Medium voltage reeling cable / FO
TRATOSFLEX-ES3-FO®

Application: Medium voltage reeling cable with optimized diameter and integrated optical fibers. The cables can be manufactured to order or project-specific with E9/125, 50/125 or 62.5/125 fibres or their various combinations. Our stock item (p/n 051873) contains 12 monomode (9/125) and 12 multimode (62.5/125) fibers in one loose tube each.

Construction and technical data:

Conductor material:	tinned copper
Conductor construction:	Class 5 = fine stranded - DIN EN IEC 60228 (VDE 0295)
Insulation:	basic EPR
Electrical field control:	inner and outer semiconducting rubber layer
Arrangement of protective conductors:	split in the outer interstices
Material inner sheath:	rubber GM1b
Torsion protection:	polyester braid
Sheathing material:	rubber (CR) 5GM3
Colour of outer sheath:	red
Permitted outer cable temperature, fixed, °C:	-40 - +80 °C
Permitted outer cable temperature, moved, °C:	-30 - +80 °C
Min. bending radius, fixed installation:	6 x Ø
Bending radius, moving application:	12 x Ø
Operating speed monospiral (one way), m/min.:	200 m/min.
Operating speed tender system, m/min.:	60 m/min.

The products and information presented here are for technical calculation only. They are subject to technical progress and in no way represent the ability of shipment. Outer diameters are approximately.

TRATOSFLEX® ES3 FO 3.6/6 kV

Nominal voltage Uo: 3.6 kV

Nominal voltage U: 6 kV

Maximum permitted operating voltage in three-phase systems: 7.2 kV

Test voltage: 11 kV

part no.	part name	Rl [Ohm/km]	Ø [mm]	Fzp [N]	Fzd [N]	Cu	G [kg]
052473	3X50 + 2X25/2 + 24 FO (62.5/125)	0.393	46.7	3000	4500	1680	3550
051919	3X95 + 2X50/2 + 24 FO (50/125)	0.21	58.5	5700	7000	3197	5800

TRATOSFLEX® ES3 FO 8.7/15 kV

Nominal voltage Uo: 8.7 kV

Nominal voltage U: 15 kV

Maximum permitted operating voltage in three-phase systems: 18 kV

Test voltage: 24 kV

part no.	part name	Rl [Ohm/km]	Ø [mm]	Fzp [N]	Fzd [N]	Cu	G [kg]
051873	3X35 + 2X25/2 + 12 FO (9/125) + 12 FO (62.5/125)	0.565	49.4	2100	3150	1248	3340

TRATOSFLEX® ES3 FO 6/10 kV

Nominal voltage Uo: 6 kV

Nominal voltage U: 10 kV

Maximum permitted operating voltage in three-phase systems: 12 kV

Test voltage: 17 kV

part no.	part name	Rl [Ohm/km]	Ø [mm]	Fzp [N]	Fzd [N]	Cu	G [kg]
052591	3X25 + 2X25/2 + 24 FO (50/125)	0.795	43.5	1500	2250	960	2510
052032	3X25 + 2X25/2 + 24 FO (62.5/125)	0.795	43.5	1500	2250	960	2510
052380	3X35 + 2X25/2 + 24 FO (9/125)	0.565	45.8	2100	3150	1248	2980
054703	3X35 + 02X25/2 + 24 FO (50/125)	0.565	45	2100	3150	1248	2980
053446	3X50 + 2X25/2 + 24 FO (50/125)	0.393	48.7	3000	4500	1248	3550
052363	3X50 + 2X25/2 + 24 FO (62.5/125)	0.393	48.7	3000	4500	1680	3550
053104	3x35 + 35 + 3x(2x2.5)C + 24G62.5/125	0.565	52	2100	3150	1560	4080
053087	3X35 + 1X35 + 3X(4X2.5)C + 24G62.5/125	0.565	54	2100	3150	1728	4190
054238	3X70 + 2X35/2 + 24 FO (9/125)	0.277	53.5	4200	5250	2352	4880
054239	3X70 + 2X35/2 + 24 FO (50/125)	0.277	53.5	4200	5250	2352	4880
054240	3X70 + 2X35/2 + 24 FO (62.5/125)	0.277	53.5	4200	5250	2352	4880
054970	3x95 + 2x50/2 + 24FO (62.5/125)	0.21	57.9	5700	7000	3216	5890
053088	3X120 + 1X70 + (12X2.5)C + 12 E9	0.164	73	7200	9000	4473	5911

TRATOSFLEX® ES3 FO 12/20 kV

Nominal voltage Uo: 12 kV

Nominal voltage U: 20 kV

Maximum permitted operating voltage in three-phase systems: 24 kV

Test voltage: 29 kV

part no.	part name	Rl [Ohm/km]	Ø [mm]	Fzp [N]	Fzd [N]	Cu	G [kg]
053577	3X35+02X25/2 + 24 FO (50/125)	0.565	53.7	2100	3150	2477	3980
052160	3X35 + 2X25/2 + 24 FO (62.5/125)	0.565	54	2100	3150	2477	3800

Rl	Conductor resistance
Ø	outer diameter approx.
Fzp	Tensile strength (permanent)
Fzd	Tensile strength (dynamic)
Cu	Copper weight (GER)
G	net weight per 1000