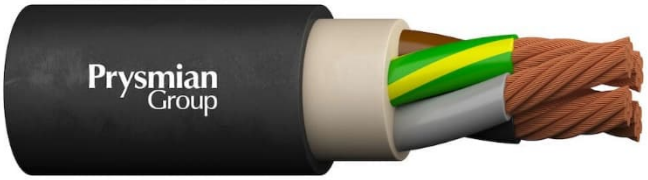
OZOFLEX(PLUS) S07RN8-F 450/750V – S1RN8-F 0.6/1kV

Special design rubber-sheathed cables for wastewater



These cables are suitable for connections of electrical equipment, submerged in contaminated water under medium mechanical stress. Likewise for fire- and explosion-hazard areas acc. DIN EN 60079-14-9, explosion-protected pumps, construction sites acc. DIN VDE 0100 Part 704, open-cast mining and quarries acc. DIN VDE 0168, indoor, outdoor, in industry and agriculture, for sewage water tanks, on plaster, excavators or hoisting gears.
If they are permanently installed in protective conduits or equipment, or e.g. in well installations or are used as rotor circuit cables for motors, also the S07RN8-F cables may be operated with an AC voltage of up to 1000 V or a DC voltage to earth of up to 750 V.

STANDARDS

DIN EN 50565-2	Application
DIN EN 50565-1	Application
DIN VDE 0100-704 / 0165 / 0168	Application
DIN EN 60228	Conductor
DIN EN 50363-1	Compound
DIN EN 50363-2-1	Compound
DIN VDE 0293-308	Core identification
DIN EN 50525-1	Core identification
EN 50525-2-21	Electrical parameters
IEC 60502-1	Electrical parameters
DIN EN 50525-2-21	Chemical behaviour
DIN EN 60811-404	Chemical behaviour
DIN 4045 / DIN 4046	Chemical behaviour
DIN EN 60332-1-2	Fire performance

NOTES ON INSTALLATION

Max. water depth [m]	2,000
Outdoor installation	Yes

MECHANICAL PARAMETERS

Permanent tensile strength (rule)	15 N/mm²		
Bending radius (rule)	OD ≤ 12mm	OD > 12mm	
	3	4	X OD max. for fixed installation
	4	5	X OD max. for flexible operation

CABLE DESIGN

Conductor	plain or tinned copper, finely stranded, class 5
Core insulation material	EPR rubber
Material inner sheath	EPDM rubber
Material outer sheath	Chlorinated polyethylene (CM/CPE)

ELECTRICAL PARAMETERS

	S07RN8-F	S1RN8-F
Rated voltage U_0/U (U_m)	450/750 (900) V	0,6/1 (1.2) kV
Test voltage [kV]	2.5	4
Voltage test duration (min.)	15	5
Control cores		
Rated voltage U_0/U (U_m)	-	300/500 (550) V
Test voltage [kV]	-	2
Voltage test duration (min.)	-	5

THERMAL PARAMETERS

Ambient temperature fix installation (min) [°C]	-40
Ambient temperature flexible installation (min) [°C]	-25
Conductor operating temp (max) [°C]	90
Max. conductor temperature at short circuit [°C]	250
Max. water temperature [°C]	40

CHEMICAL PARAMETERS

Flame retardant	in accordance with EN/IEC 60332-1-2
Oil resistant	acc. IEC/EN 60811-404
Resistant to chemicals	Yes
Sea water resistance	Yes

CABLE PROPERTIES S07RN8-F 450/750 V

Basic constructio	SAP code	Diameter conductor [mm]	Min. outer diameter [mm]	Max. outer diameter [mm]	Cable weight [kg/km]
4G1,5 +2X1,5	20430044	1.5 plain 1.5 tinned	15.0	16.0	340
4G2,5 +2X1,5	20430045	2.0 plain 1.5 tinned	17.0	18.0	450

