBA-approved design versions (N)AYY-0 1x110 ALMG and (N)A(St)YY-0 1x100 and/or 110 ALMGST, with special cable lug with adjusted diameter and water-tight aluminium for the short-circuit range greater 25 kA, are released for direct connection to the rail foot. The design with improved behaviour in the event of fire is provided for installations in tunnels.

Type Designation Codes

(N)	cables based on standard
A	conductor made from aluminium
(ST)	steel wire
Y	insulation made of polyvinyl chloride (PVC)
Y	sheath made of polyvinyl chloride (PVC)
2X	insulation made of cross-linked polyethylene (XLPE)
H	sheath made of halogen-free, flame retardant copolymer
-0	cable without green-yellow core
1x110	no. of cores x cross-section
RM	circular conductor, stranded
ALMG	aluminium alloy
ALMGST	aluminium alloy with steel wire

Special Designs

- Design according to national and international standards
- Design according to customer specifications



BayEnergy® Railway grounding cables

(N)2X CuStAl - 1-core, theft defence

acc. to Bayka standard BayEnergy 01, resp. 02



Outer sheath: XLPE, black with blue longitudinal stripes®
Finely stranded CuStAl conductor



Standards

Bayka company standard BayEnergy 01.
The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

Technical Data

Rated voltage U_0/U kV	0,6/1
Nominal cross section mm ²	70
Conductor resistance Ω/km	$\leq 0,375$

Short-circuit current according to Deutsche Bahn standard 997.0205A01 (1.3.2003) paragraph 2 "current carrying capability"

Permissible temperature range °C during laying, installing and similar before and after laying	-10 to +60 -30 to +60
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Application

BayEnergy® flexible railway grounding cables are used as grounding connection resistant to short-circuit current, for potential equalisation between rails and other conductive parts not under voltage. They are especially used, where high flexibility and a low bending radius are required.

The grounding cable is halogen-free, suitable for indoor and outdoor applications, however not directly in the ground. The advanced and improved railway grounding cables are marked using two blue Bayka identification strips® on the outer sheath, and document Bayka quality "made in Germany".

BayEnergy® flexible railway grounding cables are approved by Germany's Federal Railway Office (EBA) and released for use in the area of operation of Deutsche Bahn AG.

The imprint „Eigentum DB“ (Property of DB) or „Eigentum Verkehrsbetriebe“ (Property of the Transport Services) is used as property notice and as theft protection. BayEnergy® aluminium railway grounding cables can be easily differentiated from copper grounding cables keeping potential thieves away. Further properties:

- Resistant against impact, vibration and shock loads
- UV-resistant
- Torsion-free laying can be easily checked
- Easy laying and installation, handling with standard tools

Type Designation Codes

(N)	cables based on standard
2X	sheath made of cross-linked polyethylene (XLPE)
H	outer protective sheath made from halogen-free, flame-retardant copolymer
1x70	no. of cores x cross-section
RF	circular conductor, finely stranded
CuStAl	conductor made from copper wires and copper-plated aluminium and steel wires

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- (N)2X from 1x50 to 1x70

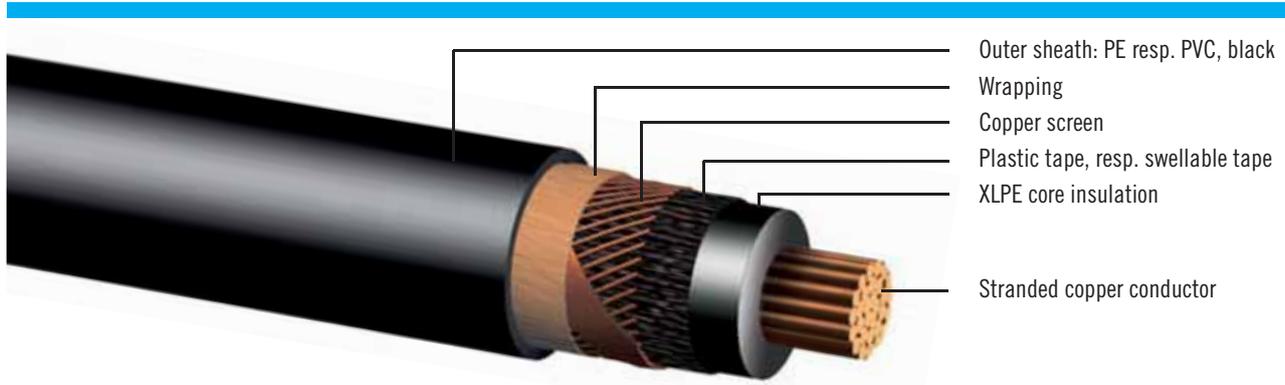
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BayEnergy® Railway power cables - 1 kV

N2XS... - stranded copper conductor, XLPE-insulated, screened

acc. to, resp. based on DIN VDE 0271



Optional:



Standards

DIN VDE 0271.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

They are free of silicone, cadmium and free from substances harmful to the wetting properties of lacquers.

Cables with PVC sheath are flame retardant and self-extinguishing according to DIN EN 50265-2-1 (IEC 60332-1).

Cables with PE sheath are UV-resistant, however not flame retardant.

