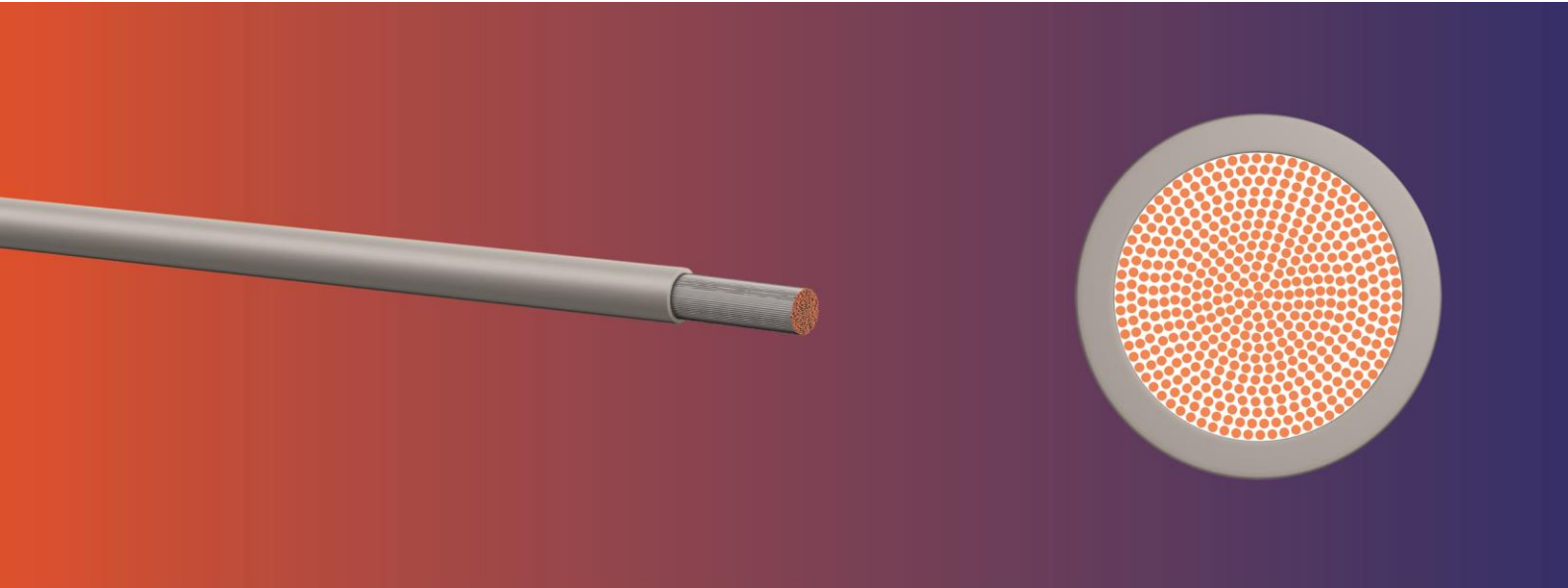


**ROLLING STOCK - POWER CABLES**

**BETrans® 3 GKW-ENX EN 50264-3-1 600 V M**  
Single core wire



## Application

This single core wire is meant for protected installations in devices and for internal wiring of cabinets inside of rail vehicles and buses. It is suitable for connecting lamps, heaters and switchgear. 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, electron beam cross-linked
Colour	See table of products (page 3), further colours upon request

## Advantages

- Halogen free
- Electron beam cross-linked
- Very long lifetime
- Good media resistance
- High level cold resistance
- Low fire load

## Electrical properties

Rated value	U <sub>0</sub> /U	0.6 / 1 kV AC
Maximum voltage	U <sub>0m</sub>	0.72 kV AC
Maximum voltage	U <sub>m</sub>	1.2 kV AC
Maximum voltage	V <sub>0</sub>	0.9 kV DC
Maximum voltage	V <sub>m</sub>	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
Min. ambient temperature	fixed installation	-50°C
Max. short circuit temperature		+280°C (max. 5s)

## Mechanical properties

Bending radius	fixed installation	∅ < 10 mm: > 3 x ∅ (-40°C)
Bending radius	fixed installation	∅ ≥ 10 mm: > 4 x ∅ (-40°C)
Bending radius	fixed installation	all cables > 5 x ∅ (-50°C)
Bending radius	occasionally moved	all cables > 8 x ∅ (-40°C)

## Material properties / Standards

Material properties	EN 50264-3-1 hazard level M
Resistance to ozone	EN 50305
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

## Material properties / Standards

Resistance to alkaline	EN 60811-404
Low fire load	DIN 51900
Limiting oxygen index (LOI)	ISO 4589-2 ASTM D 2863
Fire performance for rolling stock	EN 45545-2 HL1 - HL3
Fire performance for rolling stock	EN 50264-1
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 gases	EN 50305
Absence of halogens	EN 60754-1 EN 60684-2
Corrosivity of gases	EN 60754-2
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  
ČD (Czech Republic)

Construction Cross-sec. [mm <sup>2</sup> ]	Conductor-Ø [mm]	Conductor construction [n x mm]	Outer-Ø [mm]	R <sub>20</sub> [mΩ/m]	Weight [kg/km]	Fire load [kWh/m]	Part no.		Part no.	Part no.	Part no.	Part no.	Part no.
							Grey	Black					
0.5	0.85	16 x 0.20	1.95 ± 0.05	40.1	8	0.014	312330	313269	313245	*	*	*	
0.75	1.10	24 x 0.20	2.20 ± 0.05	26.7	11	0.017	312331	313270	313246	*	*	*	
1	1.20	32 x 0.20	2.45 ± 0.05	20	14	0.021	312332	313271	313251	*	317478	*	
1.5	1.45	30 x 0.25	2.85 ± 0.05	13.7	20	0.028	312333	313272	313252	*	*	*	
2.5	1.95	50 x 0.25	3.35 ± 0.05	8.21	30	0.035	312334	313273	313253	316801	*	*	
4	2.55	52 x 0.30	3.95 ± 0.05	5.09	44	0.044	312335	313274	313255	*	*	*	
6	3.10	78 x 0.30	4.50 ± 0.10	3.39	63	0.051	312336	313275	313256	316964	*	*	
10	4.10	74 x 0.40	5.50 ± 0.20	1.95	99	0.065	312337	313276	313257	*	*	*	
16	5.00	119 x 0.40	6.40 ± 0.20	1.24	151	0.077	312338	313277	313258	*	*	*	
25	6.20	181 x 0.40	8.00 ± 0.20	0.795	235	0.122	312339	313278	313259	*	313287	314534	
35	7.70	257 x 0.40	9.50 ± 0.20	0.565	335	0.171	312340	313279	313260	*	*	*	
50	9.70	371 x 0.40	11.70 ± 0.20	0.393	485	0.259	312341	313280	313263	*	*	*	
70	11.20	336 x 0.50	13.40 ± 0.20	0.277	671	0.329	312342	313281	313265	*	313288	*	
95	12.80	444 x 0.50	15.00 ± 0.30	0.21	876	0.358	312343	313282	313268	*	*	*	
120	14.60	570 x 0.50	17.00 ± 0.30	0.164	1105	0.427	312344	313283	*	*	*	*	
150	16.40	708 x 0.50	19.20 ± 0.30	0.132	1399	0.617	312345	313284	*	*	*	*	
185	17.90	864 x 0.50	21.10 ± 0.30	0.108	1685	0.680	312346	313285	*	*	*	*	
240	20.70	1147 x 0.50	24.10 ± 0.30	0.0817	2220	0.818	312347	313286	*	*	*	*	

Note:

\* Upon request