Mining cables

Product overview

Prysmian Group

Prysmian Group

Linking the future

As the worldwide leader in the cable industry, Prysmian Group believes in the effective, efficient and sustainable supply of energy and information as a primary driver in the development of communities.

With this in mind, we provide major global organisations in many industries with best-in-class cable solutions, based on state-of-the-art technology. Through three renowned commercial brands – Prysmian, Draka and General Cable – based in almost 50 countries, we're constantly close to our customers, enabling them to further develop the world's energy and telecoms infrastructures, and achieve sustainable, profitable growth.

In our energy business, we design, produce, distribute and install cables and systems for the transmission and distribution of power at low, medium and high voltage.

In telecoms, the Group is a leading manufacturer of all types of copper and fibre cables, systems and accessories – covering voice, video and data transmission.

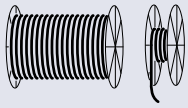
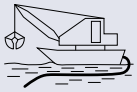
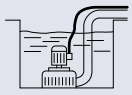
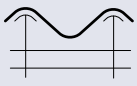
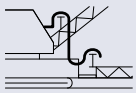
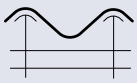
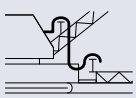
Drawing on over 130 years' experience and continuously investing in R&D, we apply excellence, understanding and integrity to everything we do, meeting and exceeding the precise needs of our customers across all continents, at the same time shaping the evolution of our industry.

What we offer

Elastomeric cables are the natural choice for applications where durability, flexibility, and safe operation under extreme conditions are important. The Prysmian Group's elastomeric cables have been "field proven" in thousands of operations, and with continuous development, utilise the best features of cables offered around the world.

Prysmian Group has developed extensive know-how over many years regarding the special operational conditions of mining equipment. The decisive factor was close cooperation with many significant mining operators. The experience we gain every day contributes to the design of our cables. The high operational reliability and service life of our cable solutions are based on this experience.

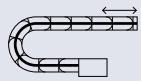
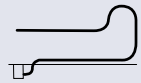
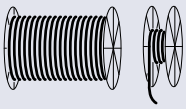
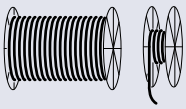
Applications overview – **Opencast**

Application group		Product name	Designation	Description
MEDIUM VOLTAGE REELING CABLES				
		PROTOLON(M)	R-(N)TSCGEWOEU	MV reeling cable
		PROTOLON(M) with FO	R-(N)TSCGEWOEU	MV reeling cable with integrated fiber optic
		PROTOLON(IQ)	(N)TSKCGEWOEU	MV reeling cable with embedded sensor
MEDIUM VOLTAGE TRAILING CABLES				
		TENAX-SAS	NTSCGEWOEU	MV trailing cable abrasion and cold resistant (-50 °)
		PROTOLON(SB)	NTSCGEWOEU / NTSCGECEWOEU	MV trailing cable with or without metallic screen
		PROTOLON(SB-SAM)	(N)TSCGEWOEU / (N)TSCGECEWOEU	MV trailing cable with optimized dimensions
		TENAX-LUMEN	(N)TSCGEH3S	MV trailing cable with self-illuminating function
MEDIUM VOLTAGE DREDGING CABLES				
		PROTOLON(ST).../3E	NTSCGEWOEU	MV water resistant cable with individual concentric earth
		PROTOLON(ST)	NTSCGEWOEU	MV water resistant cable with earth into interstices
CABLES FOR SEMI-FLEXIBLE INSTALLATION				
		PROTOLON(M)	F-(N)TSCGEWOEU	MV cable for semi-flexible use
		PROTOMONT	NSSHOEU	LV cable for semi-flexible use, water resistant
		PROTOMONT	NSHXOEU	LV cable for semi-flexible use, LSOH
		PROTOMONT(MT)	(N)SSHOEU	LV cable for semi-flexible use, with optimized dimensions
		PROTOMONT EMV-FC	(N)SSHCOEU	LV screened cable EMC compliant for VFD
		PROTOMONT EMV-FC (-45°C)	(N)SSHCOEU	LV screened cable EMC compliant for VFD, cold-resistant
MEDIUM VOLTAGE SINGLE CORE CABLES				
		FELTOFLEX	NTMCWOEU	MV single-core cable with cold removable semi-con. layer
		PROTOLON	NTMCGCWOEU	MV single-core cable
		PROTOLON(M)	(N)TMCGCWOEU	MV single-core cable with optimized dimensions
CONTROL AND SIGNALING CABLES				
		OPTOFLEX(M)	G62.5/125, G50/125, E9/125	Flexible fibre optic cable, also suitable for underground installation
		PROTOMONT(MSR)	2YSLGCGOEU	Rubber sheathed screened data cable, also suitable for underground installation