Technical Data

Rated voltage kV	0,6/1
Testing voltage kV	4
Cable temperature °C during laying (min)	-5
after laying:	
PVC-insulated cables (max)	+70
XLPE-insulated cables (max)	+90
Max permissible operating temperature (conductor) °C	
PVC-insulated cables	+70
XLPE-insulated cables	+90
Short-circuit temperature °C	
PVC-insulated cables	+160
XLPE-insulated cables	+250
Current carrying capacity, PVC-insulated cables acc. to HD 603 S1-1994 3G	
Current carrying capacity, XLPE-insulated cables acc. to HD 603 S1-1994 5G	
during regular operation: table 14+15	
in case of short-circuit: table 17	
short-circuit duration max 5s	

Application

Cables for special applications, e.g. as a single-core railway traction current cable for direct current and alternating current. Also as a return current cable in direct current systems up to 0.6/1 KV.

Preferably for connections in overhead lines and rails, for laying in pipe conduits and trough channels and directly in the ground. The regulations and standards of the transport services apply for the selection of railway traction current cables.

Type Designation Codes

N	cables acc. to standard
2X	insulation made of cross-linked polyethylene (XLPE)
S	screen made of copper
(F)	longitudinally watertight in the screen section
Y	outer sheath made of polyvinyl chloride (PVC)
2Y	outer sheath made of polyethylene (PE)
RM	circular conductor, stranded

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- N2XSY from 1x150... to 1x500...
- N2XS2Y from 1x150... to 1x630...
- N2XS(F)2Y from 1x150... to 1x500...

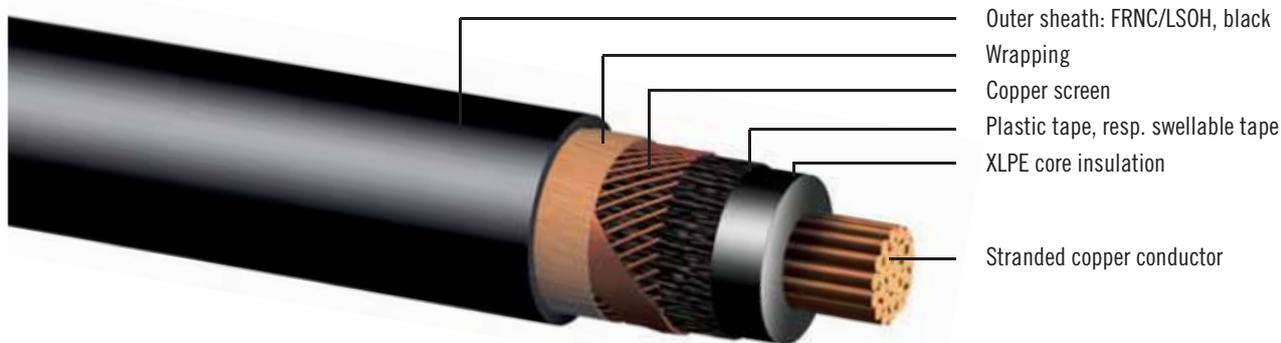
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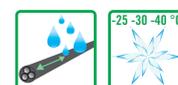
BayEnergy® Railway power cables - 1 kV

N2XS... - stranded copper conductor, XLPE-insulated, screened, halogen-free

acc. to, resp. based on DIN VDE 0271



Optional:



Standards

DIN VDE 0271.
 Low gas corrosivity acc. to EN 50267,
 low toxicity of gases acc. to DIN EN 50305,
 low smoke density acc. to DIN EN 61034-2,
 flame retardant acc. to IEC 60332-3, EN 50266-2-4.
 The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.
 They are free of silicone, cadmium and free from substances harmful to the wetting properties of lacquers.
 The cables are halogen-free, fire retardant and low-smoke. (FRNC - flame retardant, non corrosive, LSOH - low smoke, zero halogen).

Technical Data

Rated voltage kV	0,6/1
Testing voltage kV	4
Cable temperature °C	
during laying (min)	-5
after laying (max)	+90
Max permissible operating temperature (conductor) °C	+90
Short-circuit temperature °C	+250
Current carrying capacity acc. to HD 603 S1-1994 5G	
during regular operation: table 14+15	
in case of short-circuit: table 17 short-circuit duration max 5s	

Application

Cables for special applications, e.g. as a single-core railway traction current cable for direct current and alternating current. Also as a return current cable in direct current systems up to 0.6/1 kV.
 Preferably for connections in overhead lines and rails, for laying in pipe conduits and trough channels, however not directly in the ground.
 The regulations and standards of the transport services apply for the selection of railway traction current cables.

