



# Heavy duty design

Top notch quality in all materials and details makes the mechanical performance unsurpassable even in the harshest of environments.

# User friendly

As we have been able to optimise the cable diameter substantially as well as reducing the weight between 5 and 20 %, the cable is now much easier to handle and operate.

# Water proof

Thanks to the high-quality rubber in the cable sheath Protomont (MT) (N)SSHOEU is submersible in water depths down to 10 meters.



### New Protomont (MT) (N)SSHOEU is lighter and more flexible, yet as gritty as they get.

With new and superior insulation, we've been able to reduce the diameter and weight of our Protomont (MT) (N)SSHOEU cable, making it the most flexible and high-efficient cable for really rough environments such as mines and tunnels. If needed the cable is even submersible to a depth of 10 meters. Whatever your pliability and heavy-duty demands, Protomont will fill the shoes.

#### PROTOMONT (MT) (N)SSHOEU

#### Application

Rubber-sheathed flexible cables for mining and tunneling application, under heavy mechanical stress. Suitable for laying alongside conveyor belts and tunnel walls, on material handling equipment, e.g. as connection between upper and lower cars, and on movable equipment. The cables can be used indoor as well as outdoor, in explosion-hazard areas, in industry and in agriculture. The cables are water resistant up to 10 m water depth.



#### Available sections

The cable is available only in the round version:

- · Single-core
- · With two, three, four and five conductors
- · With three conductors + split or reduced earth
- · Control core: up to 37 conductors

#### MAIN FEATURES



Resistant to chemicals, oil and UV radiation

Submersible to a water depth of 10 meters

Flexible and easy to handle thanks to optimised diameter and reduced weight

Longer lengths on drum means optimised transportation

PROTOMONT (MT) (N)SSHOEU 0.6/1 kV						
Number of cores x cross section	Conductor diameter max. mm	Outer diameter min. mm	Outer diameter max. mm	Net weight (approx.) kg/km	Permissible tensile force max. N	
PROTOMONT (MT) (N)	SSHOEU-O					
1x16	5.2	9.5	11.1	230	240	
1x25	6.4	11	12.6	335	335	
1x35	7.5	12.3	13.9	435	525	
1x50	9	14.5	16.5	615	750	
1x70	11.1	16.4	18.4	812	1050	
1x95	12.8	18.5	20.5	1060	1425	
Ix120	14.5	20.4	22.4	1300	1800	
1x150	16.5	22.8	24.8	1600	2250	
Ix185	17.9	24.7	27.7	2020	2775	
1x240	21.2	27.6	30.6	2548	3600	
1x300	23.6	31.6	34.6	3200	4500	
2x1.5	1.6	9.8	11.4	145	45	
2x2.5	2	10.7	12.3	185	75	
2x4	2.4	11.9	13.5	220	120	
3x2.5	2	11.1	12.7	213	113	
3×4	2.4	12.1	13.7	271	180	
3x6	2.9	13.2	14.8	347	270	
3×10	3.9	16.1	18.1	505	450	
3x16	5.2	19	21	775	720	
3x25	6.4	22.9	24.9	1160	1125	
3x35	7.5	24.9	27.9	1500	1575	
3x50	9	29.4	32.4	2190	2250	
3x70	11.1	34.8	37.8	2930	3150	
3x95	12.8	40.9	43.9	3720	4275	
3x120	14.4	44.7	47.7	4850	5400	
3x150	16.1	50	54	6130	6750	
3x185	17.9	54.6	58.6	7290	8325	
		54.6	36.6	7290	6323	
PROTOMONT (MT) (N): 3x1.5	1.6	10.2	11.8	160	68	
	2		12.7	200		
3x2.5		11.1			113	
3x4	2.4	12.1	13.7 14.8	270 340	180	
3x6					270	
4x1.5	1.6	11	12.6	204	90	
4x2.5	2	12	13.6	245	150	
4x4	2.4	13	14.6	338	240	
4x6	2.9	14.9	16.9	453	360	
4x10	3.9	17.4	19.4	663	600	
4x16	5.2	21.4	23.4	1020	960	
4x25	6.4	24.5	27.5	1480	1500	
4x35	7.5	28.4	31.4	1880	2100	
4x50	9	33.6	36.6	2570	3000	
4x70	10.6	39.5	42.5	3820	4200	
4x95	12.8	44.8	47.8	4920	5700	
4x120	14.4	49.9	53.9	6300	7200	
4x150	16.1	54.9	58.9	7578	9000	
3x50+3x25/3	9	29.4	32.4	2320	2250	
3x70+3x35/3	10.6	34.8	37.8	3200	3150	

On request all cross sections available as halogen free version with 5GM3 outer sheath.