Voltage range	Travel speed max.	Tensile force max.	Torsion max.	Sheath quality	Abrasion resistance	Water resist-ance	S-bendings in operation	Temp. range in fully flexible operation (°C)	Certificate/Approvals
3.6/6 kV – 20/35 kV	120 m/min	25 N/mm²	+/- 100 °/m	5GM5	Very good	Good	Multiple planes	-35 to +80	Gost-R/-K/-B, TR-CU
3.6/6 kV – 20/35 kV	120 m/min	25 N/mm²	+/- 100 °/m	5GM5	Very good	Good	Multiple planes	-35 to +80	Gost-R/-K/-B, TR-CU
3.6/6 kV – 20/35 kV	240 m/min	30 N/mm²	+/- 100 °/m	5GM5	Very good	Good	Multiple planes	-35 to +80	Gost-R/-K/-B, TR-CU
3.6/6 kV – 12/20 kV	–	25 N/mm²	+/- 100 °/m	5GM5+	Excellent	Very good	–	-50 to +80	Gost-R/-K/-B, TR-CU
3.6/6 kV – 12/20 kV	–	15 N/mm²	+/- 100 °/m*	5GM5	Very good	Very good	–	-20 to +80	VDE, MSHA, Gost-R/-K/-B, TR-CU
3.6/6 kV – 12/20 kV	–	20 N/mm²	+/- 100 °/m*	5GM5	Very good	Very good	–	-30 to +80	Gost-R/-K/-B, TR-CU
3.6/6 kV – 12/20 kV	–	25 N/mm²	+/- 100 °/m	PUR	Very good	Very good	–	-50 to +80	–
1.8/3 kV – 18/30 kV	–	15 N/mm²	+/- 25 °/m	5GM3	Good	Excellent	–	-25 to +80	Gost-R/-K/-B, TR-CU
1.8/3 kV – 18/30 kV	–	15 N/mm²	+/- 100 °/m	5GM3	Good	Excellent	–	-25 to +80	Gost-R/-K/-B, TR-CU
1.8/3 kV – 18/30 kV	–	15 N/mm²	+/- 100 °/m	5GM3	Good	Very good	–	-25 to +80	Gost-R/-K/-B, TR-CU
0.6/1 kV	–	15 N/mm²	+/- 100 °/m	5GM5	Very good	Very good	–	-25 to +80	VDE, MA-China, MSHA, EAC
0.6/1 kV	–	15 N/mm²	+/- 100 °/m	5GM3 (LSOH)	Good	Very good	–	-25 to +80	–
0.6/1 kV	–	15 N/mm²	+/- 100 °/m	5GM5	Very good	Very good	–	-25 to +80	VDE
0.6/1 kV	–	15 N/mm²	+/- 25 °/m	5GM5	Very good	Very good	–	-25 to +80	MSHA, EAC
0.6/1 kV	–	15 N/mm²	+/- 25 °/m	5GM5	Very good	Very good	–	-45 to +80	MSHA, EAC
3.6/6 kV – 18/30 kV	–	15 N/mm²	+/- 25 °/m	5GM5	Very good	Very good	–	-25 to +80	Gost-R/-K/-B, TR-CU
3.6/6 kV – 18/30 kV	–	15 N/mm²	+/- 25 °/m	5GM3	Good	Very good	–	-25 to +80	Gost-R/-K/-B, TR-CU
3.6/6 kV – 18/30 kV	–	15 N/mm²	+/- 25 °/m	5GM3	Good	Very good	–	-25 to +80	Gost-R/-K/-B, TR-CU
–	–	max. 2000 N	+/- 100 °/m	5GM5	Very good	Very good	–	-30 to +80	–
250/250 V	–	max. 15 N/mm²	+/- 25 °/m	EM2	Good	Good	–	-25 to +60	EAC

* +/- 25 °/m if with metallic screen

Applications overview – **Underground/Tunneling**

Application group		Product name	Designation	Description
LOW AND MEDIUM VOLTAGE SHEARER CABLES				
		PROTOMONT(V)	NSSHCGEOEU	LV chain cable for shearers with double screen techn. and cold removable semi-con. layer
		PROTOMONT(V)	NTSKCGECWOEU	MV chain cable for shearers with double screen techn. and cold removable semi-con. layer
		PROTOMONT(VO)	(N)TSKCGEWOEU	MV chain cable for shearers with single screen techn. and cold removable semi-con. layer
		TENAX-CTE	NSSHKCGEOEU	LV chain cable for shearers with single screen techn. and semi-con. inner sheath
		PROTOMONT(Z)	NSSHKCGEOEU	LV trailing cable for shearers with double screen techn., cold removable semi-con. layer and steel armour
UNDERGROUND REELING CABLES				
		TENAX-LK	NTSKCGEWOEU	LV reeling cable with single screen techn. and semi-con. inner sheath
		PROTOMONT(S)	(N)SSHCGEOEU	LV reeling cable with single screen techn. and cold removable semi-con. layer
		CORDAFLEX(S)	NSHTOEU	LV reeling cable for fast-moving LHDs, rubber sheathed
		TROMMELFLEX M-PUR	D2X11Y	LV reeling cable for slow-moving LHDs, PUR sheathed, halogen-free
TBM REELING				
		PROTOMONT TBM	(N)TSCGECWOEU	MV reeling cable for TBMs, with double screen techn. and cold removable semi-con. layer
		PROTOMONT TBM	(N)TSCGECWHXOEU	MV reeling cable for TBMs, with double screen techn., cold removable semi-con. layer, LSOH
		TENAX-HTT	(N)TSCGEWOEU	MV reeling cable for TBMs, with single screen techn.
CABLES FOR SEMI-FIXED INSTALLATION IN UNDEGROUND MINES AND TUNNELS				
		PROTOMONT (Festoon)	NTSKCGECWOEU	MV cable for semi-flexible use, with double screen techn. and cold removable semi-con. layer
		SUPROMONT	(N)3GHSSYCY	MV armoured cable for fixed installation, with double screen techn. and cold removable semi-con. layer
		SUPROMONT	(N)3GHSSHCH	MV armoured cable for fixed installation, with double screen techn. cold removable semi-con. layer, LSOH
		PROTOMONT(MT)	(N)SSHOEU	LV cable for semi-flexible use, with optimized dimensions
		PROTOMONT ../3E	NSSHOEU	LV cable for semi-flexible use with individual concentric earth
		PROTOMONT EMV-FC	(N)SSHCOEU	LV screened cable EMC compliant for VFD
		PROTOMONT EMV-FC (-45°C)	(N)SSHCOEU	LV screened cable EMC compliant for VFD, cold-resistant