Type Designation Codes

N	cables acc. to standard
(N)	cables based on standard
2X	insulation made of cross-linked polyethylene (XLPE)
S	screen made of copper
(F)	longitudinally watertight in the screen section
H	sheath made of thermoplastic, halogen-free polyolefin
RM	circular conductor, stranded

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- N2XSH from 1x150 to 1x630
- N2XS(F)H from 1x150 to 1x500

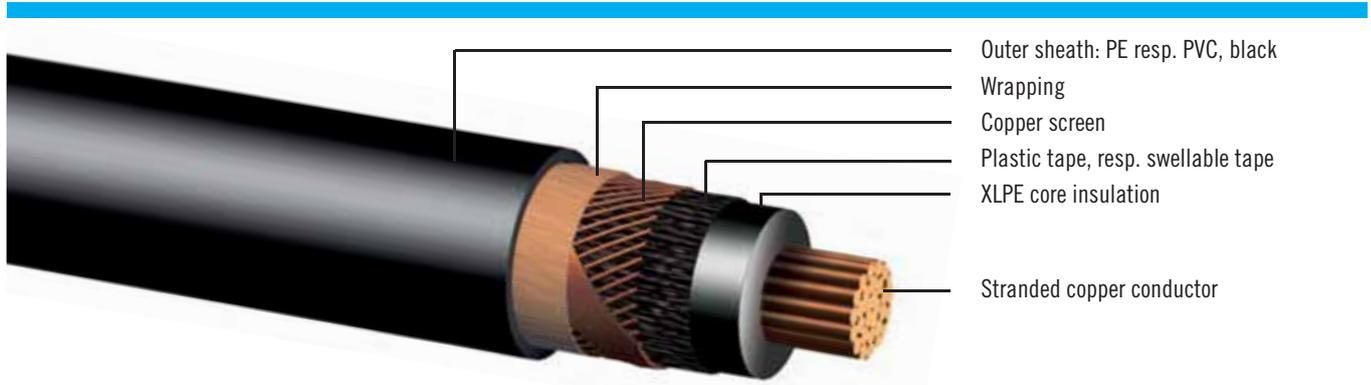
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BayEnergy® Railway power cables - 1 kV

NYSY - stranded copper conductor, PVC-insulated, screened

acc. to, resp. based on DIN VDE 0271



Optional:



Standards

DIN VDE 0271.
The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

They are flame retardant and self-extinguishing according to DIN EN 50265-2-1 (IEC 60332-1-2) and free of silicone, cadmium and free from substances harmful to the wetting properties of lacquers.

Technical Data

Rated voltage kV	0,6/1
Testing voltage kV	4
Cable temperature °C	
during laying (min)	-5
after laying C	+70
Max permissible operating temperature (conductor) °C	+70
Short-circuit temperature °C	+160

Current carrying capacity, PVC-insulated cables acc. to HD 603 S1-1994 3G
during regular operation: table 14+15
in case of short-circuit: table 17
short-circuit duration max 5s

Application

Cables for special applications, e.g. as a single-core railway traction current cable for direct current and alternating current. Also as a return current cable in direct current systems up to 0.6/1 KV. Preferably for connections in overhead lines and rails, for laying in pipe conduits and trough channels and directly in the ground.

The regulations and standards of the transport services apply for the selection of railway traction current cables.

Type Designation Codes

N	cables acc. to standard
(N)	cables based on standard
Y	insulation made of polyvinyl chloride (PVC)
S	screen made of copper
Y	outer sheath made of polyvinyl chloride (PVC)
v	outer sheath reinforced
RM	circular conductor, stranded

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- NYSY from 1x50... to 1x400...

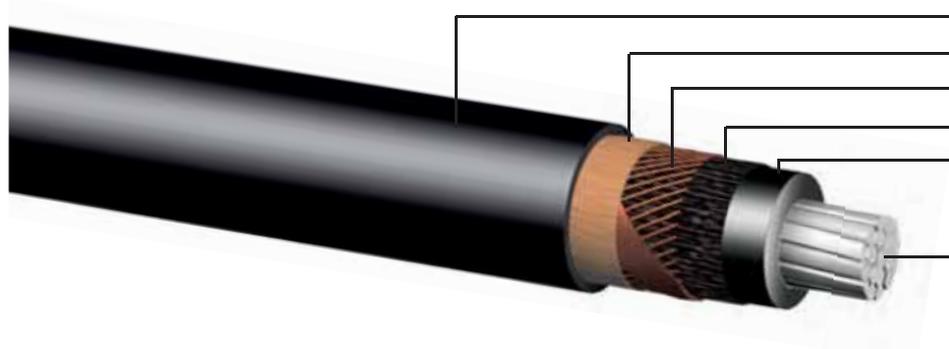
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BayEnergy® Railway power cables - 1 kV

NA2XS... - stranded aluminium conductor, XLPE-insulated, screened

acc. to, resp. based on DIN VDE 0271



Outer sheath: PE, black
 Natron-creppe
 Helix made of copper, copper screen
 Swelling fleece
 XLPE core insulation
 Stranded aluminium conductor



similar to the illustration



Optional:



Standards

DIN VDE 0271.

The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

They are free of silicone, cadmium and free from substances harmful to the wetting properties of lacquers.

Cables with PVC sheath are flame retardant and self-extinguishing according to DIN EN 50265-2-1 (IEC 60332-1).

Cables with PE sheath are UV-resistant, however not flame retardant.

Technical Data

Rated voltage kV	0,6/1
Testing voltage kV	4
Cable temperature °C during laying (min)	-5
cables with PVC sheath	-20
cables with PE sheath	+90
after laying (max)	
Max permissible operating temperature (conductor) °C	+90
Short-circuit temperature °C	+250

Current carrying capacity acc. to HD 603 S1-1994 5G during regular operation: table 14+15 in case of short-circuit: table 17 short-circuit duration max 5s

Application

Cables for special applications, e.g. as a single core railway traction current cable for direct current and alternating current. Also as a return current cable in direct current systems up to 0.6/1 KV.

