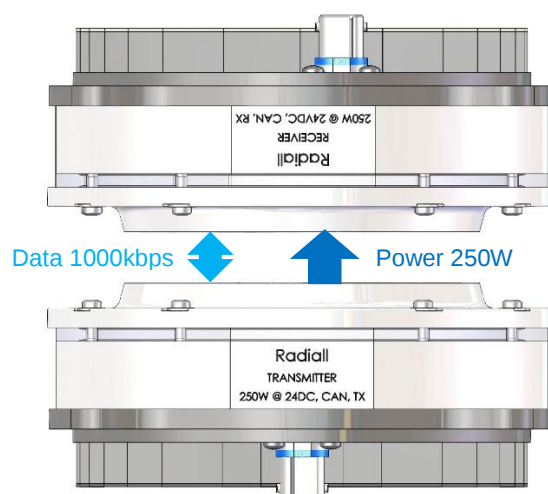


Co250CAN Kit

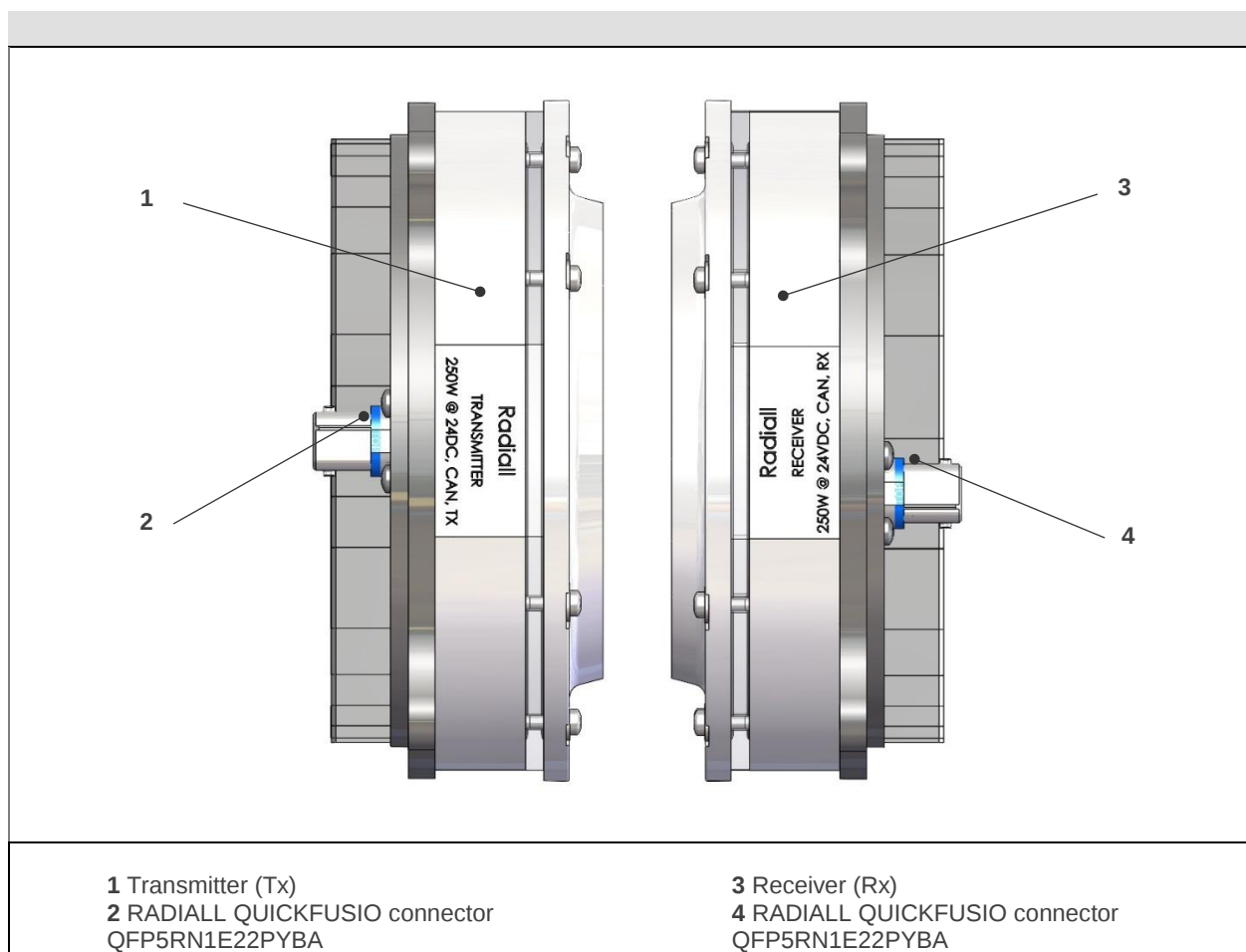
Contactless Connectors

The Co250CAN is a Contactless Power & Data evaluation kit design to transfer 250W using inductive coupling till 15mm through non-electrically conducting materials with a data link.



1 General specifications

1.1 Synoptic



1.2 Marking

Description	Part Number
Contactless Power & Data Transmitter + Receiver 250W 15mm 24 VDC Cir. Prototype	MU347620232400
Contactless Power & Data Receiver 250W CAN 15mm 24 VDC Cir. Prototype	MU327620232300
Contactless Power & Data Transmitter 250W CAN 15mm 24 VDC Cir. Prototype	MU327620232300