Voltage range	Travel speed max.	Tensile force max.	Torsion max.	Sheath quality	Min. bending radii at		S-bendings in operation	Temp. range in fully flexible operation (°C)	Certificate/Approvals
					max. 5N/mm²	max. 15N/mm²			
0.6/1 kV	–	15 N/mm²	+/- 25 °/m	5GM5	2.3xD	5xD	–	-20 to +80	MA – China, MSHA, EAC, BAS
1.8/3 kV – 3.6/6 kV	–	15 N/mm²	+/- 25 °/m	5GM5	2.3xD	5xD	–	-20 to +80	MA – China, MSHA, WUG, Gost -R/-K/-B, TR-CU
1.8/3 kV	–	15 N/mm²	+/- 50 °/m	5GM3	2.3xD	5xD	–	-20 to +80	MA – China, Gost -R/-K/-B
0.6/1 kV	–	15 N/mm²	+/- 50 °/m	5GM5	2.3xD	5xD	–	-20 to +80	EAC
0.6/1 kV	–	40 N/mm²	+/- 10 °/m	5GM5	–	5xD	–	-20 to +80	MA – China, MSHA, EAC, BAS
0.6/1 kV	160 m/min	30 N/mm²	+/- 100 °/m	5GM5	–	6xD	Multiple planes	-25 to +80	EAC
0.6/1 kV	160 m/min	30 N/mm²	+/- 50 °/m	5GM5	–	6xD	Multiple planes	-25 to +80	MA - China, EAC
0.6/1 kV	160 m/min	30 N/mm²	+/- 25 °/m	5GM5	–	6xD	Multiple planes	-25 to +80	MSHA, EAC
0.6/1 kV	60 m/min	25 N/mm²	+/- 50 °/m	PUR (HF)	–	8xD	Single plane	-30 to +60	–
6/10 kV – 18/30 kV	30 m/min	30 N/mm²	+/- 25 °/m	5GM5	–	12xD	Multiple planes	-20 to +80	Gost-R/-K/-B, TR-CU
6/10 kV – 18/30 kV	30 m/min	30 N/mm²	+/- 25 °/m	5GM3 (LSOH)	–	12xD	Multiple planes	-20 to +80	Gost-R/-K/-B, TR-CU
6/10 kV – 18/30 kV	30 m/min	15 N/mm²	+/- 100 °/m	5GM5	–	12xD	Multiple planes	-20 to +80	Gost-R/-K/-B, TR-CU
3.6/6 kV	–	15 N/mm²	+/- 25 °/m	5GM5	–	Fix 6xD Flex 10xD	–	-25 to +80	MA – China, WUG, BAS, Gost-R/-K/-B, TR-CU
3.6/6 kV – 18/30 kV	–	15 N/mm²	+/- 25 °/m	PVC YM5	–	Fix 6xD Flex 10xD	–	-5 to +60	VDE
3.6/6 kV – 18/30 kV	–	15 N/mm²	+/- 25 °/m	HM4 (LSOH)	–	Fix 6xD Flex 10xD	–	-5 to +60	VDE
0.6/1 kV	–	15 N/mm²	+/- 100 °/m	5GM5	–	Fix 4xD Flex 5xD	–	-25 to +80	VDE
0.6/1 kV	–	15 N/mm²	+/- 25 °/m	5GM5	–	Fix 4xD Flex 5xD	–	-25 to +80	MA-China, MSHA, EAC, BAS
0.6/1 kV	–	15 N/mm²	+/- 25 °/m	5GM5	–	Fix 4xD Flex 5xD	–	-25 to +80	MSHA, EAC
0.6/1 kV	–	15 N/mm²	+/- 25 °/m	5GM5	–	Fix 4xD Flex 5xD	–	-45 to +80	MSHA, EAC

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