Preferably for connections in overhead lines and rails, for laying in pipe conduits and trough channels and directly in the ground.

The regulations and standards of the transport services apply for the selection of railway traction current cables.

Type Designation Codes

N	cables acc. to standard
(N)	cables based on standard
A	conductor made of aluminium
2X	insulation made of cross-linked polyethylene (XLPE)
S	screen made of cooper
(F)	longitudinally watertight in the screen section
Y	outer sheath made of polyvinyl chloride (PVC)
2Y	outer sheath made of polyethylene (PE)
RM	circular conductor, stranded

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- NA2XSY from 1x150 to 1x500
- NA2XS2Y from 1x150 to 1x500
- NA2XS(F)2Y from 1x120 to 1x500

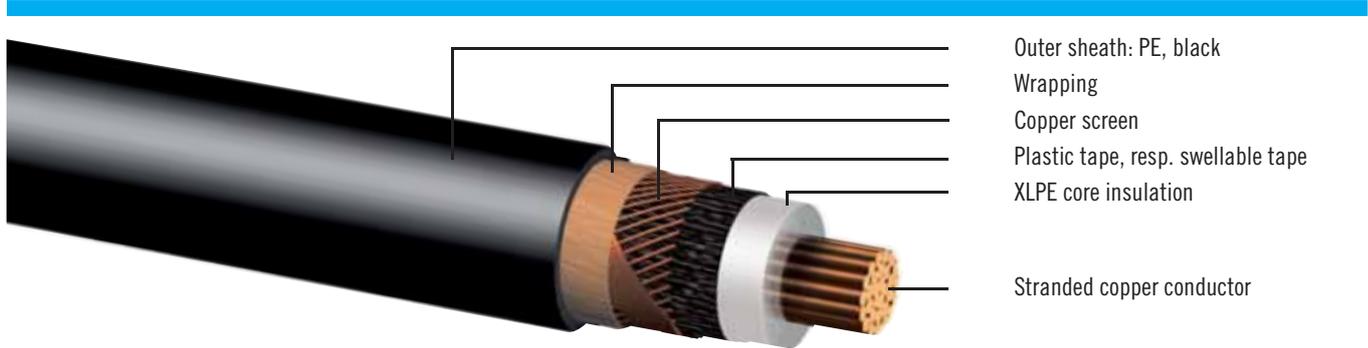
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BayEnergy® Railway power cables - 3-6 kV

N2XS... - stranded copper conductor, XLPE-insulated, screened

acc. to, resp. based on DIN VDE 0271



Outer sheath: PE, black
Wrapping
Copper screen
Plastic tape, resp. swellable tape
XLPE core insulation

Stranded copper conductor



similar to the illustration



Optional:



Standards

Based on DIN VDE 0271.
The cables are in compliance with RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.
The cables are free of silicone, cadmium and free from substances harmful to the wetting properties of lacquers.

Technical Data

Rated voltage kV	1,8/3
Testing voltage kV	7
Cable temperature °C	
during laying (min)	-5
after laying C	+90
Max permissible operating temperature (conductor) °C	+90
Short-circuit temperature °C	+250
Current carrying capacity	
acc. to HD 603 S1-1994 5G	
during regular operation: table 14+15	
in case of short-circuit: table 17	
short-circuit duration max 5s	

Application

Cables for special applications, e.g. as a single-core railway traction current cable for direct current and alternating current. Also as a return current cable in direct current systems up to 1.8/3 kV.
Preferably for connections in overhead lines and rails, for laying in pipe conduits and trough channels and directly in the ground.
The regulations and standards of the transport services apply for the selection of railway traction current cables.
Railway traction current cables with PVC sheath upon enquiry.

Type Designation Codes

N	cables acc. to standard
2X	insulation made of cross-linked polyethylene (XLPE)
S	screen made of copper
(F)	longitudinally watertight in the screen section
Y	outer sheath made of polyvinyl chloride (PVC)
2Y	outer sheath made of polyethylene (PE)
RM	circular conductor, stranded

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- (N)2XS2Y 1x400
- (N)2XS(F)2Y from 1x240 to 1x500