2 Electrical characteristics

Electrical characteristics apply over the full operating temperature range.

2.1 General

Characteristics	Value	Units	Tolerance	Conditions
TX input voltage	24	VDC	±10%	
RX output voltage	24	VDC	±5%	@load=0A
Input current (nominal)	12,5	A		@Output power = 250W / Z=15mm / X=Y=5mm
RX output power	250	W		@ Z=0..15mm / X=Y=0..5mm
Efficiency	90	%		See §2.5 Efficiency

2.2 Power link

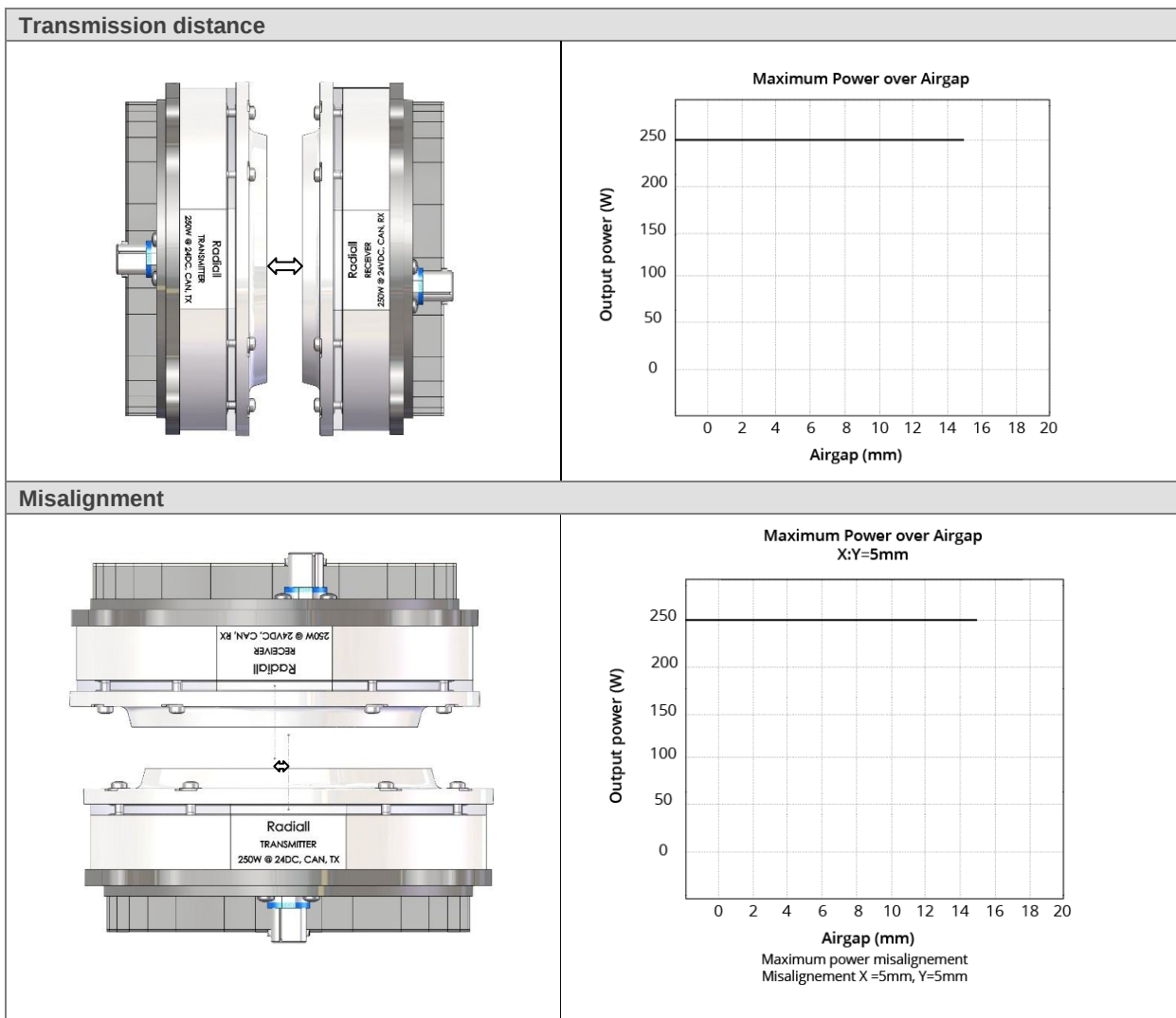
Characteristics	Value	Units	Tolerance	Comments
Maximum axial distance (airgap)	15	mm		See §2.4 Air gap and Misalignment
Minimum axial distance (airgap)	0	mm		
Misalignment X, Y	±5	mm		
Operational Readiness Power	1	s		

