

Reelkab MSSFO (N)TSCGEWOEU



*For more detailed information on Fiber, please refer to the technical page.

CABLE STRUCTURE

Conductor	Phase and earth conductor made of tinned annealed stranded copper wires Class 5 in accordance with VDE 0295 and IEC 60228
Conductor Screen	Extruded inner semiconductive rubber compound and semiconductive tape
Insulation	High grade special compound based on EPR quality at least 3GI3, in accordance with VDE 0207 Part 20
Insulation Screen	Extruded outer semiconductive rubber compound easily stripped and semiconductive tape
Optical Fiber	Fiber core diameter: 50, 62,5, or 9µm ; cladding diameter: 125µm ; coating diameter : 250µm
Fiber Covering	Up to 24 cores fiber are used in PBT
Core Arrangement	A three core design, where the earth conductor is divided into two parts and placed in the spaces between the cores with fiber optic element, with the cores layed up around a semi conductive filler incorporating an aramid rope at the center for added tensile strength and structural stability.
Inner Sheath	Special rubber compound, quality at least 5GM3, in accordance with VDE 0207 Part 21
Reinforcement	A braid of polyester threads, reinforced and bonded with vulcanization between the sheaths, delivers high durability to the sheath system
Outer Sheath	Special rubber compound quality at least 5GM5, in accordance with VDE 0207 - Part 21

STANDARDS & MAIN CHARACTERISTICS

Standard	Based on VDE 0250-813	Flame Retardant	IEC 60332-1-2
General Requirements	VDE 0250-1	Oil Resistant	IEC 60811-404
Guide to Use	VDE 0298-3, VDE 0298-4	UV Resistance	BS EN 50289-4-17 / Method B
Electrical Tests	VDE 0472-501, 512, 508, 502, 503	Water Resistance	AD8
Non-electrical Tests	VDE 0472-401, 402, 602,615, 613		
Conductor Resistance	VDE 0295, IEC 60228		

OPERATING CHARACTERISTICS

Rated Voltage	3,6/6 kV / 6/10 kV / 8,7/15 kV / 12/20 kV	Min. Bending Radius	VDE 0298-3
Test Voltage	11 kV / 17 kV / 24 kV / 29 kV	Max. Tensile Load on the Conductor	20 N/mm ²
Max. Conductor Temperature	90°C	Max. Tensile Load on the Conductor	Up to 25 N/mm ² (acc. to VDE 0298-3 : 15 N mm ²)
Short Circuit Temperature	250°C (Max. 5 s)	Torsional Stress	± 50 °/m
Min. Ambient Temperature	-40°C	Min. Distance with S-Type	20 x D
Max. Current Carrying Capacity	VDE 0298-4	Directional Changes	
		Travel speed	max. 180 m/min

VISUAL AND MARKING

Sheath Color	Red	Marking	UNTEL Reelkab MSSFO (N)TSCGEWOEU (NxS mm ²) (rated voltage) (Based on VDE 0250-813) [LOT NUMBER] [XXXX MT]
Cores	Color-coded phase identification ropes		

APPLICATION

This cable is specially designed for mobile equipment operating under high to extreme mechanical stresses with integrated fibre optics for the combined transmission of energy and data It is engineered to withstand high travel speeds, dynamic tensile loads, multi directional changes in movement across different planes, churning effects when running over rollers, and continuous torsional stresses It is particularly suitable for fast moving container cranes, portal cranes, stacker reclaimers, and large scale mobile industrial machinery.