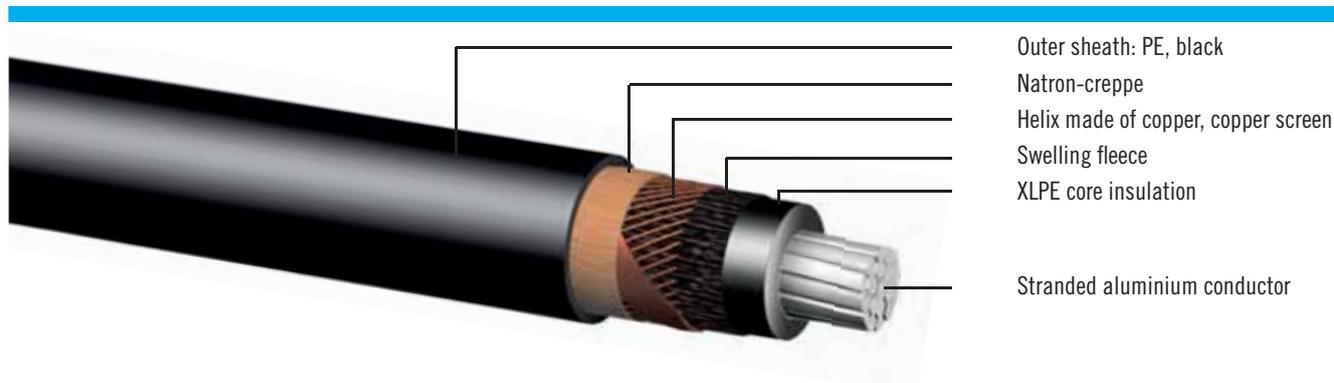
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BayEnergy® Railway power cables - 3-6 kV

NA2XS... - stranded aluminium conductor, XLPE-insulated, screened, halogenfree

acc. to, resp. based on DIN VDE 0271



similar to the illustration



Optional:



Standards

Based on DIN VDE 0271,
 low gas corrosivity acc. to EN 50267,
 low toxicity of gases acc. to DIN EN 50305,
 low smoke density acc. to DIN EN 61034-2,
 flame retardant acc. to IEC 60332-3, EN 50266-2-4.

The cables are in compliance with RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

The cables are free of silicone, cadmium and free from substances harmful to the wetting properties of lacquers.

The cables are halogen-free, fire retardant and low-smoke. (FRNC - flame retardant, non corrosive, LSOH - low smoke, zero halogen).

Technical Data

Rated voltage kV	1,8/3
Testing voltage kV	7
Cable temperature °C	
during laying (min)	-5
after laying (max)	+90
Max permissible operating temperature (conductor) °C	+90
Short-circuit temperature °C	+250

Current carrying capacity
 acc. to HD 603 S1-1994
 during regular operation: B1
 in case of short-circuit: B2
 short-circuit duration max 5s

Application

Cables for special applications, e.g. as a single-core railway traction current cable for direct current and alternating current. Also as a return current cable in direct current systems up to 1.8/3 kV.

Preferably for connections in overhead lines and rails, for laying in pipe conduits and trough channels, however not directly in the ground.

The regulations and standards of the transport services apply for the selection of railway traction current cables.

Type Designation Codes

N	cables acc. to standard
(N)	cables based on standard
A	conductor made of aluminium
Y	insulation made of polyvinyl chloride (PVC)
2X	insulation made of cross-linked polyethylene (XLPE)
S	screen made of copper
(F)	longitudinally watertight in the screen section
H	outer sheath made of halogen-free polymer
RM	circular conductor, stranded

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- (N)2XSH 1x500
- (N)2XS(F)H from 1x240 to 1x500

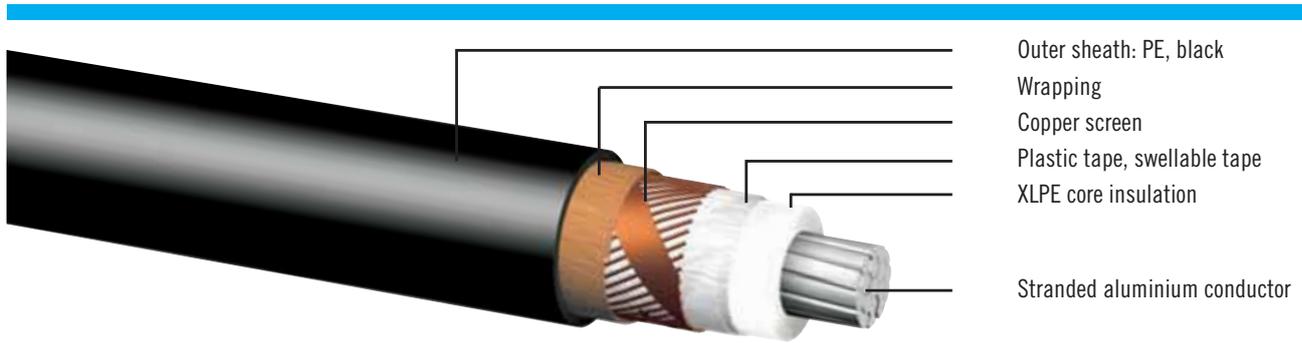
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BayEnergy® Railway power cables - 3-6 kV

NA2XS... - stranded aluminium conductor, XLPE-insulated, screened

acc. to, resp. based on DIN VDE 0271



similar to the illustration



Optional:



Standards

Based on DIN VDE 0271.
The cables are in compliance with EU LVD (Low Voltage Directive) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH), dated 20.06.2013.

They are free of silicone, cadmium and free from substances harmful to the wetting properties of lacquers.

Cables with PVC sheath are flame retardant and self-extinguishing according to DIN EN 50265-2-1 (IEC 60332-1).
Cables with PE sheath are UV-resistant, however not flame retardant.

