Q-XCO – quick-lock ruggedized SFP connector

Features

- Quick-lock mating connector for remote radio head, point-to-point link and industrial applications
- Ruggedized outdoor design with 2 x LC interface
- Plugs directly into SFP module, compatible with all standard SFP modules
- Full compensation of positioning tolerances and SFP module tolerances
- Bayonet, blind-mating mechanism and highest installation safety
- Full protection of optical interface during installation
- Access and exchange of SFP module possible

Mating mechanism

|		
Mating	1-step blind mating	bayonet
	mating references	visual and latch
Compensation of positioning tolerances of SFP module	z-axis	± 2.25 mm
	x,y-axis	± 0.4 mm (± 0.6 mm depending on SFP module)
Latching of LC connector	use of LC HQ technology	automating latching and unlatching
Mating durability	IEC 61300-2-2	100 cycles
Force on SFP module		no force in mated state

Specifications

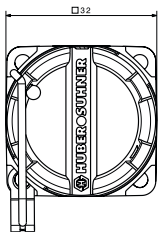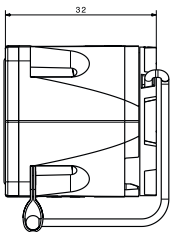|		
Technology		LC full ceramic ferrules
Housing material	connector	high-performance plastic
	socket	die-casting with zinc plating
Material flammability rating		UL 94-V0
Mechanical performance	IEC 61300-2-4	≤ 400 N tensile load
	IEC 61300-2-42	≤ 30 N static side load
	IEC 61300-2-5	180° cable torsion, passed
Thermal performance	operation, IEC 61300-2-22	– 40 °C to + 85 °C
	installation	– 40 °C to + 55 °C
Ingress protection	IEC 60529-20	IP 67 (mated or with dust cap)
Salt mist	IEC 61300-2-26, MIL-STD-202G Method 101E	192 h
Vibration	IEC 61300-2-1, MIL-STD-202G, Method 204G	passed 10 Hz – 500 Hz / 10 g
Shock	IEC 61300-3-3, MIL-STD-202G, Method 213B	passed 50 g
UV resistance	ISO 4982-2	passed 2000 h @ 2000 MJ/m²

Optical performance

Insertion loss	singlemode	typ. ≤ 0.20 dB	97% ≤ 0.45 dB
	multimode	typ. ≤ 0.20 dB	97% ≤ 0.50 dB
Return loss	singlemode	≥ 50 dB	

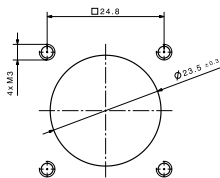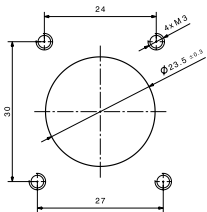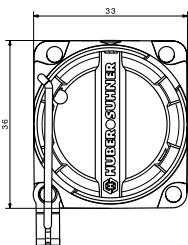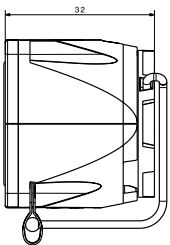# Q-XCO – quick-lock ruggedized SFP connector

Q-XCO plug

Ø 29.2

81.5   8.6

111.6
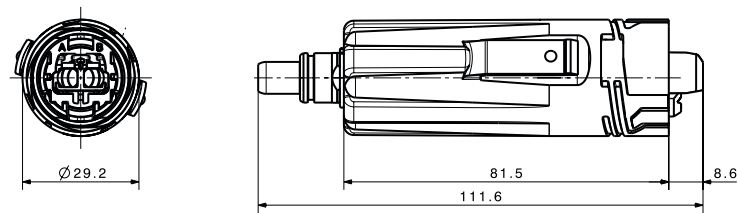
Q-XCO flange small

hole pattern

32   □32   □24.8

4x M3   Ø 23.5 ±0.3

Q-XCO flange large with asymmetric build-in dimension

32   33   24   4x M3

36   Ø 23.5 ±0.3

30

27

Q-XCO adapter

21.24   32   □32   □24.8

□24.8   4x M3   Ø 23.5 ±0.3
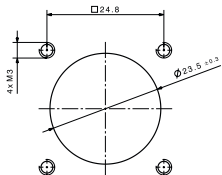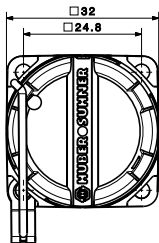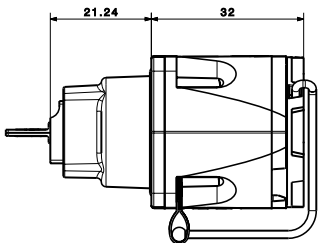
Q-XCO – quick-lock ruggedized SFP connector
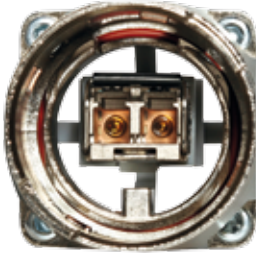
Description	Picture	Dust cap
XA (for assembly code)	Q-XCO connector	
Item no. 84108683	Q-XCO flange small	
Item no. 84108684	Q-XCO flange large	
Item no. 84118876	Q-XCO adapter singlemode	
Item no. 84137745	Q-XCO adapter multimode	