CABLE PROPERTIES ELECTRICAL / MECHANICAL S07RN8-F 450/750 V

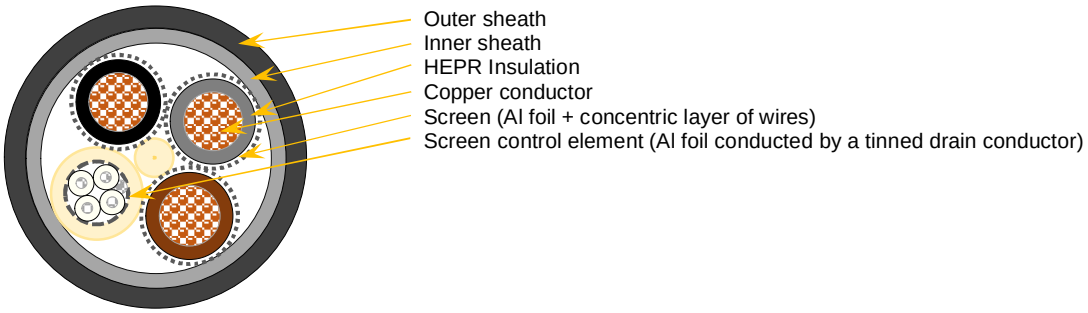
Basic constructio	SAP code	Bending radius, fix (min) [mm]	Bending radius moving (min) [mm]	Conductor resistance at 20° C [Ohm/km]	Current carrying capacity [A]	Short circuit current conductor (1sec) [kA]
4G1,5 +2X1,5	20430044	62	78	13.3 13.7	29	0.21 0.21
4G2,5 +2X1,5		70	88	7.98 13.7	38	0.36 0.21

Current carrying capacity in water: the values are valid for permanent operation with DC or AC with 50 up to 60 Hz at 30°C ambient water temperature, two or three cores loaded (cable completely immersed in water).

CABLE PROPERTIES S1RN8-F 0.6/1 kV

Basic constructio	SAP code	Diameter conductor [mm]	Min. outer diameter [mm]	Max. outer diameter [mm]	Cable weight [kg/km]
3x2,5+3x2,5/3E +(4x0,5)St	20436016	2.0 plain 0.9 tinned	18.0	20.0	410
3x6+3x6/3E +(4x0,5)St	20430046	2.9 plain 0.9 tinned	20.0	22.0	580
3x10+3x10/3E +(4x0,5)St	20439457	3.8 plain 0.9 tinned	24.0	26.0	940
3x16+3x16/3E +(4x0,5)St	20439458	5.0 plain 0.9 tinned	24.0	26.0	1060
3x25+3x16/3E +(4x0,5)St		6.4 plain 0.9 tinned	29.0	31.0	1480
3x35+3x16/3E +(4x0,5)St	20436017	7.5 plain 0.9 tinned	32.0	34.0	1850
3x50+3x25/3E +(4x0,5)St	20436018	9.0 plain 0.9 tinned	38.0	40.0	2650
3x70+3x35/3E + 2x(2x0,5)St	20470083	10.7 plain 0.9 tinned	42.0	44.0	3500

Example of cable cross section:



Each power core covered with Alu-laminated PET-foil and a layer of tinned copper wires.
The control core element covered with static screen (Alu-laminated PET-foil, conducted by a tinned drain conductor 0.75mm²).

CABLE PROPERTIES ELECTRICAL / MECHANICAL S1RN8-F 0.6/1 kV

Basic constructio	SAP code	Bending radius, fix (min) [mm]	Bending radius moving (min) [mm]	Conductor resistance at 20° C [Ohm/km]	Current carrying capacity [A]	Short circuit current conductor (1sec) [kA]
3x2,5+3x2,5/3E +(4x0,5)St	20436016	75	94	7.98 40.1	38	0.36 0.072
3x6+3x6/3E +(4x0,5)St	20430046	84	105	3.30 40.1	67	0.86 0.072
3x10+3x10/3E +(4x0,5)St	20439457	98	123	1.91 40.1	93	1.43 0.072
3x16+3x16/3E +(4x0,5)St	20439458	100	126	1.21 40.1	125	2.29 0.072
3x25+3x16/3E +(4x0,5)St		118	148	0.780 40.1	165	3.58 0.072
3x35+3x16/3E +(4x0,5)St	20436017	131	164	0.554 40.1	205	5.01 0.072
3x50+3x25/3E +(4x0,5)St	20436018	153	192	0.386 40.1	255	7.15 0.072
3x70+3x35/3E + 2x(2x0,5)St	20470083	172	215	0.272 40.1	316	10.0 0.072

Current carrying capacity in water: the values are valid for permanent operation with DC or AC with 50 up to 60 Hz at 30°C ambient water temperature, two or three cores loaded (cable completely immersed in water).