



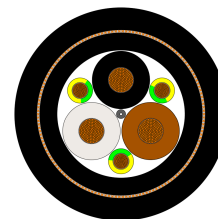
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrial cable

(N)GRDGCGOEU ENERGY CHAIN CABLE

Screened low-voltage cable for high-performance energy chains



APPLICATION

Screened low-voltage cable for energy chains, container cranes, stacking cranes, indoor cranes and material-handling equipment requiring long travel distances, high speed and high abrasion resistance.

KEY FEATURES

Parameter	Value
Application	Low-voltage cable for energy chains in container cranes, stacking cranes, indoor cranes and material handling equipment
Dynamic service	Energy-chain travel speed up to 240 m/min, depending on chain length and application factors
EMC protection	Screened design with tinned copper braid, surface coverage above 80% and low transfer impedance
Environment	Outdoor and indoor use with resistance to abrasion, oil, ozone, UV and moisture

DESIGN

Parameter	Value
Conductor	Bare electrolytic copper, finely stranded Class 5; earth conductor Class FS
Insulation	PROTOLON MS EPR insulation with improved mechanical and electrical performance
Screen	Tinned copper braid, coverage above 80%, transfer impedance below 100 mOhm/m at 30 MHz
Sheath	EPR inner sheath and abrasion-resistant EVA outer sheath, black

ELECTRICAL, THERMAL, MECHANICAL AND MATERIAL DATA

Parameter	Value
Rated voltage U0/U	0.6/1 kV (600/1000 V)
Max. AC operating voltage	0.7/1.2 kV
Max. DC operating voltage	0.9/1.8 kV
AC test voltage	3.5 kV for 5 min
Conductor temperature	90 deg C; short circuit 250 deg C
Ambient temperature, fixed	-50 deg C to +80 deg C
Ambient temperature, flexible	-35 deg C to +80 deg C
Bending radius	According to DIN VDE 0298-3
Tensile load	Maximum 15 N/mm ²
Torsional stress	Not allowed
Standards	DIN VDE 0250-814; DIN VDE 0298-3/-4
Environmental	Halogen-free, RoHS compliant, GOST-R approval

TECHNICAL DATA

(N)GRDGCGOEU - POWER AND CONTROL DATA (1)						
Configuration	Conductor OD max. mm	Outer diameter min.-max. mm	Bending radius min. mm	Weight kg/km	Tensile force max. N	Resistance Ohm/km
1x16C	5.7	10.1-12.1	61	320	240	1.21
1x25C	7.1	12.8-14.8	74	450	370	0.78
1x35C	8.3	13.7-15.7	79	540	520	0.55
1x50C	9.8	15.7-17.7	89	740	750	0.39
1x70C	11.6	18.7-20.7	104	1020	1050	0.27
1x95C	13.8	20.8-22.8	114	1260	1420	0.21
1x120C	14.9	22.8-24.8	124	1580	1800	0.16
1x150C	17.2	25.6-28.6	143	2000	2250	0.13
1x185C	18	27.7-30.7	154	2370	2770	0.11
1x240C	22.5	31.9-34.9	175	3130	3600	0.08
4x2.5	2	9.9-11.5	46	200	150	7.98
4x4	2.9	12.7-14.7	74	320	240	4.95
4x6	3.6	14.2-16.2	81	430	360	3.3
4x10	4.6	16.7-18.7	94	670	600	1.91
4x16	5.9	21.2-23.2	116	1020	960	1.21
4x25	7.2	26.5-29.5	148	1600	1500	0.78
3x35+3x16/3	8.1	26.4-29.4	147	1770	1570	0.55

CONSTRUCTION AND APPLICATION NOTES

Parameter	Value
Conductor	Bare electrolytic copper, finely stranded Class 5; earth conductor Class FS
Screen	Tinned copper braid above 80% coverage for EMC performance
Sheath	EPR inner sheath and abrasion-resistant EVA outer sheath
Dynamic service	Energy-chain travel speed up to 240 m/min; torsional stress not allowed

TECHNICAL DATA

(N)GRDGCGOEU - POWER, CONTROL AND BUS DATA (2)						
Configuration	Conductor OD max. mm	Outer diameter min.-max. mm	Bending radius min. mm	Weight kg/km	Tensile force max. N	Resistance Ohm/km
3x50+3x25/3	10	31.5-34.5	173	2560	2250	0.39
3x70+3x35/3	11.9	37.6-40.6	203	3550	3150	0.27
4x2.5C	1.9	11.2-13.2	66	310	150	7.98
4x4C	2.9	15.2-17.2	86	490	240	4.95
4x6C	3.6	17.0-19.0	95	650	360	3.3
4x10C	4.6	19.2-21.2	106	870	600	1.91
3x16+3x2.5C	5.9	20.3-22.3	112	1050	720	1.21
3x25+3x4C	7.2	25.7-28.7	144	1610	1120	0.78
12x1.5	1.5	11.7-13.7	69	305	270	13.3
24x1.5	1.5	19.9-21.9	110	710	540	13.3
7x2.5	1.9	11.3-13.3	67	290	260	7.98
12x2.5	1.9	15.3-17.4	87	490	450	7.98
18x2.5	1.9	19.5-21.5	108	760	670	7.98
24x2.5	1.9	22.5-24.5	123	1020	900	7.98
1x(2x0.5)C	0.9	8.0-10.0	40	135	10	39
4x(2x0.5)C	0.9	17.6-19.6	98	500	60	39
4x(2x1)C	1.3	26.3-29.3	147	1130	180	19.5

COMPLIANCE AND SERVICE NOTES

Parameter	Value
Insulation	PROTOLON MS EPR compound; ETFE alternative available for control cables
Temperature	Fixed installation -50 to +80 deg C; flexible operation -35 to +80 deg C
Standards	DIN VDE 0250-814; DIN VDE 0298-3/-4; oil test EN 60811-404
Data note	Dimensions, weights and ratings are nominal and subject to normal tolerances

CERTIFICATIONS



TEBAOFLEX CABLE