Tolerance compensation

± 0.6 mm

± 2.25 mm

The connector compensates for all tolerances of SFP modules and for mounting tolerances

Exchange of SFP module
Release and pull SFP module

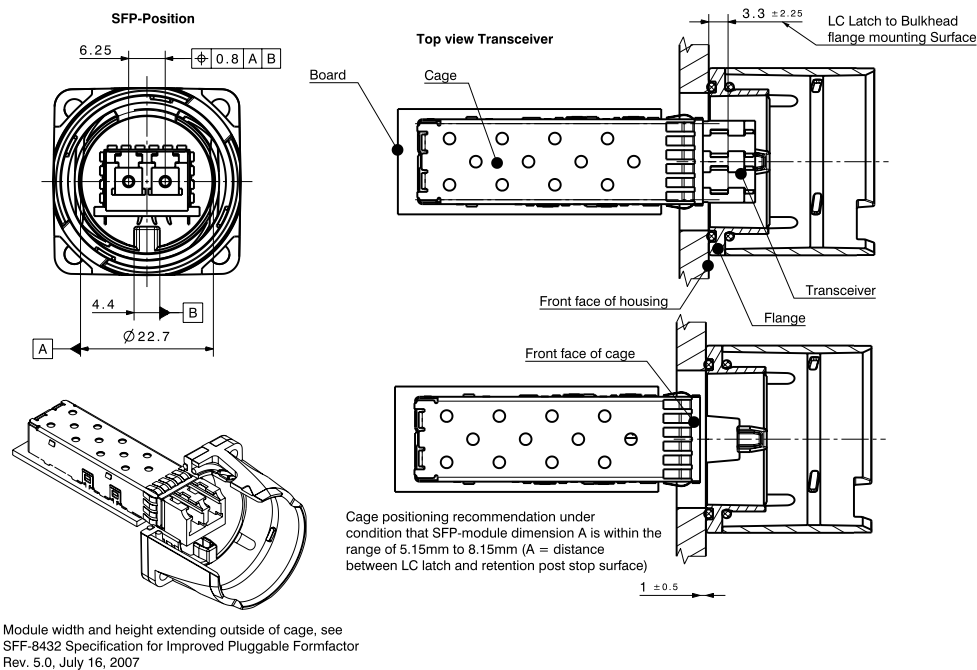## Mating sequence

Rotate to find correct keying position

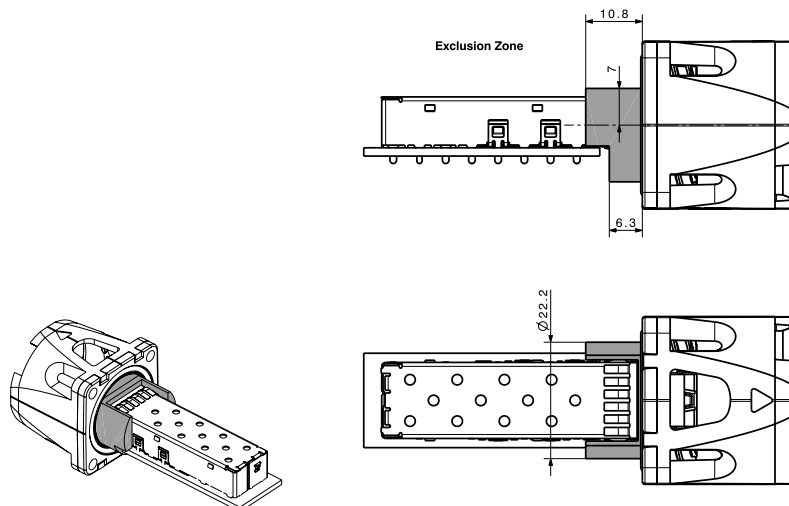Slide connector into flange and rotate 155° until snap-in position

Connector mated with visual reference for correct installation

Q-XCO – quick-lock ruggedized SFP connector

SFP cage positioning specification

SFP-Position

6.25

⊕ 0.8 A B

4.4

B

A

Ø 22.7

Top view Transceiver

Board

Cage

3.3 ±2.25

LC Latch to Bulkhead
flange mounting Surface

Front face of housing

Transceiver

Flange

Front face of cage

Cage positioning recommendation under
condition that SFP-module dimension A is within the
range of 5.15mm to 8.15mm (A = distance
between LC latch and retention post stop surface)

1 ± 0.5

Module width and height extending outside of cage, see
SFF-8432 Specification for Improved Pluggable Formfactor
Rev. 5.0, July 16, 2007

Exclusion zone for connector mating

Exclusion Zone

10.8

7

6.3

Ø 22.2

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