Technical Data

Rated voltage kV	1,8/3
Testing voltage kV	7
Cable temperature °C	
during laying (min):	-5
cables with PVC sheath	-20
cables with PE sheath	+90
after laying (max)	
Max permissible operating temperature (conductor) °C	+90
Short-circuit temperature °C	+250
Current carrying capacity	
acc. to HD 603 S1-1994 5G	
during regular operation: table 14+15	
in case of short-circuit: table 17	
short-circuit duration max 5s	

Application

Cables for special applications, e.g. as a single core railway traction current cable for direct current and alternating current. Also as a return current cable in direct current systems up to 1.8/3 kV.
Preferably for connections in overhead lines and rails, for laying in pipe conduits and trough channels and directly in the ground.
The regulations and standards of the transport services apply for the selection of railway traction current cables.

Type Designation Codes

N	cables acc. to standard
(N)	cables based on standard
A	conductor made of aluminium
2X	insulation made of cross-linked polyethylene (XLPE)
S	screen made of copper
(F)	longitudinally watertight in the screen section
Y	outer sheath made of polyvinyl chloride (PVC)
2Y	outer sheath made of polyethylene (PE)
RM	circular conductor, stranded

Special Designs

- Design according to national and international standards
- Design according to customer specifications
- Design with limited tolerance of outer diameter on request

Product range

- (N)A2XS_Y from 1x240 to 1x500
- (N)A2XS_{2Y} from 1x240 to 1x500
- (N)A2XS(F)2Y from 1x240 to 1x500

- Use www.bayka.de or this QR-Code for our full portfolio:



TYPE DESIGNATION CODES POWER CABLES

Power cables with plastic insulation and plastic sheath according to DIN VDE 0262, DIN VDE 0263, DIN VDE 0265, DIN VDE 0266, DIN VDE 0267, DIN VDE 0271, DIN VDE 0273 and DIN VDE 0276 part 603, 604, 620, 622, 626

For cables with plastic insulation and plastic sheath the following designation codes are used (starting with the conductor):

N -	Cables acc. to standard
A -	Aluminum conductor
Y -	Insulation of polyvinyl chloride (PVC)
2Y -	Insulation of thermoplastic polyethylene (PE)
X -	Insulation of cross-linked polyvinyl chloride (XPVC)
2X -	Insulation of cross-linked polyethylene (XLPE)
H -	Field limiting conductive layers over the conductor and over the Insulation
HX -	Insulation of cross-linked halogen-free polymer blend
C -	Concentric conductor of copper
CW -	Concentric conductor of copper, waveform (ceander)
CE -	Concentric conductor in multi-core cables on each individual core

S -	Braided copper
SE -	For multicore cables field limiting conductive layers over the conductor and the insulation and copper screen over each individual core (indicated by „H“ is omitted here)
F -	Overhead line cable (DIN VDE 0276)
F -	Armouring of galvanized flat steel wire insulation sustaining
FE -	(F) - Longitudinally watertight cable (screen)
B -	Steel tape armouring
R -	Armouring of galvanized round steel wires
G -	Helix of galvanized steel tape
HX -	Sheath of cross-linked halogen-free polymer blend
Y -	Inner sheath of polyvinylchloride (PVC)
Y -	Outer sheath of polyvinylchloride (PVC)
2Y -	Outer sheath of polyethylene (PE)
1Y -	Outer sheath of polyurethane (PUR)

Conductor cross-section, shape and structure

R -	Circular conductor
S -	Sector shaped conductor
E -	Solid conductor
M -	Stranded conductor
RE -	Circular conductor, solid
RM -	Circular conductor, stranded
SE -	Sector shaped conductor, solid
SM -	Sector shaped conductor, stranded
OM -	Oval shaped conductor, stranded
H -	Waveguide
V -	Compacted conductor

Use the QR-Code to find the Type designation codes online:



TYPE DESIGNATION CODES TELECOMMUNICATION

The number of conductors or pairs are marked with numbers. After the digits marking the stranded elements follows. The first letter of the type designation indicates the cable type or the application.

A	Outdoor cable
AB	Outdoor cable with lightning protection requirements
AI	Outdoor cable with induction protection requirements
G	Mine cable
GJ	Mine cable with induction protection requirements
J	Installation cable
JE	Installation cable for industrial electronics
L	Hose cable for telecommunication systems. Cables with stranded conductors for increased mechanical stress for telecommunication systems
S	Switch board cable for telecommunication systems
P	Insulation made of paper
Y	Insulation or sheath or protective sheath made of polyvinylchloride (PVC)
Yv	Reinforced protective sheath made of polyvinylchloride (PVC)
2Y	Insulation of solid PE or sheath or protective sheath made of polyethylene (PE)
2Yv	Reinforced protective sheath made of polyethylene (PE)
02Y	Insulation made of foamed polyethylene (PE)
02YS	Insulation made of foam-skin