2.3 Data communications

Characteristics	Value	Units	Comments
Protocols	CAN		
Function	Bidirectional		Half-duplex
Baud Rate	1	Mbps	
Interframe Space	10	ms	
Termination	No		120 Ohms - To be added externally

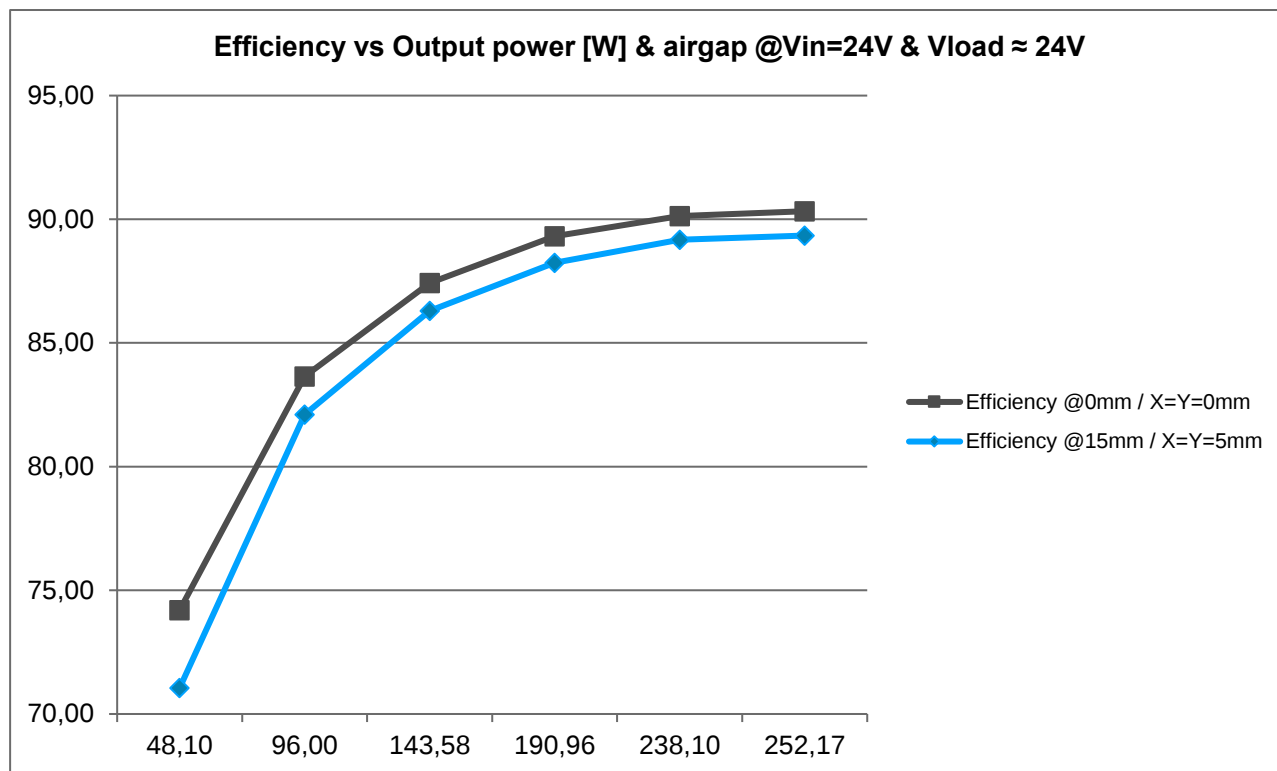
2.4 Air gap and Misalignment

The airgap between the transmitter Tx and the receiver Rx is 0 to 15mm @ 250W.



