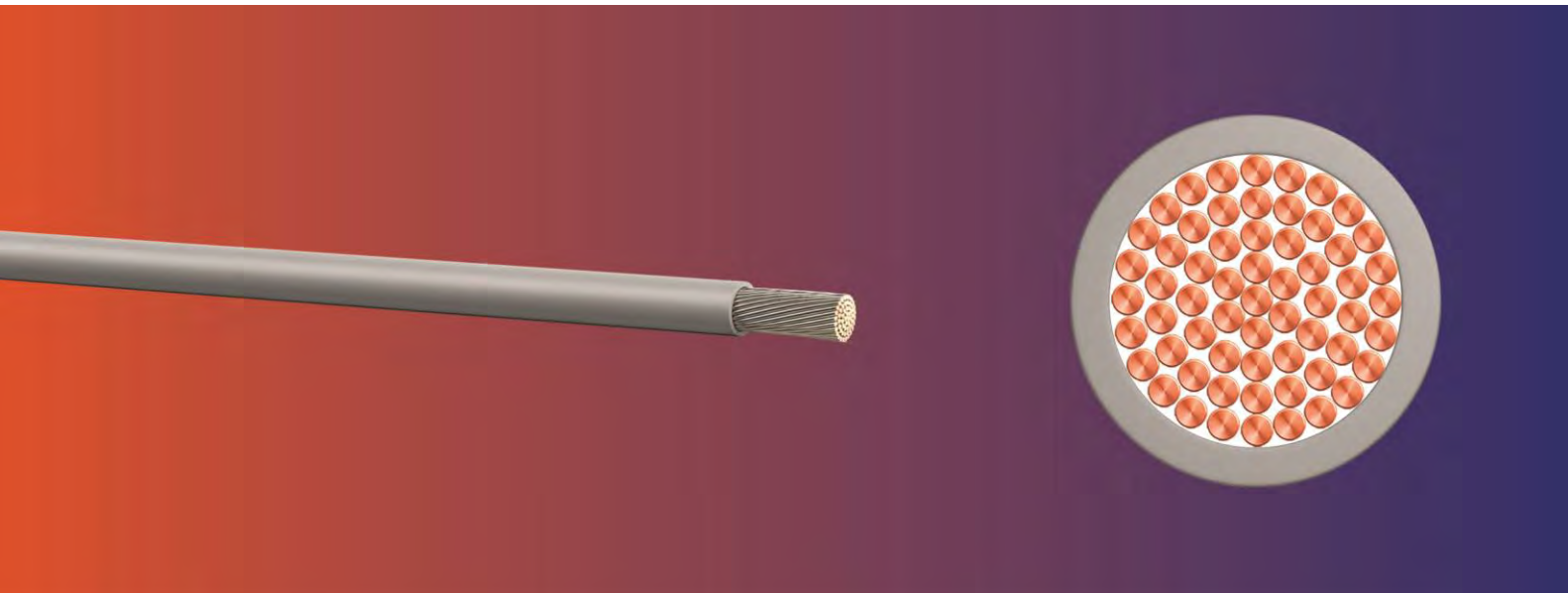


**ROLLING STOCK - CONNECTION- AND POWERCABLE**

**BETrans® 3 GKW-ENX EN 50264-3-1 600 V M**  
Core based on EN 50264-1



## Application

This cable is meant for protected installations inside and outside of rail vehicles and buses. It is used for the connection of fixed and moved parts, lamps, heating- and electrical appliances. For installation the guidelines of EN 50355 and EN 50343 must be considered.

## Construction

Conductor	Tinned fine copper strand acc. to VDE 0295 / IEC 60228, class 5
Insulation	Polyolefin Copolymer, Comp 752, electronbeam cross-linked
Core colour	Grey, black, further colours upon request

## Advantages

- Halogen free
- Electron-beam cross-linked
- Extremely high flexibility
- Good media resistance
- High level cold resistance
- Low fire load

## Electrical properties

Rated value	U0/U	0.6 / 1 kV AC
Maximum voltage	U0m	0.72 kV AC
Maximum voltage	Um	1.2 kV AC
Maximum voltage	V0	0.9 kV DC
Maximum voltage	Vm	1.8 kV DC
Test voltage		3.5 kV, 50 Hz / 5 min.

## Thermal properties

Max. operating temperature	fixed installation	+120°C
Max. operating temperature	occasionally moved	+90°C
Max. short circuit temperature		+280°C (max. 5s)
Min. ambient temperature	fixed installation	-50°C

## Mechanical properties

Bending radius	fixed installation	> 3 x Ø (-40 °C)
Bending radius	fixed installation	> 10 x Ø (-40 °C)
Bending radius	fixed installation	all cables ≥ 5 x Ø (-50°C)
Bending radius	occasionally moved	all cables > 8 x Ø (-40 °C)