3Y	Insulation made of styroflex
4Y	Insulation made of polyamide (PA)
5Y	Insulation made of polytetrafluoroethylene (PTFE)
6Y	Insulation made of perfluorethylenpropylen (FEP)
7Y	Insulation made of ethylene tetrafluoroethylene (ETFE)
9Y	Insulation made of polypropylene
09YS	Insulation made of polypropylene foam-skin
H	Insulation or sheath made of halogen free material
FE	Cable with insulation integrity
M	Lead sheath
Mz	Annealed lead sheath
C	Screen made of copper braid
(C)	Individually screend pairs (copper braid)
(K)	Screen made of copper tape
L	Aluminum sheath
LD	Corrugated aluminum sheath
(L)ZY	Al-laminated sheath made of polyethylene, PE
F	Cable core with jelly filling
TF	Cable core with swellable tape
W	Corugated steel tape sheath
D	Screen made of round copper wires
B*)	Armouring
C*)	Protective sheath of jute and viscous compound

Q	Armouring made of steel braid
(St)	Screen (metal tape or plastic laminated metal tape)
(Z)	Steel wire braid over the inner PVC sheath
E	Compound layer with embedded plastic tape
T	Strength members
(Zg)	Strength members of bundled fiberglass yarns in or under the sheath
Bd	Stranded in bundles
DM	Multiple twin quad
Lg	Lagenverseilung
F	Star quad in the railway communications cables
St	Star quad with phantom circuit
St I	Star quad in district cables (trunk cable)
St III	Star quad in local cables
St VI	Star quad HF suitable up to 4 MHz
St VII	Star quad HF suitable up to 16 MHz
St VIII	Star quad HF suitable up to 32 MHz
PiMF	Shielded pair (pairs in metal foil)
S	Railway signalling cable
TF	Star quad for carrier frequency technology

¹⁾ Tensile load valid only at participation cable sheath and cable core

²⁾ The bending radius for multiple bending applies to the radius of switching mechanism

Modifications and mistakes reserved. Other cable types and versions on request!

TYPE DESIGNATION CODES FIBRE OPTIC

A-		D		Q	(ZN)2Y	12x12	E	9/	125	0,36	F	3,5	LG
1	2	3	4	5	6	7	8	9	10	11	12	13	14

<p>1 A - outdoor cable, J - indoor cable, AT - outdoor cable, divisible, U - universal cable for outdoor and indoor use (also as A/J)</p> <p>2 (ZS) - metallic support element/ strength member</p> <p>3 V - tight buffered fibre W - loose tube with 1 fibre, filled D - loose tube, filled E - loose tube, flexible</p> <p>4 S - metallic core/pair/quad</p> <p>5 Filling of the cable core F - petrojelly OF - special jelly Q - swellable tapes</p> <p>6 Cable sheath Y - PVC</p>	<p>H - flame retardant 2Y - PE 4Y - PA 11Y - PUR (L)2Y - Al-laminated sheath (SR)2Y - corrugated steel tape armoring and PE- sheath (ZN)2Y - non-metallic strength members and PE-sheath (ZN(L)2Y - non-metallic strength members and PE-sheath Al-laminated sheath (ZN(SR)2Y - non-metallic strength members, corrugated steel tape armoring and PE- sheath</p> <p>7 ...X Number of cores with a fiber in loose tube cables X... Number of loose tubes x number of fibers per loose tube in loose tube cables</p> <p>8 Type E - single-mode fiber, G - Graded-index fibre</p>	<p>9 ∅ Fiber core diameter fiber in microns for multi-mode ∅ field diameter in microns in single-mode fibers</p> <p>1 0 ∅ Fiber cladding diameter in microns</p> <p>1 1 Attenuation coefficient in dB / km</p> <p>1 2 Wavelength B - 850nm F - 1300nm at G, 1310 e H - 1550nm</p> <p>1 3 Bandwidth at G, dispersion coefficient in single-mode fibers</p> <p>1 4 LG - layering SZ - SZ stranding</p>
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PICTOGRAMS

	Direct burial		Particularly rugged		Longitudinally watertight
	Laying in ducts		Rodent protected		Transversally watertight
	Blowing in ducts and pipes		Screened		Oil-resitant
	Laying in trays		Temperature at laying		Acid-resitant
	Outdoor		Theft-defence		Particularly flexible
	Laying in water		Halogen-free		Limited UV-resitant
	Aerial cable, self supporting		Flame retardant		Abrasion-proof
	Inhouse		Low smoke		Rail foot

CODE OF CONDUCT: BAYKA - BAYERISCHE KABELWERKE AG

Preamble

Bayka and its member companies affirm their Corporate Social Responsibility as a part of their global business activities (internationally known as "CSR" 1). "Bayka's Code of Conduct for Corporate Social Responsibility" (hereinafter called "CoC") acts as a guideline in the industry, especially regarding working conditions, social and environmental compatibility, transparency, collaboration and dialog that is marked by trust. Developed and agreed to by Bayka and its member companies, the content of this CoC is an expression of Bayka's collective core values as they are defined in Bayka's vision and mission statements and especially as they are affirmed in the social market economy.

Bayka recommends that this CoC be implemented by the member companies. It is designed as a self-imposed obligation that can be signed by the member companies. By providing this CoC, Bayka assists them in responding to different general conditions in a global market and in facing challenges and social expectations that come from intensified collaboration from within the value chain.

1. Basic Understanding of Social Responsibility in Corporate Management

A mutual, basic understanding of social responsibility in corporate management forms the basis of this CoC. This means the undersigned company assumes responsibility by bearing in mind the consequences of its business decisions and actions on economic, technological, social and environmental levels and brings about an appropriate balance of interests. The undersigned company voluntarily contributes to the well being and longterm development of a global society at every point it can at the locations where it is in business. It is geared towards universally held ethical values and principals, especially integrity, honesty and respect of human dignity.

