

HC-HMA-S hybrid cable

2x FO + 3x Cu wires

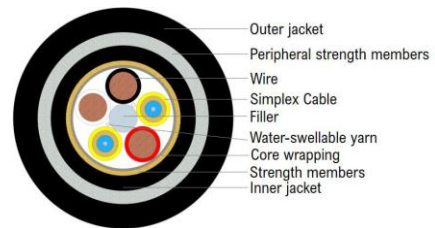
Description:

The OPTOKON HC-HMA-S hybrid cable is based on Highly durable flexible cable terminated with HMA-S hybrid fiber optic Expanded Beam and copper wires connectors. It is designed for applications where there is a requirement data communication by fiber optic and at the same time is needed power supply for connected devices. Suitable for military tactical systems, FTTA applications, CCTV systems or for connections of movable devices.

The hybrid cable includes two optical fibers suite able for high volume data transmission, high definition video signals and other high speed communication systems. Three copper wires of AWG 16 size might be used for power supplying of remote site, connection of control serial interface etc. Flexible cable design allows connection of moving devices like robots, while maintaining a reliable connection.

Features:

- Ruggedized field design
- MIL-DTL-38999 standard
- Hybrid connection: 2x FO + 3x Cu wires
- FO – Expanded Beam technology
- High reliable flexible connection of moveable objects
- Operating temperature: -40 to +70 °C



Hybrid cable cross section

Specifications:

Hybrid cable			
Fiber		Wire	
Fiber count	2	Wire count	3
Fiber Type	G.657.A1, G.657.A2	Wire Stranded Tinned Copper	AWG 16 (19x0.3 mm)
Buffer diameter	0.9 mm	Wire Insulation material	FEP
Simplex jacket	FR-LSHF	Wire Insulation colour	White, Black, Red
Simplex diameter	1.8 mm	Wire Insulation diameter	1.9 mm
Cable outer diameter	11.7 mm		
Max. loading	8000 N short term / 3500 N long term		
Outer jacket: UV stable Flame-retardant TPU Outer Jacket (V-2 acc. to UL94)			
Full description of hybrid cable available: https://www.optokon.com/product/322-highly-durable-hybrid-cable			
Hybrid connector HMA-S: 2x FO + 3x AWG16 FO – Expanded Beam technology			
Parameter			
Connector tyoe	HMA-S		
Insertion loss	SM: 1.8 dB typ.		
Return loss	SM: > 32 dB		
Operating temperature	-40 to +85 °C		
Water immersion	up to 15 m depth		
Vibration Sinusoidal	10-500 Hz, 3 axis 0.75 mm amplitude @ 10 g		
Free fall resistance	500 falls from 1.2 m height		
Shock	11 ms, 3 axis, 50 g		
Tensile Strength	Tensile of 1500 N, cable dependant		
			

Order code:

Trunk cable:

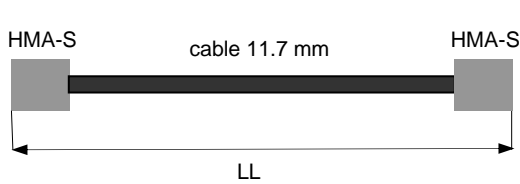
HC-HMA-S		-	AA	-	(BB)¹	-	LL
Hybrid cable with HMA-S connector							
Connector A	3S	3x socket contacts					
	3P	3x pin contacts					
Connector B¹	3S	3x socket contacts					
	3P	3x pin contacts					
Length	m						

Note: 1) please define if B connector is different from connector A
2) standard fiber connection – crossed, other on request

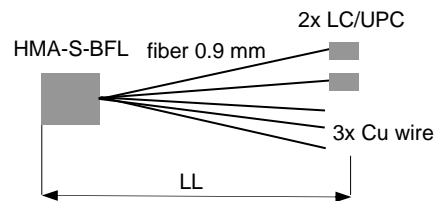
Conversion – fan-out cable:

HC-HMA-BFL		-	AA	-	BB³ CU/FO³	-	0.LL
Connector A (panel connector)	3S	3x socket contacts					
	3P	3x pin contacts					
Connector B	BB	Hybrid connector or separate:					
	CU	Cu wires connector or bare wires					
	FO	Fiber optic connector (LC/UPC, ...)					
Fanout length	m						

Note: 3) would be defined according to the request:
- Hybrid or Cu wires connector – please define
- FO connector – LC/UPC or according to the: CON_13-01_EN-ORD_CODE.pdf

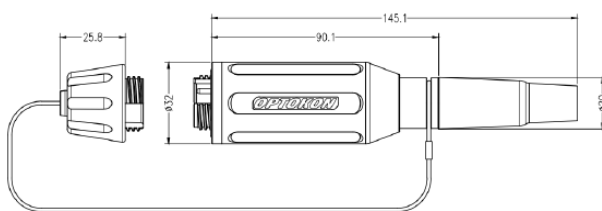


Trunk cable

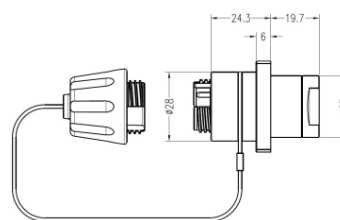


Fan-out – conversion cable

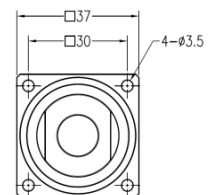
Connector dimensions:



HMA-S plug (2+3) type



HMA-S-BFL panel mount
Flange – low profile



Front view