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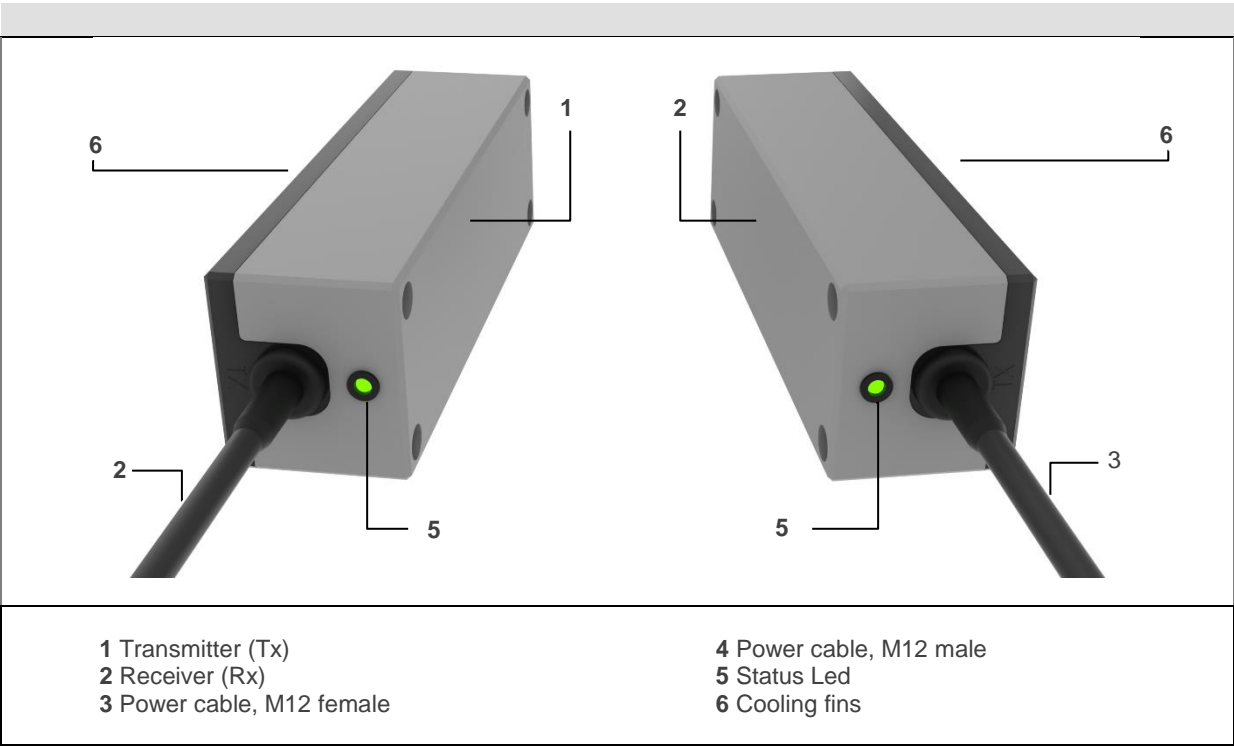
Co15CAN Kit
Contactless Connectors

A Contactless Power & Data Demonstrator design to transfer 15W at 8 to16mm through non-metallic materials with a data link



1 General specifications

1.1 Synoptic



1.2 Marking

Description	Part Number
Contactless Power & Data Transmitter + Receiver 15W CAN 8...16mm 24 VDC Rect. Screw Kit 00	MU343632012400
Contactless Power & Data Transmitter 15W CAN 8...16mm 24 VDC Rect. Screw	MU313632012400
Contactless Power & Data Receiver 15W CAN 8...16mm 24 VDC Rect. Screw	MU323630212400

2 Electrical characteristics

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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%	
Input current max	1.2	A		@Output power = 15W
RX output power	15	W		@TX voltage = 21,6V / Z=16mm / X=Y=2mm
Peak Power	15	W		
Maximum capacitive load	47	µF		
Efficiency	84	%	±2%	See §2.6 Efficiency