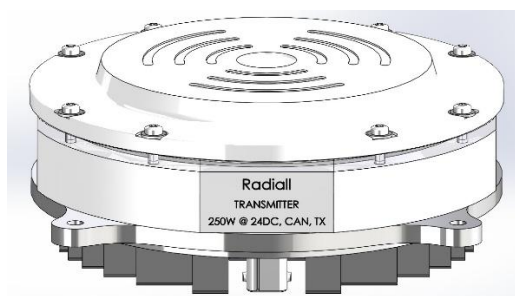
2.5 Efficiency

90% of efficiency at 15 mm airgap



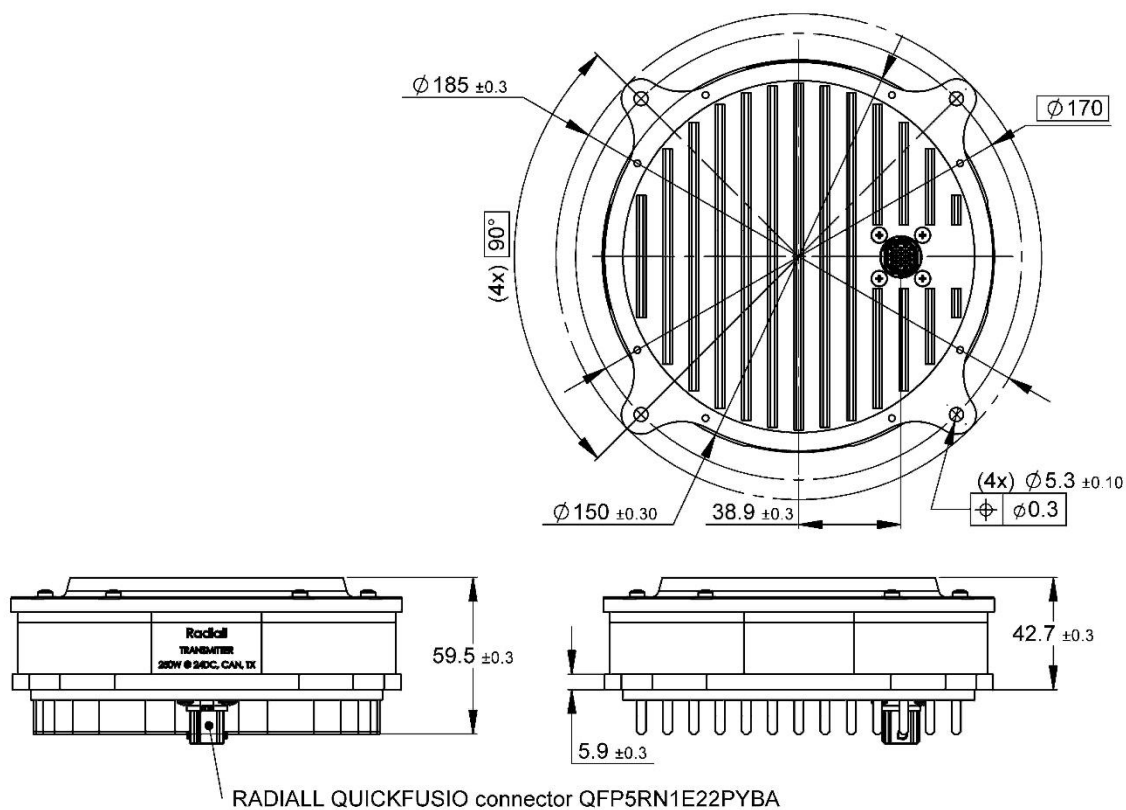
3 Mechanical characteristics