PROTOMONT (MT) (N)SSHOEU 0.6/1 kV					
Number of cores x cross section	Conductor diameter max. mm	Outer diameter min. mm	Outer diameter max. mm	Net weight (approx.) kg/km	Permissible tensile force max. N
PROTOMONT (MT) (N)S	SSHOEU-J (continued)				
3x95/50	12.4	43.6	46.6	4600	4275
3x95+3x50/3	12.8	40.9	43.9	4270	4275
3x120+3x70/3	14.4	44.7	47.7	5350	5400
3x150+3x70/3	16.5	50.8	54.8	6930	6750
3x185+3x95/3	17.9	54.5	58.5	8150	8325
3x240+3x120/3	20.6	62.2	66.2	10200	10800
3x300+3x150/3	23.4	70.3	74.3	13250	13500
5x1.5	1.6	11.9	13.5	245	113
5x2.5	2	12.9	14.5	297	188
5x4	2.4	14.7	16.7	414	300
5x6	2.9	16.1	18.1	530	450
5x10	3.9	19	21	795	750
5x16	5.2	23.2	25.2	1200	1200
5x25	6.4	28	31	1850	1875
5x35	7.5	34.5	37.5	2650	2625
PROTOMONT (MT) (N)S	SSHOEU-O Control cables				
12x4	2.4	20.8	22.8	831	720
12x6	2.9	23.4	26.4	1129	1080
7x1.5	1.6	12.9	14.5	288	158
8x1.5	1.6	13.8	15.4	325	180
10x1.5	1.6	15.5	17.5	400	225
12x1.5	1.6	15.8	17.8	400	270
14x1.5	1.6	16.8	18.8	495	315
18x1.5	1.6	18.5	20.5	610	405
19x1.5	1.6	18.9	20.9	620	427
24x1.5	1.6	21.1	23.1	750	540
7x2.5	2	14.9	16.9	417	263
8x2.5	2	15.8	17.8	452	300
10x2.5	2	16.4	18.4	500	375
12x2.5	2	17.3	19.3	561	450
14x2.5	2	18.7	20.7	660	525
18x2.5	2	21.2	23.2	840	675
19x2.5	2	22.3	24.3	900	712
24x2.5	2	22.8	24.8	1009	900
37x2.5	2	29	31	1600	1388

On request all cross sections available as halogen free version with 5GM3 outer sheath.

PROTOMONT (MT) (N)SSHOEU					
Global data					
Brand	Protomont (MT)				
Type designation	(N)SSHOEU				
Standard	DIN VDE 0250-812				
Approvals	VDE-REG F546				
Construction characteristics					
Conductor	Bare copper, class 5				
Insulation	German made special cross- linked EPR, developed for optimized insulation thickness with retained cable properties.				
Core identification	Light grey with black digits				
Inner sheath	German made special cross- linked EPR, >GM1b				
Outer sheath	German made special cross- linked CPE, 5GM5				
Outer sheath colour	Yellow				
Mechanical characteristics					
Resistance to impact	Very good				
Abrasion resistance	Very good				
Cable flexibility	Excellent				
Cable handling	Excellent (due to optimized diameter and weight)				
Fixed bending radius	D>12 mm: 4(xD) – D<12 mm: 3(xD)				
Flexible bending radius	D>12 mm: 5(xD) – D<12 mm: 4(xD)				
Max. tensile load conductor	15 N/mm²				
Torsional stress	+/- 100 °/m				
Usage characteristics					
Silicone free	Yes				
Lead free	Yes				
Chemical resistance	Temporary				
Water resistance	Yes, up to 10 m submersing depth				
Oil resistance	Yes				
Ozone resistance	Yes				
UV resistance	Yes				
Max. conductor temperature in service	90°C				
Reaction to fire	IEC 60332-1-2				
RoHS/REACH compliant	Yes				
Weather resistance	Yes				

PROTOMONT (MT) (N)SSHOEU				
Thermal parameters				
Max. permissible temperature at conductor	90°C			
Max. short circuit temperature	250°C			
Ambient temp. in flexible application (min. – max.)	-25°C - +60°C			
Ambient temp. in fixed installation (min. – max.)	-40°C – +80°C			
Max. permissible water temp.	40°C			
Electrical parameters				
Rated voltage	0.6/1 kV (600/1000V)			
Max. permissible operating voltage AC	0.7/1.2 kV			
Max. permissible operating voltage DC	0.9/1.8 kV			
AC test voltage	3 kV (5 min.)			

Please check our homepage: www.prysmiangroup.de for more details.

### Made locally

We've been making cables in Germany since 1858. Today we have 2,000 skilled co-workers developing state-of-the-art cables in six plants all over the country. We can offer a complete range of cables covering everything from the deep blue sea, mines and tunnels to skyscrapers and satellites.

Two of our facilities are Centres of Excellence including R&D departments in which we develop new solutions to meet your specific needs as well as the common challenges of tomorrow.

When that is not enough, we have the largest cable manufacturer in the world to our disposal, Prysmian. That includes 50 countries, 112 plants, 25 R&D centres and about 30,000 skilled professionals doing nothing but developing and producing cable solutions that will solve your current and future needs.





### The planet's pathways

#### **PRYSMIAN**

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