



# PSM-LWL-HCSO-200/230 HCS Optical Fiber Cable

## HCS Optical Fiber Cable For Permanent Outdoor Installation

Order No. 27 99 44 5



### 1. Technical Data

<b>Fiber</b>		
Type		200/230 µm step index fiber
Attenuation at 650 nm		≤ 10.0 dB/km (0°C to +70°C [+32°F to +158°F]) ≤ 15.0 dB/km (-20°C to 0°C [-4°F to +32°F])
Attenuation at 850 nm		≤ 8.0 dB/km (0°C to +70°C [+32°F to +158°F]) ≤ 12 dB/km (-20°C to 0°C [-4°F to +32°F])
Bandwidth length production		≥ 17 MHz/km at 650 nm ≥ 20 MHz/km at 850 nm
Numerical aperture		0.37
<b>Single Element</b>		
		2 full wires for direct connection of fiber optic connectors
Material		Copolymer (FRNC), flame-retardant, halogen-free
Color		Red/green
Conductor diameter		2.9 mm ±0.1 mm (0.114 in. ±0.004 in.) (for 3 mm [0.118 in.] crimping)
Strain relief elements		Non-metal, aramide yarn
Bending radius	Short period	30 mm (1.181 in.), minimum
	Permanent	50 mm (1.969 in.), minimum
Twisting		2 single elements and 2 dummy elements twisted around an FRP core and wrapped with fleece
<b>Outer Cable Sheath</b>		
Material		Polyethylene (PE)
Color		Black
Diameter		11 mm (0.433 in.)
Rodent protection		Glass-fibre yarn
Longitudinal water tightness		By swelling material
Marking		PHOENIX CONTACT FOC L (Date MM/YY) AT-VQH(B)2Y 2K200/230 10A17 + 8B20 LG and ID length specification in m
Tearing wire		2 tearing wires under the outer cable sheath
<b>Weight</b>		90 kg/km
<b>Temperature Range</b>		
Installation		-5°C ... +50°C (+23°F ... +122°F)
Operation		-20°C ... +70°C (-4°F ... +158°F)
Storage		-25°C ... +70°C (-13°F ... +158°F)

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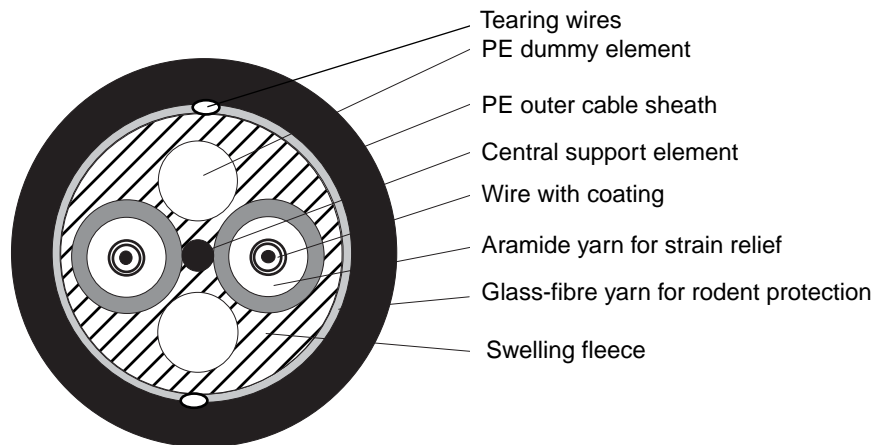
**2. Mechanical Cable Properties According to EN 187 000**

Bending radius	Procedure 513, Test Type 1	Short period	150 mm (5.906 in.)
		Permanent	200 mm (7.874 in.)
Tensile strength	Procedure 501	Short period	1500 N, minimum
		Permanent	500 N, minimum
Lateral pressure	Procedure 504	Short period	500 N/cm, minimum
		Permanent	300 N/cm, minimum
Impact strength	Procedure 505		1.5 Nm/3 impacts, minimum
Longitudinal water tightness	Procedure 605	1 m (3.28 ft.) cable, 1 m (3.281 ft.) water column, 24 hours	

**3. Material Properties**

Resistance to oil Chloroform test	Resistance to oil, benzene, acid, and lyes Free of substances, which would hinder coating with paint or varnish according to central standard P-VW 3.10.7 57650 of VW, Audi, and Seat
Free of halogen	IEC 60 754-2 A1:1997
UV resistance	DIN 53 387, Procedure 1, Condition A
Fire load	1.68 MJ/m (0.47 kWh/m)
Combustion gases	No toxic or corrosive combustion gases

**4. Structure**



**5. Recommended Connectors**

F-SMA - quick mounting connector for HCS fibers  
Set consists of 4 connectors

PSM-SET-FSMA/4-HCS  
Order No. 27 99 48 7

Connector mounting set

PSM-HCS-KONFTOOL  
Order No. 27 99 52 6