3.1 Transmitter (Tx)



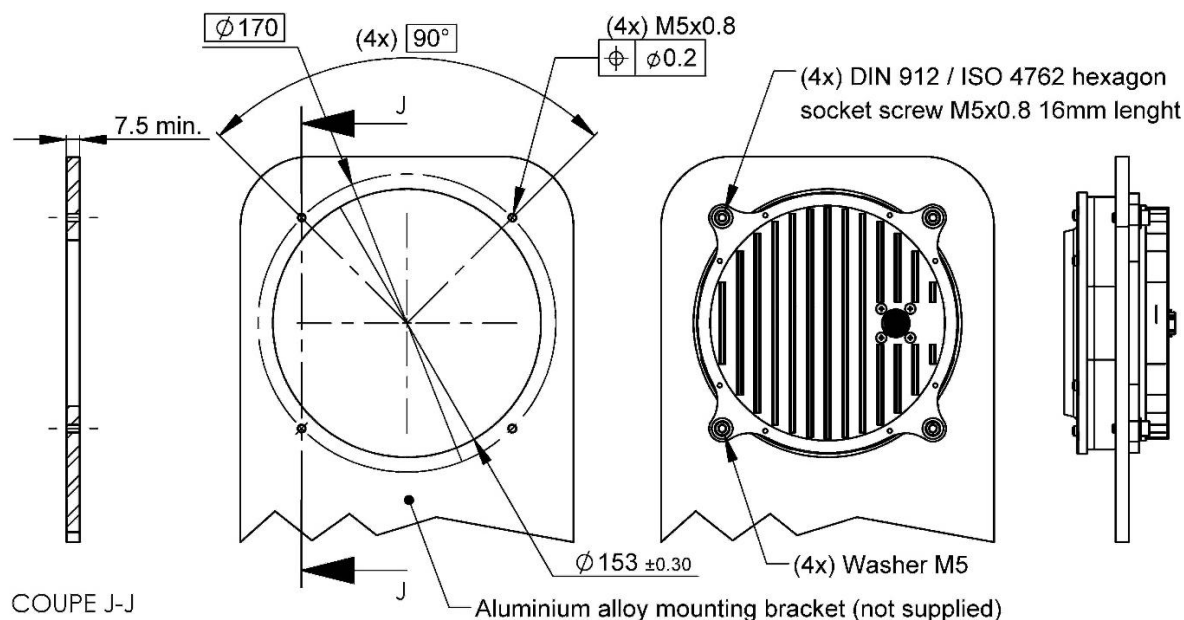
Characteristics	Value	Units
Length	Ø185	mm
Width	Ø185	mm
Height	59.5	mm
Typ. weight	890	g

