1.8/3KV Single Core Dual Wall Traction Cables

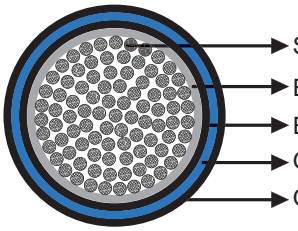
Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- BS 6853 -1a
- DIN 5510-1 1-4
- NFF 16-101 F0

Construction



- Conductors: Circular Class 5 stranded plain or tinned copper to BS EN 60228: 2005 / BS 6360.
- Insulation1: Electron beam crosslinkable thin wall LSZH compound.
- Insulation2: Electron beam crosslinkable thin wall LSZH compound.
- Screen(optional): Copper Wire Screen (for screened and sheathed cables).
- Outer Sheath(optional): Electron beam crosslinkable LSZH compound (for screened and sheathed cables).

Optional

FRA-DW-3SU-FR(Fire resistant & Unsheathed)

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	1.5	2.5	4.0	6.0	10	16	25	35	50
Maximum Conductor Resistance	Ω/km	13.7	8.21	5.09	3.39	1.95	1.24	0.795	0.565	0.393
Voltage Rating	KV	1.8/3								

Nominal Conductor Cross Section	mm²	70	95	120	150	185	240	300	400
Maximum Conductor Resistance	Ω/km	0.277	0.21	0.164	0.132	0.108	0.0817	0.0654	0.0495
Voltage Rating	KV	1.8/3							

Mechanical and Thermal Properties

- Minimum Bending Radius: 3×OD (OD<12mm); 4×OD (OD>12mm)
- Temperature Range: -40℃ to +120℃

Dimensions and Weight

FRA–DW–3SU (Unsheathed)

Cable Code	No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
FRA-DW-3SU-1G1.5	1×1.5	30/0.25	0.8	3.2	22
FRA-DW-3SU-1G2	1×2.0	37/0.25	0.9	3.55	28
FRA-DW-3SU-1G2.5	1×2.5	50/0.25	0.9	3.75	34
FRA-DW-3SU-1G4	1×4.0	56/0.30	1.0	4.50	52
FRA-DW-3SU-1G6	1×6.0	84/0.30	1.1	5.10	74
FRA-DW-3SU-1G10	1×10.0	80/0.40	1.2	6.35	120
FRA-DW-3SU-1G16	1×16.0	126/0.40	1.5	8.30	180
FRA-DW-3SU-1G25	1×25.0	196/0.40	1.8	10.20	280
FRA-DW-3SU-1G35	1×35.0	276/0.40	2.0	11.70	390
FRA-DW-3SU-1G50	1×50.0	396/0.40	2.2	13.60	550
FRA-DW-3SU-1G70	1×70.0	360/0.50	2.1	15.60	730
FRA-DW-3SU-1G95	1×95.0	475/0.50	2.3	17.30	940
FRA-DW-3SU-1G120	1×120.0	608/0.50	2.4	19.60	1180
FRA-DW-3SU-1G150	1×150.0	756/0.50	2.6	21.90	1510
FRA-DW-3SU-1G185	1×185.0	925/0.50	2.8	23.80	1800
FRA-DW-3SU-1G240	1×240.0	1221/0.50	2.9	26.90	2290
FRA-DW-3SU-1G300	1×300.0	1525/0.50	3.0	29.70	2910
FRA-DW-3SU-1G400	1×400.0	2013/0.50	3.4	35.80	4040

FRA–DW–3S–OS (Screened & Sheathed)

Cable Code	No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
FRA-DW-3S-OS-1G1.5	1×1.5	30/0.25	0.8	5.2	48
FRA-DW-3S-OS-1G2.5	1×2.5	50/0.25	0.9	5.8	63
FRA-DW-3S-OS-1G4	1×4.0	56/0.30	1.0	6.7	89
FRA-DW-3S-OS-1G6	1×6.0	84/0.30	1.1	7.4	120
FRA-DW-3S-OS-1G10	1×10.0	80/0.40	1.2	9.0	180
FRA-DW-3S-OS-1G16	1×16.0	126/0.40	1.5	11.2	280
FRA-DW-3S-OS-1G25	1×25.0	196/0.40	1.8	13.4	400
FRA-DW-3S-OS-1G35	1×35.0	276/0.40	2.0	14.8	510
FRA-DW-3S-OS-1G50	1×50.0	396/0.40	2.2	16.8	700
FRA-DW-3S-OS-1G70	1×70.0	360/0.50	2.1	19.0	920
FRA-DW-3S-OS-1G95	1×95.0	475/0.50	2.3	20.7	1160
FRA-DW-3S-OS-1G120	1×120.0	608/0.50	2.4	23.4	1450
FRA-DW-3S-OS-1G150	1×150.0	756/0.50	2.6	25.9	1830
FRA-DW-3S-OS-1G185	1×185.0	925/0.50	2.8	27.8	2130
FRA-DW-3S-OS-1G240	1×240.0	1221/0.50	2.9	31.2	2910
FRA-DW-3S-OS-1G300	1×300.0	1525/0.50	3.0	34.2	3370


Impact Resistant


Highly Flexible


UV Resistant


Weather Resistant


Oil Resistant


Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1


Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1


Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073


Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453


Low Toxicity