2.2 Power link

Characteristics	Value	Units	Tolerance	Comments
Maximum axial distance	16	mm		See §2.5 Air gap and Misalignment
Minimum axial distance	8	mm		
Misalignment X,Y	2 ; 2	mm		
Operational Readiness Power	1	s		
Operating indication	LED			

2.3 Data communications

Characteristics	Value	Units	Comments
Protocol	CAN 2.0A CAN 2.0B		
Data rate	250	kbps	
Latency	400	µs	Minimum latency
Termination	No		120 Ohms on request

2.4 LED indicators

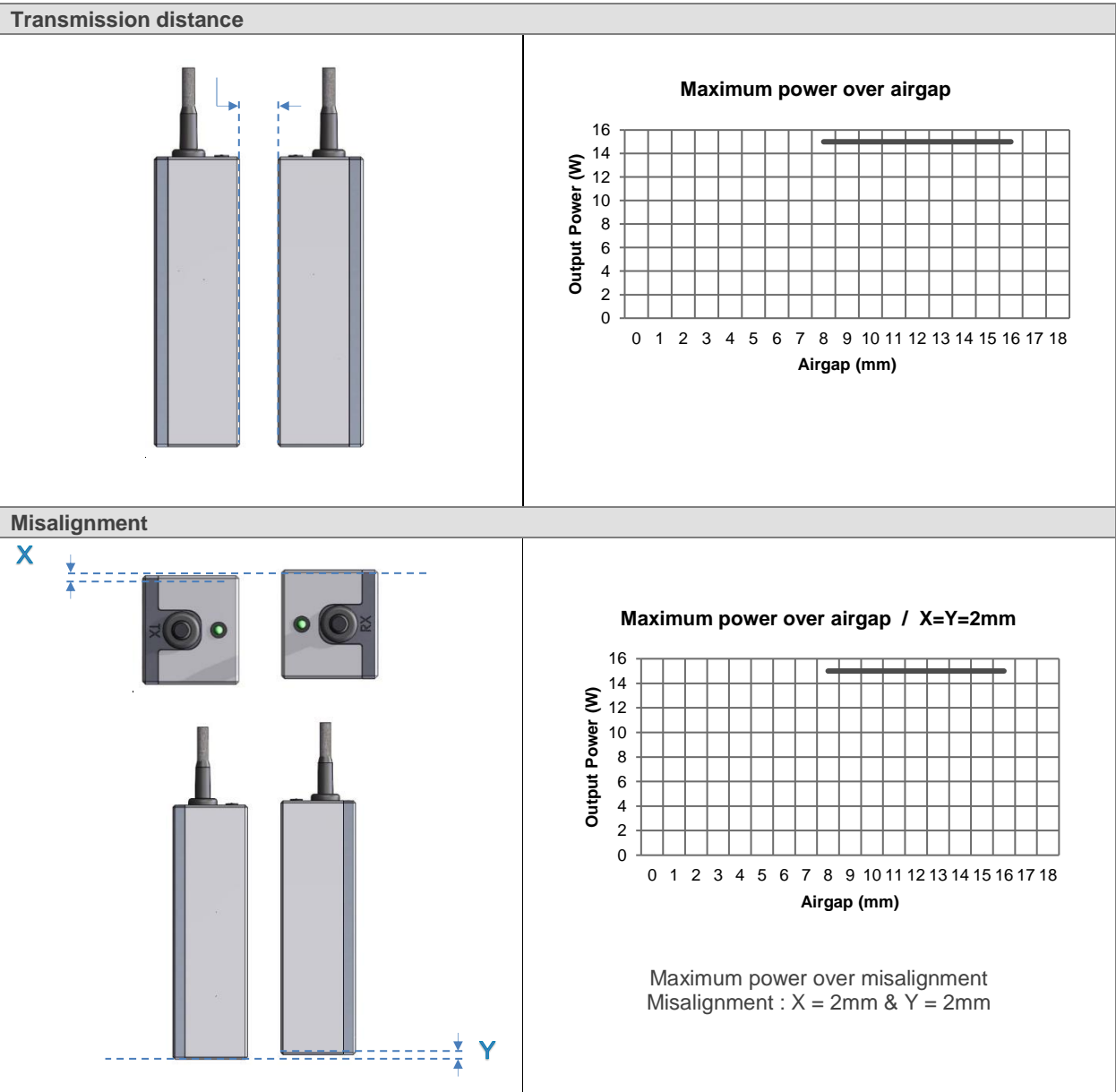
There is a status LED on each transmitter Tx and receiver Rx

