

DATA SHEET

Interconnection Box

SPECIAL FEATURES

- Intrinsically immune to EMI
- Electrically passive
- Designed for connecting FS65HDA and FS66HDL sensors
- EN45545 certified



DESCRIPTION

This interconnection box is part of a set of fiber optic accessories used in HBK FiberSensing Pantograph Monitoring Solution for connecting the FS65HDA Heavy Duty Accelerometers and the FS66HDL Heavy Duty Force sensors to the optical interrogator.

The Interconnection Box grants the interface of the sensors installed on the pantograph, outside the train

structure, to the interior of the train through a single point. It ensures two separate connections for main and spare usage.

BENEFITS AND APPLICATION

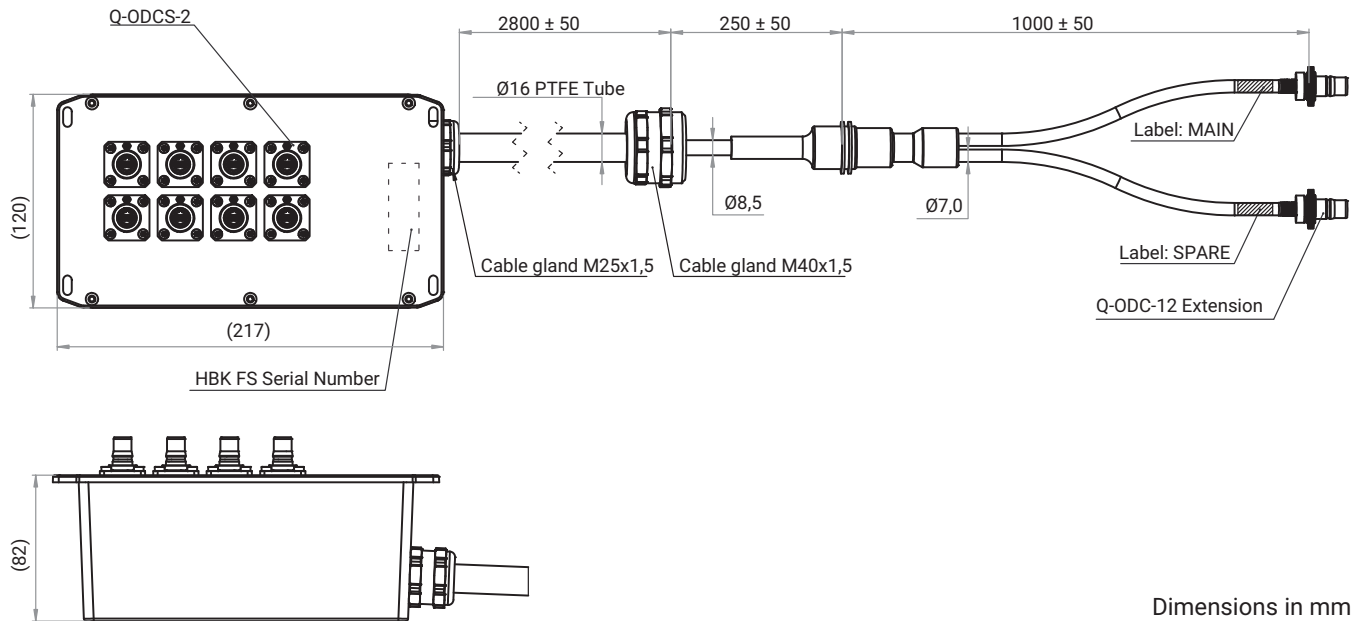
Sensor design

- Ease of installation
- System reliability
- Flexibility to use with any sensor combination
- Specifications compatible with railway applications

Fiber Bragg grating technology

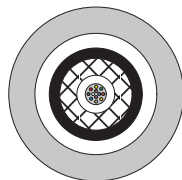


- No drift, absolute referenced measurements
- Immune to electro-magnetic and radio frequency interferences
- Passive technology fitting applications in explosive areas
- Reduced cable requirements with intrinsic multiplexing capability
- Long distances between sensors and the interrogators attainable
- Combinable with other FBG sensor types on the same fiber and same interrogator

DIMENSIONS



Dimensions in mm

SPECIFICATIONS

Box				
Dimensions (w x h x d)	mm	120 x 82 x 217		
Main Materials ²⁾	n.a.	Aluminum		
Degree of protection	n.a.	IP65		
# sensor connectors	un	8		
Operating temperature	°C	-40 ... 85		
Storage temperature	°C	-40 ... 85		
Cables				
		From box to train roof	From train roof to furcation	From furcation to connector
Cross section	n.a.			
Cable external diameter	mm	16	8.5	7.0
Cable length ¹⁾	mm	2800±50	250±50	1000±50
Main materials ²⁾	n.a.	PTFE, RADOX®	RADOX®	LSZH
Operating temperature	°C	-40 ... 85		
Storage temperature	°C	-40 ... 85		
Attenuation loss @1550nm ³⁾	dB/km	0.5		
Bend radius (during installation)	mm	> 130	> 105	> 105
Bend radius (in service)	mm	> 80	> 40	> 40
Gland	n.a.	M40		-
# of fibers	un	16		8

Connectors			
		On the box	On the cables
Type	n.a.	Q-ODC-2	Q-ODC-12
# of fiber connections	un	2	8
Dimensions	mm	Ø 25.4 x 49.6	Ø 20 x 49
Main Materials ²⁾	n.a.	Nickel-plated brass	Nickel-plated brass
Operating temperature	°C	-40 ... 85	-40 ... 85
Optical losses ³⁾	dB	<0.45	<0.35

1) Custom lengths available upon request

2) The full composition of the box including cable and connectors, complies with RoHS, REACH, Conflict Minerals. EN45545 certified.

3) Typical values. Two-way loss as FBG signals are seen in reflection.

ORDERING INFORMATION

Standard Item
1-FSOEM-1701-03-01

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