## Material properties / Standards

Material properties	EN 50264-3-1 hazard level M
Ozone resistant	EN 60811-403

## Material properties / Standards

High resistance to cold	EN 60811-504
High resistance to oil	EN 60811-404
High resistance to fuel	EN 60811-404
Resistance to acid	EN 60811-404
Resistance to alkaline	EN 60811-404
Low fire load	DIN 51900
Limiting oxygen index (LOI)	ISO 4589-2
Fire performance for rolling stock	EN 45545-2 HL1 - HL3
Vertical flame propagation for a single insulated wire or cable	EN 60332-1-2
Vertical flame spread of bunched wires or cables ≥ 12 mm	EN 60332-3-24
Vertical flame spread of bunched wires or cables > 6 < 12 mm	EN 60332-3-25
Vertical flame spread of bunched wires or cables ≤ 6 mm	EN 50305
Smoke density	EN 61034-2
Toxicity of Smoke	EN 50305
Absence of halogens	EN 50267-2-1 EN 60684-2
Corrosivity of gases	EN 50267-2-2
Fire performance for rolling stock	NFPA130
Vertical flame propagation for bunched wires or cables	FT 4/IEEE 1202
Smoke release	UL 1685
Technical prescriptions concerning the burning behaviour	UN/ECE-R 118
Resistance to flame propagation	ISO 6722-1

## Approvals

Swiss Federal Railways

Construction Cross Section [n x mm <sup>2</sup> ]	Color code	Conductor-Ø [mm]	Min. insulation wall thickness [mm]	Outer-Ø [mm]	R <sub>20</sub> [mΩ/m]	Weight [kg/km]	Fire load [kWh/m]	Part no.
0.5	grey	0.85 ± 0.05	0.55	1.95 ± 0.05	40.1	8	0.014	312330
	black	0.85 ± 0.05	0.55	1.95 ± 0.05	40.1	8	0.014	313269
0.75	grey	1.10 ± 0.05	0.55	2.20 ± 0.05	26.7	11	0.017	312331
	black	1.10 ± 0.05	0.55	2.20 ± 0.05	26.7	11	0.017	313270
1	grey	1.20 ± 0.06	0.625	2.45 ± 0.05	20.0	14	0.021	312332
	black	1.20 ± 0.06	0.625	2.45 ± 0.05	20.0	14	0.021	313271
1.5	grey	1.45 ± 0.07	0.7	2.85 ± 0.05	13.7	20	0.028	312333
	black	1.45 ± 0.07	0.7	2.85 ± 0.05	13.7	20	0.028	313272
2.5	grey	1.95 ± 0.08	0.7	3.35 ± 0.05	8.21	30	0.035	312334
	black	1.95 ± 0.08	0.7	3.35 ± 0.05	8.21	30	0.035	313273
4	grey	2.55 ± 0.10	0.7	3.95 ± 0.05	5.09	44	0.044	312335
	black	2.55 ± 0.10	0.7	3.95 ± 0.05	5.09	44	0.044	313274
6	grey	3.10 ± 0.10	0.7	4.50 ± 0.10	3.39	63	0.051	312336
	black	3.10 ± 0.10	0.7	4.50 ± 0.10	3.39	63	0.051	313275
10	grey	4.10 ± 0.20	0.7	5.50 ± 0.20	1.95	99	0.065	312337
	black	4.10 ± 0.20	0.7	5.50 ± 0.20	1.95	99	0.065	313276
16	grey	5.00 ± 0.20	0.7	6.40 ± 0.20	1.24	151	0.077	312338
	black	5.00 ± 0.20	0.7	6.40 ± 0.20	1.24	151	0.077	313277
25	grey	6.20 ± 0.20	0.9	8.00 ± 0.20	0.795	235	0.122	312339
	black	6.20 ± 0.20	0.9	8.00 ± 0.20	0.795	235	0.122	313278
35	grey	7.70 ± 0.20	0.9	9.50 ± 0.20	0.565	335	0.171	312340
	black	7.70 ± 0.20	0.9	9.50 ± 0.20	0.565	335	0.171	313279
50	grey	9.70 ± 0.20	1.0	11.70 ± 0.20	0.393	485	0.259	312341
	black	9.70 ± 0.20	1.0	11.70 ± 0.20	0.393	485	0.259	313280
70	grey	11.20 ± 0.20	1.1	13.40 ± 0.20	0.277	671	0.329	312342
	black	11.20 ± 0.20	1.1	13.40 ± 0.20	0.277	671	0.329	313281
95	grey	12.80 ± 0.30	1.1	15.00 ± 0.30	0.21	876	0.358	312343
	black	12.80 ± 0.30	1.1	15.00 ± 0.30	0.21	876	0.358	313282
120	grey	14.60 ± 0.30	1.2	17.00 ± 0.30	0.164	1105	0.427	312344
	black	14.60 ± 0.30	1.2	17.00 ± 0.30	0.164	1105	0.427	313283
150	grey	16.40 ± 0.30	1.4	19.20 ± 0.30	0.132	1399	0.617	312345
	black	16.40 ± 0.30	1.4	19.20 ± 0.30	0.132	1399	0.617	313284
185	grey	17.90 ± 0.30	1.6	21.10 ± 0.30	0.108	1685	0.68	312346
	black	17.90 ± 0.30	1.6	21.10 ± 0.30	0.108	1685	0.68	313285
240	grey	20.70 ± 0.30	1.7	24.10 ± 0.30	0.0817	2220	0.818	312347
	black	20.70 ± 0.30	1.7	24.10 ± 0.30	0.0817	2220	0.818	313286