Status LED	Illumination sequence (100ms step)	Meaning
Flashing red, Green and off	● ● ● ● ● ● ● ● ● ●	Searching for Rx and Tx connection
Blink red	● ● ● ● ● ● ● ● ● ●	Rx disconnected
Fast flashing green and red	● ● ● ● ● ● ● ● ● ●	Mode binding
Fix green	● ● ● ● ● ● ● ● ● ●	Normal operation
Fix Red	● ● ● ● ● ● ● ● ● ●	Waiting for input voltage higher than 21,6 Vdc

2.5 Air gap and Misalignment

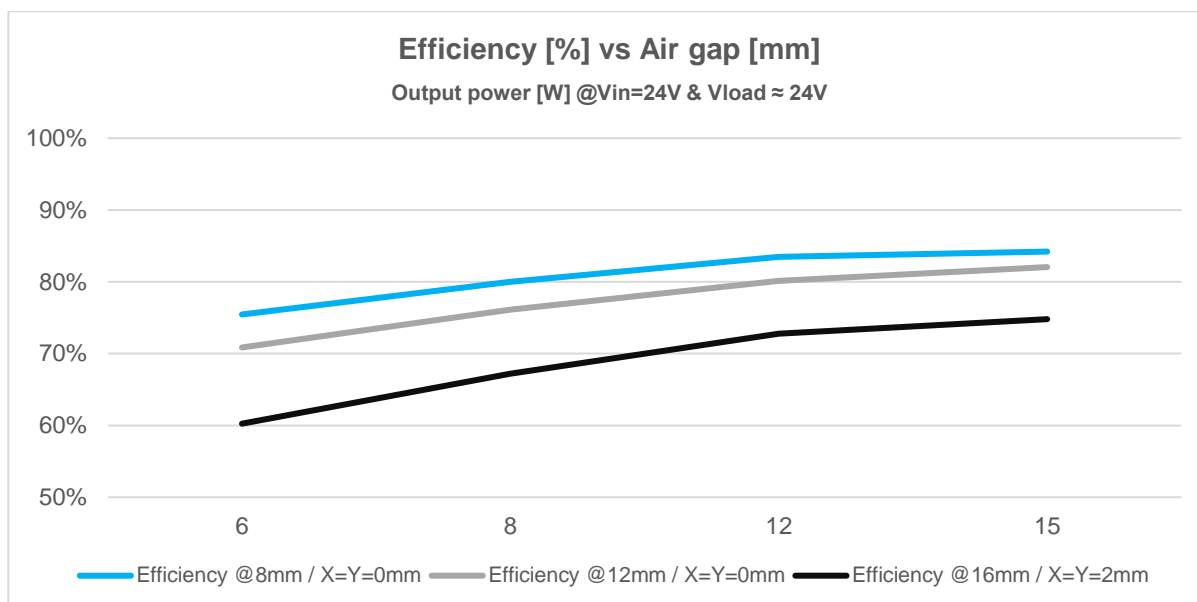
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The system transmits contactless power at 8 to 16mm for max power level of 15W.