2. Where the CoC applies

2.1 This CoC is in effect for all of the undersigned company's branches and business units worldwide.

2.2 The undersigned company commits to promoting adherence to the content of this CoC at every point it can for its suppliers and in other parts of the value chain.

3. Core Values for Social Responsibility in Corporate Management

The undersigned company will proactively work to ensure that the values mentioned below are put into practice and adhered to both now and in the future.

3.1 Adherence to Laws

The undersigned company will abide by the laws in effect and other legal requirements of the countries where it is in business. For countries that have a weak institutional frame-

work, the company will carefully examine what good company practices from their home country should be applied to enable supportive, responsible company management.

3.2 Integrity and Organizational Governance

3.2.1 The undersigned company gears its activities towards universally held ethical values and principals, especially integrity, honesty, respect of human dignity, openness and non-discrimination based on religion, ideology, gender and ethnicity.

3.2.2 The undersigned company rejects corruption and bribery as stated in the relevant UN Convention 2). It uses suitable means to promote transparency, trading with integrity, responsible leadership and company accountability.

3.2.3 The undersigned company pursues clean and recognized business practices and fair competition. In regards to competition, it focuses on professional behavior and high standards of quality for work. It fosters partnership and trusting interaction with the supervisory authorities. Additionally, it will hold to the parameters of the "Guide for our Association Activity – Instructions for Compliance with Competition Law in the Bayka".

3.3 Consumer Interests

To the extent consumer interests are affected, the undersigned company abides by regulations that protect the consumer, as well as appropriate sales, marketing and information practices. Groups that are in special need of protection (e.g. protection of minors) will receive special attention.

3.4 Communication

The undersigned company will communicate in an open way and is oriented towards dialogue about the requirements of this CoC and about its implementation among employees, clients, suppliers and other stakeholders. Every document and all information will be duly produced. They will not be unfairly changed or destroyed. They will be properly stored. Company secrets and partner's business information will be handled sensitively and will be kept in confidence.

3.5 Human Rights

The undersigned company is committed to promote human rights. It respects human rights stated in the Charter of the United Nations 3), especially those named in the following:

3.5.1 Privacy

Protection of privacy.

3.5.2 Health and Safety

Ensuring health and work safety, especially the guarantee of a safe and health-promoting work environment, avoiding accidents and injuries.

3.5.3 Harassment

Employee protection against bodily punishment and against physical, sexual, psychological or verbal harassment or abuse.

3.5.4 Freedom of Conscience

Protection and guarantee of the right to freedom of conscience and freedom of expression.

3.6 Working Conditions

The undersigned company abides by the following core work standards from ILO 4):

3.6.1 Child Labor

The prohibition of child labor, i.e. the employment of persons younger than 15 years old, as long as the local legal requirements do not specify a higher age limit and as long as no exceptions are permitted 5).

3.6.2 Forced Labor

The prohibition of forced labor of any kind 6).

3.6.3 Wage Compensation

Work standards concerning compensation, especially in regards to the level of compensation as stated in the laws and requirements that are in force 7).

3.6.4 Employee Rights

Respecting the rights of the employee to freedom of association, freedom of assembly and collective bargaining, as long as this is legally permitted and possible in the respective country 8).

3.6.5 Prohibition of Discrimination

Treatment of all employees in a non-discriminatory fashion 9).

3.7 Hours of Work

The undersigned company abides by work standards concerning the longest permitted time of work.

3.8 Environmental Protection

The undersigned company fulfills the requirements and the standards for environmental protection that affect their operations and acts in an environmentally conscious way at all locations where it is in operation. For additional responsibility with natural resources, it holds to the principles from the Rio Declaration 10).

3.9 Civic Commitment

The undersigned company contributes to the social and economic development of the countries and regions where it is in business and promotes appropriate, volunteer activities by its employees.

4. Implementation and Application

The undersigned company will make every appropriate and reasonable effort to implement and to apply the principles and values described in this CoC both now and in the future. Contractual partners will be informed about the basic measures upon request and within the scope of a reciprocal cooperation, so that it becomes observable how keeping these measures is fundamentally guaranteed. No right exists to disseminate operational or business secrets related to competition or any other information that is in need of protection.

1) CSR = Corporate Social Responsibility

2) UN Convention against corruption in 2003, in force since 2005

3) General explanation of human rights, UN Resolution 217 A (III) of 1948

4) ILO = International Labour Organization

5) ILO Convention No. 138 of 1973 and ILO Convention No. 182 of 1999

6) ILO Convention No. 29 of 1930 and ILO Convention No. 105 of 1957

7) ILO Convention No. 100 of 1951

8) ILO Convention No. 87 of 1948 and ILO Convention No. 98 of 1949

9) ILO Convention No. 111 of 1958

10) The 27 principles from the "Rio Declaration on Environment and Development" of 1992 as the result from the UN Conference on Environment and Development in Rio de Janeiro

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Amtsgericht Nürnberg
Register number: HRB 314

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