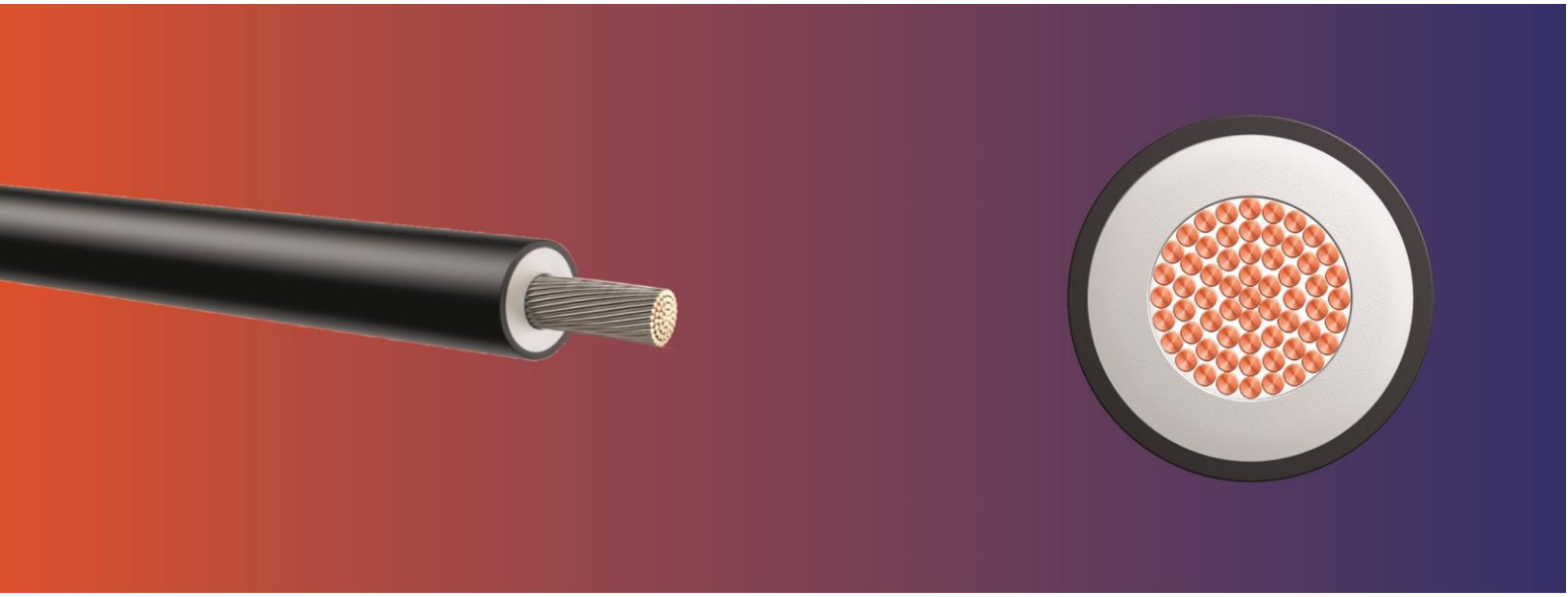
ROLLING STOCK – AUXILIARY - AND MAINPOWER CABLE

BETAtrans® 4 GKW-ENX EN 50264-3-1 1800 V M

Core based on EN 50264-1



Application

This cable is used for protected installations inside and outside of rail vehicles, buses and other rail vehicles. Due to the double-insulated design, this cable is qualified for short circuit and earth fault-proof applications. It is suitable for the wiring of electric engines, switch and auxiliary boards, converters and distribution boxes. For installation the guidelines of EN 50355 and EN 50343 must be considered.

Construction

Conductor	Tinned copper strands
Insulation	Polyolefin Copolymer, Comp 752, electronbeam cross-linked
Core colour	White
Sheath	Polyolefin Copolymer, Comp 752, electronbeam cross-linked
Sheath colour	Black, further colours upon request

Advantages

- Halogen free
- Electron-beam cross-linked
- Very long lifetime
- Good media resistance
- Short circuit and fault proof
- High dielectric strength
- High level cold resistance
- Low fire load

FELTEN Wire & Cable Solutions BV
Habraken 2401
5507 TM Veldhoven
The Netherlands
www.feltenwcs.com
email: sales@feltenwcs.com
Phone: +31(0)40-8200950

Number: BTR-4-GKW-ENX-EN-50264-3-1-1800-V-M-0000407-V01 Up-dating F: 16.12.2022

Electrical properties

Rated value	U0/U	1.8 / 3 kV AC
Maximum voltage	U0m	2.16 kV AC
Maximum voltage	Um	3.6 kV AC
Maximum voltage	V0	2.7 kV DC
Maximum voltage	Vm	5.4 kV DC
Test voltage		6.5 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
Min. ambient temperature	occasionally moved	-40°C

Mechanical properties

Bending radius	fixed installation	Ø < 10 mm: > 3 x Ø (-40 °C)
Bending radius	fixed installation	Ø ≥ 10 mm: > 4 x Ø (-40 °C)
Bending radius	fixed installation	Ø < 10 mm: > 5 x Ø (-50 °C)
Bending radius	Occasionally moved	> 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
UV resistant	EN 50618
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

FELTEN Wire & Cable Solutions BV
Habraken 2401
5507 TM Veldhoven
The Netherlands
www.feltenwcs.com
email: sales@feltenwcs.com
Phone: +31(0)40-8200950

Number: BTR-4-GKW-ENX-EN-50264-3-1-1800-V-M-0000407-V01 Up-dating F: 16.12.2022

Construction Cross Section [n x mm2]	Color code	Conductor-Ø [mm]	Mean insulation wall thickness [mm]	Outer-Ø [mm]	R_{20} [mΩ/m]	Weight [kg/km]	Fire load [kWh/m]	Part no.
1.5	black	1.45	2.0	5.45 ± 0.10	13.7	45	0.127	312899
2.5	black	1.95	2.0	5.95 ± 0.20	8.21	58	0.146	312900
4	black	2.55	2.0	6.55 ± 0.20	5.09	76	0.169	312901
6	black	3.1	2.0	7.10 ± 0.20	3.39	98	0.19	312902
10	black	4.1	2.0	8.10 ± 0.20	1.95	141	0.227	312903
16	black	5	2.0	9.00 ± 0.30	1.24	198	0.261	312904
25	black	6.2	2.0	10.20 ± 0.30	0.795	283	0.306	312905
35	black	7.7	2.0	11.70 ± 0.30	0.565	390	0.385	312906
50	black	9.7	2.0	13.70 ± 0.30	0.393	544	0.492	312907
70	black	11.2	2.0	15.20 ± 0.40	0.277	732	0.565	312908
95	black	12.8	2.2	17.20 ± 0.40	0.21	959	0.682	312909
120	black	14.6	2.2	19.00 ± 0.40	0.164	1190	0.758	312910
150	black	16.4	2.2	20.80 ± 0.40	0.132	1474	0.911	312911
185	black	17.9	2.4	22.70 ± 0.50	0.108	1767	1.002	312912
240	black	20.7	2.4	25.50 ± 0.50	0.0817	2302	1.136	312913
300	black	23.3	2.4	28.10 ± 0.50	0.0654	2839	1.212	312914
400	black	26.3	2.6	31.50 ± 0.50	0.0495	3696	1.473	312915