Dimensions



Fixation

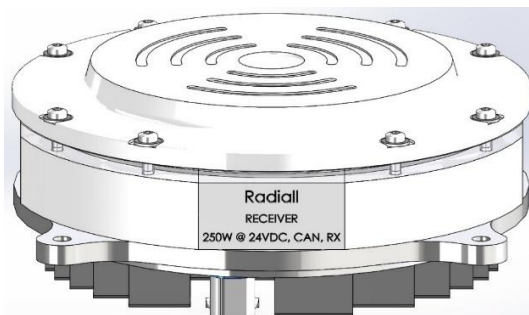
BRACKET MOUNTING ADVICES



Materials and finishes

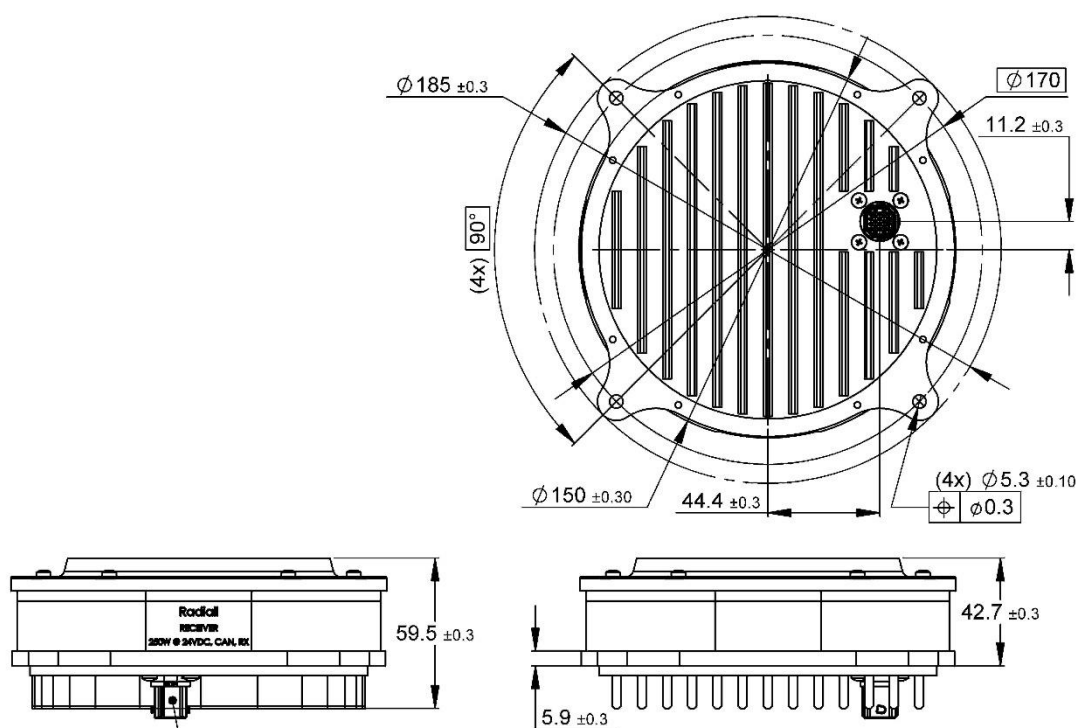
Thermal dissipator	Aluminium alloy with black anodizing finish
Intermediate body	White PET
Light guide	Translucent PC
Inductor cover	White PET

3.2 Receiver (Rx)



Characteristics	Value	Units
Length	Ø185	mm
Width	Ø185	mm
Height	59.5	mm
Typ. weight	940	g

