



# BayEnergy® - grounding cables

for use at sound insulation walls, for handrails and some other applications at railway systems

# BayEnergy® - grounding cable

### (N)2X CuStAI - 1-core

according 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 73/23/EEC) and RoHS Directive EU 2002/65/EC - RoHS 2.0 and Regulation No. 1907/2006 (REACH).

### **Technical Data**

Rated voltage U <sub>0</sub> /U kV	0,6/1
Nominal cross-section mm <sup>2</sup>	70
Conductor resistance Ω/km	≤ 0,375

#### Short-circuit current

according to Deutsche Bahn standard 997.0205A01 (1.3.2003) paragraph 2 "current carrying capability"

Tensile force N	≤ 3500
Tensile force daN	350
Permissible temperature range °C	
during laying, installing and similar	-10 to +60
before and after laying	-30 to +60
Outer Ø approx. in mm	14
Net weight approx. in kg/km	470
Bending radius min. mm	
one-off	≥ 45
repeated	≥ 90

### **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
- For more Information, please use the QR-Code or www.bayka.de:





# DB released pin- & connecting component





Product	Bayka Order-No.
Press-cable lug DIN 46235 12- 70S	98 350 15
Press-cable lug DIN 46235 16- 70S	98 350 11

## DB released grounding cable from Bayka

Product	VDE-approval	EBA-approval	DB-release
(N)2X 1x70 RF CuStAI	<b>√</b>	$\checkmark$	<b>√</b>

Technical Documents (DB AG)	Titel
3 Ebs 15.03.17-6	grounding connector (copper/steel/aluminium-conductor)
3 Ebs 15.03.21	cable lug for grounding connector (coppe/steel/aluminium-conductor), according to Ebs 15.03.17-6

#### CONTACT

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### CABEL THEFT - PREVENTION IS BETTER THAN SEARCHING

With a railway network of about 33,000 km the DB AG has a hardly solvable job to protect all theft-threatened parts. Road ground lines, traditionally of

copper made, are desired with thieves, because here the highest proceeds are achievable.

### Press reports:

In May an international summit took place because of the copper thefts in Vienna. At that time the damage potential was estimated as "huge", because according to ÖBB "a stolen ground cable with a value of five to six euros causes a damage which goes to the thousands". The ÖBB saw 5,000 kilometres of cable as potential stolen goods in completely Austria (Austria: ORF, 23. February 2014)

More than one and a half hours had to change ÖBB traveller in Vienna on Tuesday on the underground. Between the railway stations Vienna village Hüttel and Vienna Meidling a cable theft was noted about 10. 20 oʻclock because. For safety reasons trains on the rapid-transit railway distance could not drive S60 afterwards any more. As a result five trains fell out. (Austria: Kurier, 05. August 2014)

Zeiningen AG: Again grounding cable stolen once more have

audacious copper thieves in a railway line with Zeiningen on longer distance the grounding cable separated. The damage to property is substantial. The affected road segment is in the free field between Mumpf and Möhlin on municipal area Zeiningen. In unknown manner the thieves cut the grounding cable on a length of nearly two kilometres and took away the cable pieces. The value of the copper amounts to about 10'000 fr. The damage to property must be numbered at about 20'000 fr. (Switzerland Police, 24. October 2013)

Haßloch, Böhl; Schifferstadt; Neustadt; Ludwigshafen; (ots) - federal policemen arrested on Saturday morning about 8.15 oʻclock three cable thieves at the age of 48, 52, and 57 years in the section between Haßloch and Böhl red-handed. Three male culprits loaded Just brightly - and scrap metal, to the value of 8,500 euros, from a building site of the German



Example
Grounding cable on sound insulation wall:
Copper cable: 10 x 1 m
Content: ca. 7 kg copper
Profit: ca. 30,- €

railways in the Böhler street in hatred hole when a patrol of the federal police arrived. On inquiry the men provided implausible information. Other inquiries proved that the culprits had already appeared several times because of theft. Now a penal procedure expects three men because of especially heavy theft. Moreover, you had to unload approx. a half a tonne of metal again. (German Federal police, 18. August 2014)

# The Bayka-solution

By artificial DNA or invisible marks make easier the search for the thief, nevertheless, the theft canno be prevented basically. BayEnergy® railway grounding cables have already proven to be an effective means of preventing cable theft.

### Your benefit

- for thieves unattractive
- Proprietary tip by coat print
- coloured longitudinal strips for the avoidance of Torsion and as an additional theft protection.
- an easy transfer and assembly
- Processing with standard tools

