

## Screened Rubber Flexible Cable for medium mechanical stress and use in waste water

## OZOFLEX(FC+) S07RC4N8-F

<b>Application</b>	<p>For making connections to electrical equipment used in a waste-water environment and subject to medium mechanical stress, especially if considerable demands in respect of electromagnetic compatibility (EMC) according to the EMC directive imposes. For an effective shielding both ends of cable must have a good shield contact to ground.</p> <p>Owing to the various (and frequently changing) substances of which the contaminated water is made up, the cables may be used only in easily accessible areas that can be inspected (installation depth of approximately 10 m, as customarily encountered in sewage water tanks).</p> <p>These cables are also suitable for use in process water, cooling water, mine surface water, rainwater and combined waste water. Under certain circumstances they can be suitable for groundwater and seawater; it is possible to impose less stringent specifications in terms of accessibility and inspection. In such cases the cables can be used at depths greater than 10 m. (The water types are defined in accordance with DIN 4045 and DIN 4046).</p> <p>If the water concerned is aggressive or composed of special substances, the cable's resistance properties should be examined.</p> <p>These cables can be used indoors, outdoors, in explosion-hazard areas to DIN VDE 0165, in fire-hazard locations, on construction sites in accordance with DIN VDE 0100 Part 704, in open-cast mining and in quarries in accordance with DIN VDE 0168, in industry and in agriculture. They can also be permanently installed, e.g. on plaster, on excavators or on hoisting gear.</p> <p>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, the cables may be operated with an AC voltage of up to 1000 V or a DC voltage to earth of up to 750 V.</p> <p>The permissible AC test voltage in connection with motor tests is 3 kV, the maximum test duration is 3 minutes.</p> <p>In other respects the specifications of DIN VDE 0298-300 apply</p>										
<b>Technical details</b>	<p>Design complies with DIN VDE 0282-16 (HD 22.16):</p> <ul style="list-style-type: none"><li>• Finely-stranded copper conductors, Class 5 to DIN VDE 0295 (IEC 60228) – up to and including 6 mm<sup>2</sup> tinned</li><li>• Ozone and weather-resistant insulation on EPR base (Ethylene-Propylene-Rubber)</li><li>• Rubber inner sheath</li><li>• Flexible copper shield braiding of tinned single wires between inner and outer sheath, maximum transfer impedance of 250 Ω/km at 30 MHz</li><li>• Special synthetic vulcanized rubber outer sheath, oil-resistant to DIN VDE 0472-803</li></ul> <p>Burning behavior to DIN EN 50265-2-1 (VDE 0482 Teil 265-2-1) Waterresistant, test to DIN VDE 0282-16 (HD 22.16)</p> <p>Colour of outer sheath: black External marking, e.g.: ~~~~~ OZOFLEX(FC+) S07RC4N8-F 4G6 ~~~~~</p> <table border="0"><tr><td>Maximum permissible operating temperature at conductor</td><td>90 °C</td></tr><tr><td>Maximum permissible short-circuit temperature</td><td>200 °C (with tinned conductors) 250 °C (with bare conductors)</td></tr><tr><td>Minimum permissible temperatures in air, on the cable surface during operation, installation, transportation and storage</td><td>- 25 °C when in motion - 40 °C when stationary</td></tr><tr><td>Maximum permissible ambient temperature for use in water</td><td>40 °C</td></tr><tr><td colspan="2">At higher water temperatures, a shortened cable service life is to be expected.</td></tr></table>	Maximum permissible operating temperature at conductor	90 °C	Maximum permissible short-circuit temperature	200 °C (with tinned conductors) 250 °C (with bare conductors)	Minimum permissible temperatures in air, on the cable surface during operation, installation, transportation and storage	- 25 °C when in motion - 40 °C when stationary	Maximum permissible ambient temperature for use in water	40 °C	At higher water temperatures, a shortened cable service life is to be expected.	
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Minimum bending radii	Outer diameter of cable d in mm			
	up to 12	over 12 up to 20	over 20	
Permanent installation	3 d	4 d	4 d	
Free movement	5 d	6 d	6 d	
Entry with mechanical load	6 d	6 d	8 d	

  

<b>Continuous tensile stress</b>	Max. 15 N/mm <sup>2</sup> taking into account the entire copper cross-section of the main conductor
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<b>Current-carrying capacity</b>	The values apply to a cable in continuous operation, operating temperature 60 °C, air temperature 30 °C, installation touching on a surface, three cores loaded. In other respects, DIN VDE 0298-4 applies
	At other ambient temperatures, the current-carrying capacities must be converted with the following factors:
°C	10   15   20   25   <b>30</b>   35   40   45   50   55
f	1.15   1.12   1.08   1.04   <b>1.00</b>   0.96   0.91   0.87   0.82   0.76

  

<b>Voltages</b>	Rated voltage of cable $U_b/U$	450/750 V
	Maximum permissible operating voltage $U_{b \max}$ in three-phase and single-phase AC systems: line-earth / line-line	476/825 V
	DC systems: line-earth / line-line	619/1238 V
	AC peak value	1170 V
	AC test voltage (test periode)	2.5 kV (15 min)

**Selection data**

Number of cores and conductor size	Order No.	Conductor: Approx. number of strands x max. strand diameter	Diameter (Approx.)	Overall diameter of cable		Net weight 1000 m approx.	Current-carrying capacity
				Min.	Max.		
mm <sup>2</sup>		mm	mm	mm	mm	kg	A
<b>OZOFLEX(FC+) S07RC4N8-F 4 core, with protective conductor</b>							
4 G 1.5	5DH5 312	28 x 0.26	1.5	13.0	15.0	280	23
4 G 2.5	5DH5 313	45 x 0.26	1.9	15.5	18.0	415	30
4 G 4	5DH5 314	51 x 0.31	2.5	17.5	20.0	545	41
4 G 6	5DH5 315	75 x 0.31	3.2	19.5	22.0	700	53
4 G 10	5DH5 316	77 x 0.41	4.1	23.5	26.0	1010	74
4 G 16	5DH5 317	123 x 0.41	5.6	27.5	31.0	1460	99
4 G 25	5DH5 318	190 x 0.41	6.8	32.5	36.0	2100	131
4 G 35	5DH5 320	268 x 0.41	8.1	36.0	39.5	2730	162
4 G 50	5DH5 321	384 x 0.41	9.6	42.0	45.5	3680	202
4 G 70	5DH5 322	545 x 0.41	11.2	46.5	50.0	4800	250
4 G 95	5DH5 323	724 x 0.41	13.2	53.5	58.0	6280	301
4 G 120	5DH5 324	926 x 0.41	14.9	57.5	62.0	7520	352
<b>OZOFLEX(FC+) S07RC4N8-F multicore, with protective conductor</b>							
7 G 1.5	5DH5 352	28 x 0.26	1.5	16.4	17.4	409	23
8 G 1.5	5DH5 361	28 x 0.26	1.5	17.8	18.8	470	23
12 G 1.5	5DH5 362	28 x 0.26	1.5	20.2	21.2	605	23
12 G 2.5	5DH5 355	45 x 0.26	1.9	23.1	24.1	820	30