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3,6/6 kV

CAN*	Cross-section (mm ²)	Conductor Diameter Max. (mm)	Earth Conductor Diameter Max. (mm)	Outer Sheath Diameter			Approx. Cable Weight (kg/km)	Min. Bending Radius Free moving (mm)	Permissible tensile force max. (N)	Dynamic tensile force max. (N)	Current Carrying Capacity (**) (A)	Short-circuit current (conductor) (kA)	Max. Electrical Resistance at 20 °C (ohm/km)
				Min. (mm)	Nom. (mm)	Max. (mm)							
4741.1	3x25+2x25/2+1x(12G62,5)	7,30	5,50	38,5	41,6	42,6	2.737	426	1500	1875	131	3,58	0,795
4741.2	3x35+2x25/2+1x(12G62,5)	8,90	5,50	41,5	43,3	44,5	3.121	445	2100	2625	162	5,01	0,565
4741.3	3x50+2x25/2+1x(12G62,5)	10,50	5,50	44,5	46,3	47,5	3.748	475	3000	3750	202	7,15	0,393
4741.4	3x70+2x35/2+1x(12G62,5)	12,60	6,60	50,0	52,6	54,0	5.018	540	4200	5250	250	10,01	0,277
4741.5	3x95+2x50/2+1x(12G62,5)	14,40	7,80	54,0	56,9	58,0	6.180	580	5700	7125	301	13,59	0,21
4741.6	3x120+2x70/2+1x(12G62,5)	16,40	9,50	59,5	64,6	65,7	8.058	657	7200	9000	352	17,16	0,164
4741.7	3x150+2x70/2+1x(12G62,5)	18,20	9,50	63,0	65,7	67,0	8.833	670	9000	11250	404	21,45	0,132
4741.8	3x185+2x95/2+1x(12G62,5)	20,20	10,80	67,0	70,7	72,0	10.552	720	11100	13875	461	26,46	0,108
4741.9	3x240+2x120/2+1x(12G62,5)	23,10	12,40	74,5	80,3	81,4	13.750	814	14400	18000	540	34,32	0,0817
4741.10	3x300+2x150/2+1x(12G62,5)	26,00	13,60	81,5	87,8	88,8	16.777	888	18000	22500	620	42,90	0,0654

6/10 kV

CAN*	Cross-section (mm ²)	Conductor Diameter Max. (mm)	Earth Conductor Diameter Max. (mm)	Outer Sheath Diameter			Approx. Cable Weight (kg/km)	Min. Bending Radius Free moving (mm)	Permissible tensile force max. (N)	Dynamic tensile force max. (N)	Current Carrying Capacity (**) (A)	Short-circuit current (conductor) (kA)	Max. Electrical Resistance at 20 °C (ohm/km)
				Min. (mm)	Nom. (mm)	Max. (mm)							
4742.1	3x25+2x25/2+1x(12G62,5)	7,30	5,50	40,0	42,0	43,0	2.770	430	1500	1875	131	3,58	0,795
4742.2	3x35+2x25/2+1x(12G62,5)	8,90	5,50	42,0	43,9	45,0	3.178	450	2100	2625	162	5,01	0,565
4742.3	3x50+2x25/2+1x(12G62,5)	10,50	5,50	45,0	46,9	48,0	3.807	480	3000	3750	202	7,15	0,393
4742.4	3x70+2x35/2+1x(12G62,5)	12,60	6,60	51,0	53,9	55,0	5.171	550	4200	5250	250	10,01	0,277
4742.5	3x95+2x50/2+1x(12G62,5)	14,40	7,80	55,0	57,4	59,0	6.234	590	5700	7125	301	13,59	0,21
4742.6	3x120+2x70/2+1x(12G62,5)	16,40	9,50	58,5	61,3	62,5	7.630	625	7200	9000	352	17,16	0,164
4742.7	3x150+2x70/2+1x(12G62,5)	18,20	9,50	63,0	65,7	67,0	8.834	670	9000	11250	404	21,45	0,132
4742.8	3x185+2x95/2+1x(12G62,5)	20,20	10,80	67,5	72,8	73,9	10.920	739	11100	13875	461	26,46	0,108
4742.9	3x240+2x120/2+1x(12G62,5)	23,10	12,40	73,0	77,0	78,0	13.194	780	14400	18000	540	34,32	0,0817
4742.10	3x300+2x150/2+1x(12G62,5)	26,00	13,60	81,5	87,8	88,8	16.777	888	18000	22500	620	42,90	0,0654