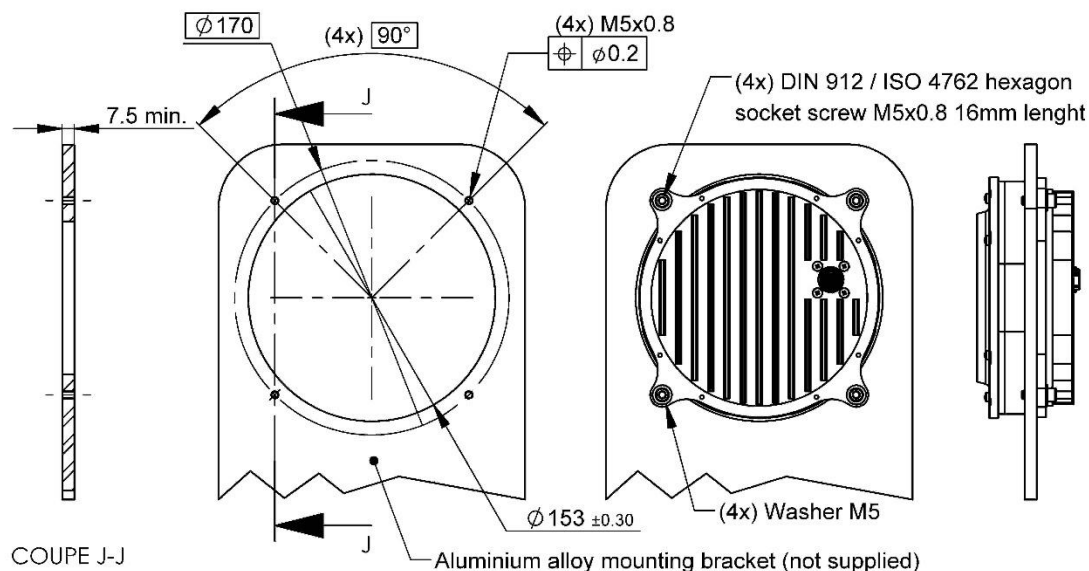
Dimensions



RADIALl QUICKFUSIO connector QFP5RN1E22PYBA

Fixation

BRACKET MOUNTING ADVICES

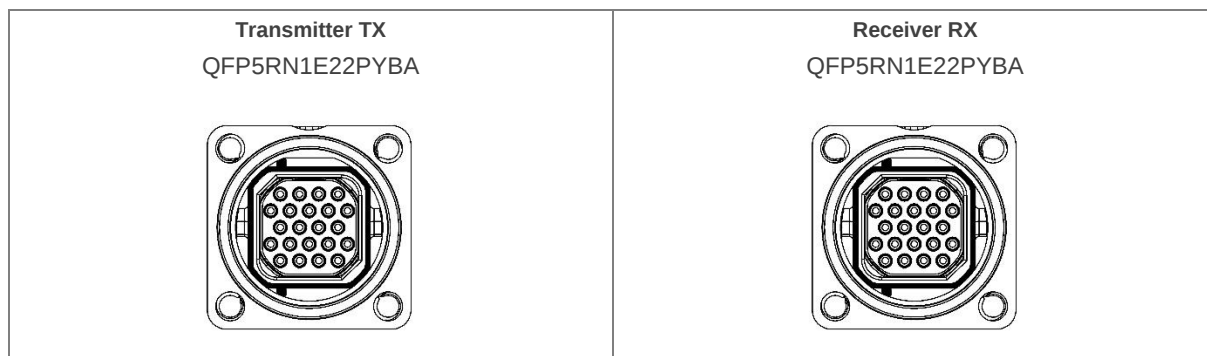


Materials and finishes

Thermal dissipator	Aluminium alloy with black anodizing finish
Intermediate body	White PET
Light guide	Translucent PC
Inductor cover	White PET

4 Connector pinning Transmitter (Tx) and Receiver (Rx) [Achraf/Dylan]

QuickFusio 22 PIN with harness adapter*



QuickFusio Pinout (Tx & Rx)

24VDC	Pin number: 8, 9, 12, 13, 16, 17, 18, 22
GND	Pin number: 6, 10, 11, 14, 15, 19, 20, 21
MM	Pin number: 2, 3, 4, 7
CANH	Pin number: 1
CANL	Pin number: 5

*Test harness can be provided: QuickFusio connector <-> banana plug

5 Features & Environmental characteristics

Features

Reverse polarity protection (Tx)	Yes
Short-circuit protection of the power (Tx & Rx)	Yes
Short-circuit protection for data output (Tx & Rx)	Yes

Characteristics	Value	Units	Tolerance	Conditions
Operating temperature	-40...+70	°C		
Storage temperature	-40...+100 (min -40...+85)	°C		
Protection degree	IP67			