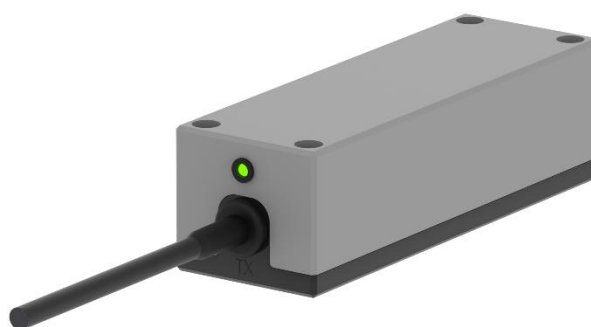
2.6 Efficiency

84% of efficiency guarantee at 8 mm of transmission with the transmitter and receiver aligned



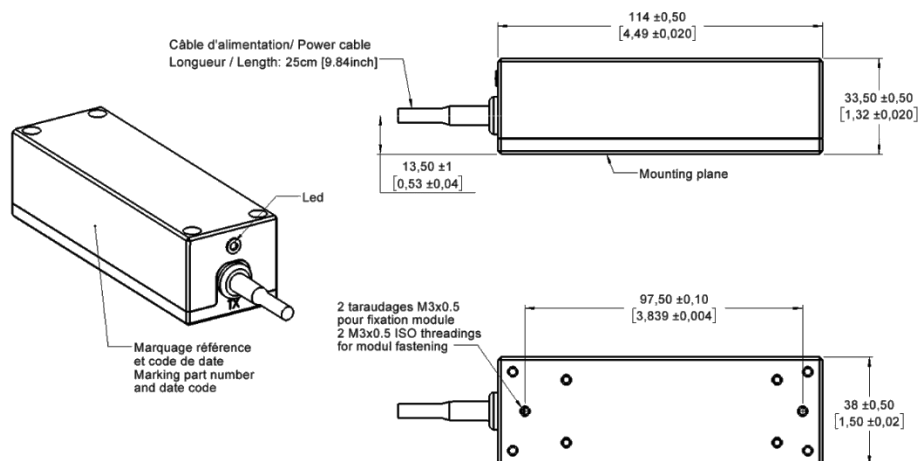
3 Mechanical characteristics

3.1 Transmitter (Tx)



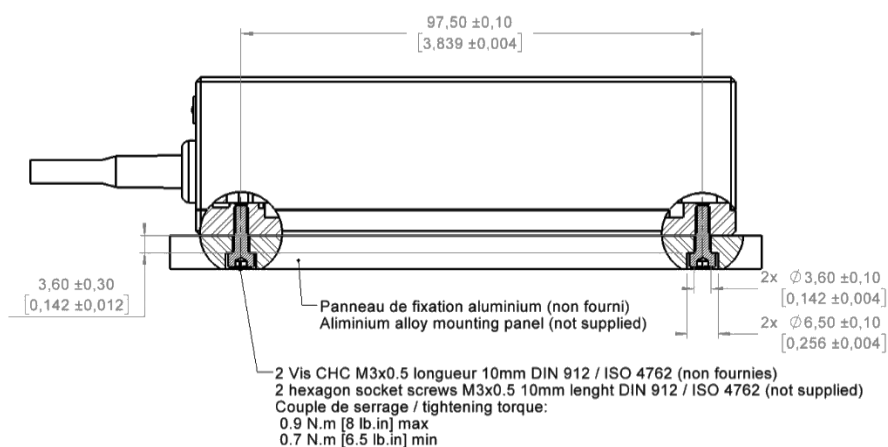
Characteristics	Value	Units	
Length	114	mm	
Width	38	mm	
Height	33.5	mm	
Typ. weight	220	g	
Cable length	25	cm	±5cm