** Conductor temperature at 90 °C, Ambient air temperature at 30 °C

* CAN : Cable Article Number

*** Design available with 6, 12, 18 ort 24 fibers.

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8,7/15 kV

CAN*	Cross-section (mm ²)	Conductor Diameter Max. (mm)	Earth Conductor Diameter Max. (mm)	Outer Sheath Diameter			Approx. Cable Weight (kg/km)	Min. Bending Radius Free moving (mm)	Permissible tensile force max. (N)	Dynamic tensile force max. (N)	Current Carrying Capacity (**) (A)	Short-circuit current (conductor) (kA)	Max. Electrical Resistance at 20 °C (ohm/km)
				Min. (mm)	Nom. (mm)	Max. (mm)							
4743.1	3x25+2x25/2+1x(12G62,5)	7,30	5,50	42,0	43,8	45,0	2.937	450	1500	1875	139	3,58	0,795
4743.2	3x35+2x25/2+1x(12G62,5)	8,90	5,50	45,0	47,3	49,0	3.527	490	2100	2625	172	5,01	0,565
4743.3	3x50+2x25/2+1x(12G62,5)	10,50	5,50	50,0	52,8	54,0	4.449	540	3000	3750	216	7,15	0,393
4743.4	3x70+2x35/2+1x(12G62,5)	12,60	6,60	53,0	55,8	57,0	5.422	570	4200	5250	265	10,01	0,277
4743.5	3x95+2x50/2+1x(12G62,5)	14,40	7,80	58,0	60,7	62,0	6.688	620	5700	7125	319	13,59	0,21
4743.6	3x120+2x70/2+1x(12G62,5)	16,40	9,50	64,0	66,7	68,0	8.372	680	7200	9000	371	17,16	0,164
4743.7	3x150+2x70/2+1x(12G62,5)	18,20	9,50	68,0	70,7	72,0	9.641	720	9000	11250	428	21,45	0,132
4743.8	3x185+2x95/2+1x(12G62,5)	20,20	10,80	72,0	75,9	77,0	11.426	770	11100	13875	488	26,46	0,108
4743.9	3x240+2x120/2+1x(12G62,5)	23,10	12,40	77,0	82,8	83,9	14.221	839	14400	18000	574	34,32	0,0817
4743.10	3x300+2x150/2+1x(12G62,5)	26,00	13,60	84,0	90,3	91,3	17.289	913	18000	22500	660	42,90	0,0654

12/20 kV

CAN*	Cross-section (mm ²)	Conductor Diameter Max. (mm)	Earth Conductor Diameter Max. (mm)	Outer Sheath Diameter			Approx. Cable Weight (kg/km)	Min. Bending Radius Free moving (mm)	Permissible tensile force max. (N)	Dynamic tensile force max. (N)	Current Carrying Capacity (**) (A)	Short-circuit current (conductor) (kA)	Max. Electrical Resistance at 20 °C (ohm/km)
				Min. (mm)	Nom. (mm)	Max. (mm)							
4744.1	3x25+2x25/2+1x(12G62,5)	7,30	5,50	45,0	46,8	48,0	3.239	480	1500	1875	139	3,58	0,795
4744.2	3x35+2x25/2+1x(12G62,5)	8,90	5,50	47,0	48,9	50,0	3.721	500	2100	2625	172	5,01	0,565
4744.3	3x50+2x25/2+1x(12G62,5)	10,50	5,50	51,0	53,8	55,0	4.598	550	3000	3750	216	7,15	0,393
4744.4	3x70+2x35/2+1x(12G62,5)	12,60	6,60	56,0	58,5	60,0	5.777	600	4200	5250	265	10,01	0,277
4744.5	3x95+2x50/2+1x(12G62,5)	14,40	7,80	60,0	62,8	64,0	6.964	640	5700	7125	319	13,59	0,21
4744.6	3x120+2x70/2+1x(12G62,5)	16,40	9,50	66,0	68,8	70,0	8.698	700	7200	9000	371	17,16	0,164
4744.7	3x150+2x70/2+1x(12G62,5)	18,20	9,50	69,0	71,5	73,0	9.778	730	9000	11250	428	21,45	0,132
4744.8	3x185+2x95/2+1x(12G62,5)	20,20	10,80	75,0	77,8	79,0	11.747	790	11100	13875	488	26,46	0,108
4744.9	3x240+2x120/2+1x(12G62,5)	23,10	12,40	78,5	84,5	85,6	14.568	856	14400	18000	574	34,32	0,0817
4744.10	3x300+2x150/2+1x(12G62,5)	26,00	13,60	85,5	92,0	93,0	17.639	930	18000	22500	660	42,90	0,0654

** Conductor temperature at 90 °C, Ambient air temperature at 30 °C

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*** Design available with 6, 12, 18 ort 24 fibers.

