



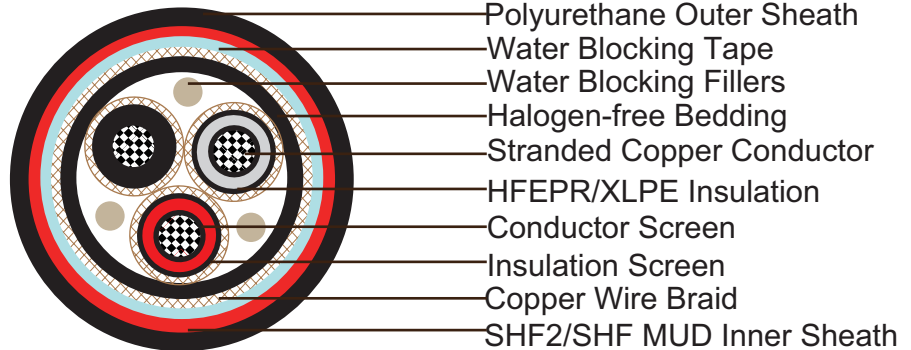
## Water Blocked P19 or P19/P21 RFOU 12/20KV

### Applications

These cables are partially water blocked, flame retardant, low smoke, halogen free and mud resistant, used for fixed installation for medium voltage power.

### Standards

- IEC 60092-354
- IEC 60092-351
- IEC 60092-359
- IEC 60332-1
- IEC 60332-3-22
- IEC 60754-1,2
- IEC 61034-1,2
- NEK 606:2004
- VG 95218 part 29



### Construction

- **Conductors:** Circular tinned annealed stranded copper to IEC 60228 class 2.
- **Conductor Screen:** Semi conducting material.
- **Insulation:** Halogen-free EPR. XLPE can be offered as an option (for TFOU cable).
- **Insulation Screen:** Semi conducting material and tinned copper wire braid.
- **Filler:** Water blocking fillers, if required.
- **Bedding:** Halogen free compound, PETP wrapping tape will be applied over the bedding, if required.
- **Armour:** Tinned copper wire braid, PETP wrapping tape will be applied over the braiding, if required.
- **Water Blocking Elements:** Water blocking tape and strings for providing longitudinal water tightness.
- **Inner Sheath:** Halogen free thermosetting compound, SHF2 (for TYPE P19), or halogen free mud resistant thermosetting compound, SHF MUD (for TYPE P19/P21), coloured red.
- **Outer Sheath:** Polyurethane for providing transversal water tightness, PE is optional, but can not meet low smoke standard.





## Optional

P20 or P20/P22 RFOU/TFOU 18/30(36) kV

## Electrical Characteristics

Nominal Cross Section Area	mm <sup>2</sup>	16	25	35	50	70	95
Nominal Conductor Diameter	mm	5.2	6.5	7.4	8.7	10.3	12.2
Maximum DC Resistant@20°C	Ω/km	1.16	0.734	0.529	0.391	0.27	0.195
Continuous Current Rating@45°C 1 Core	A	96	127	157	196	242	293
Continuous Current Rating@45°C 3 Core	A	67	89	110	137	169	205
Short Circuit Current 1s	A	2290	3580	5010	7150	10020	13590
Operating Voltage	KV	12/20	12/20	12/20	12/20	12/20	12/20
Nominal Cross Section Area	mm <sup>2</sup>	120	150	185	240	300	
Nominal Conductor Diameter	mm	13.8	15.1	17.0	19.6	21.9	
Maximum DC Resistant@20°C	Ω/km	0.154	0.126	0.1	0.0762	0.0607	
Continuous Current Rating@45°C 1 Core	A	339	389	444	522	601	
Continuous Current Rating@45°C 3 Core	A	237	272	311	365	421	
Short Circuit Current 1s	A	17170	21460	26470	34340	42930	
Operating Voltage	KV	12/20	12/20	12/20	12/20	12/20	

## Ambient Temperature Correction Factors

Ambient Temperature Correction Factors	35	40	45	50	55	60	65	70	75	80
Rating Factor	1.1	1.05	1.0	0.94	0.88	0.82	0.74	0.67	0.58	0.47

## Mechanical and Thermal Properties

- **Bending Radius:** 15×OD (during installation); 9×OD (fixed installed)
- **Temperature Range:** -20°C ~ +90°C





## Dimensions and Weight

Construction No. of cores×Cross section(mm <sup>2</sup> )	Nominal Insulation Thickness mm	Nominal Bedding Thickness mm	Nominal Inner Sheath Thickness mm	Nominal Outer Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×16	5.5	1.4	1.2	1.0	30.0±2	1260
1×25	5.5	1.5	1.2	1.2	34.0±2	1607
1×35	5.5	1.8	1.3	1.2	34.7±2	1675
1×50	5.5	1.8	1.4	1.2	36.2±2	1885
1×70	5.5	1.9	1.4	1.2	37.0±2	2174
1×95	5.5	2.0	1.5	1.4	39.8±2	2594
1×120	5.5	2.0	1.5	1.4	41.6±2	2951
1×150	5.5	2.1	1.6	1.4	43.5±2	3407
1×185	5.5	2.2	1.6	1.4	45.7±2	3953
1×240	5.5	2.3	1.7	1.6	49.0±2	4736
1×300	5.5	2.4	1.8	1.6	51.7±2	5581
3×16	5.5	1.8	2.0	1.0	57.1±2	5198
3×25	5.5	1.9	2.0	1.2	64.6±2	5990
3×35	5.5	2.9	2.1	1.2	65.0±2	6290
3×50	5.5	3.0	2.2	1.2	67.8±2	7077
3×70	5.5	3.1	2.3	1.2	71.5±2	8180
3×95	5.5	3.3	2.4	1.4	75.8±2	9608
3×120	5.5	3.4	2.5	1.4	79.8±2	11109
3×150	5.5	3.6	2.6	1.4	84.7±2	12752
3×185	5.5	3.8	2.7	1.4	92.3±2	12878
3×240	5.5	4.0	2.9	1.6	99.3±2	15461
3×300	5.5	4.2	3.0	1.6	105.1±2	18050



Standard



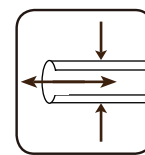
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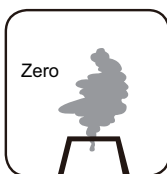
Standard



Standard



Water Tightness  
VG 95218-29



Halogen Free  
IEC60754-1



Low Corrosivity  
IEC60754-2



Low Smoke Emission  
IEC 61034-1&2



Flame Retardancy  
IEC60332-1



Reduced Fire Propagation  
IEC60332-3-22