Dimensions



Fixation

INSTRUCTIONS DE FIXATION PANNEAU PANEL MOUNTING INSTRUCTIONS

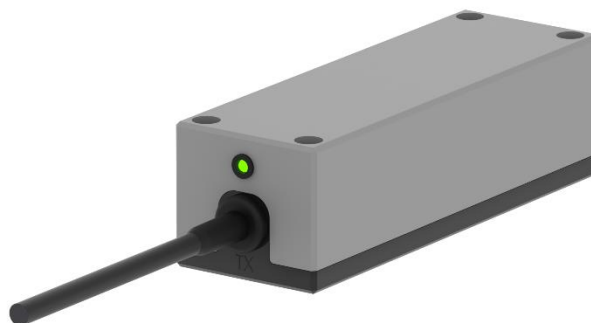


Materials and finishes

Case	Aluminium alloy
Top cover	PET

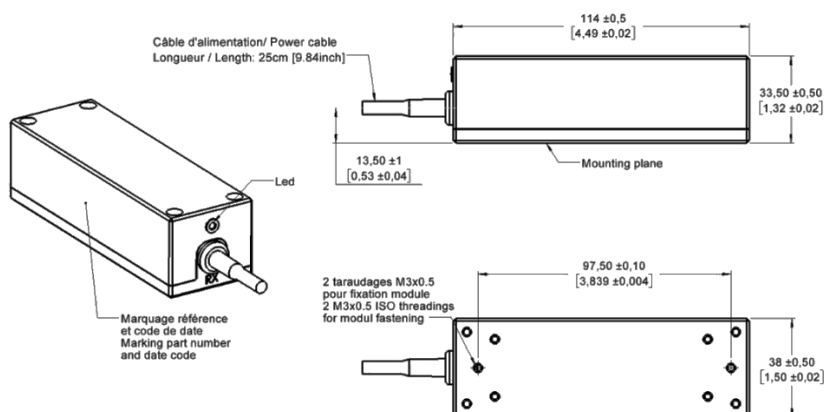
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3.2 Receiver (Rx)



Characteristics	Value	Units	
Length	114	mm	
Width	38	mm	
Height	25	mm	
Typ. weight	220	g	
Cable length (Power cable)	25	cm	±5cm

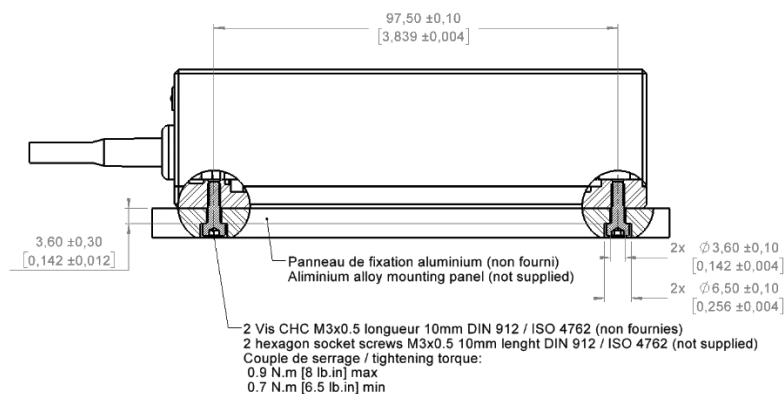
Dimensions



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Fixation

INSTRUCTIONS DE FIXATION PANNEAU PANEL MOUNTING INSTRUCTIONS



Materials and finishes

Case	Aluminium alloy
Top cover	PET

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4 Connectors pinning

4.1 Connector pinning Receiver (Rx) side

Industry standard cable connector M12, female, 5 pin, A-coded

M12, female (A-coded)	PoS Number	M12	Comment
	1	SHIELD	Internally connected to main frame
	2	V+	Power supply
	3	V-	Ground / 0V
	4	CAN_H	CAN_H bus line
	5	CAN_L	CAN_L bus line

4.2 Connector pinning Transmitter (Tx) side

Industry standard cable connector M12, male, 5 pin, A-coded

M12, male (A-coded)	PoS Number	M12	Comment
	1	SHIELD	Internally connected to main frame
	2	V+	Power output
	3	V-	Ground / 0V
	4	CAN_H	CAN_H bus line
	5	CAN_L	CAN_L bus line

5 Features & Environmental characteristics

Features		
Reverse polarity protection of the power supply	Yes	
Short-circuit protection of the power output	Yes	
Short-circuit protection for data output	yes under conditions	CAN link: Yes
Overheating protection	Yes	
Dynamic coupling	Yes	

Characteristics	Value	Units	Tolerance	Conditions
Operating temperature	-40...+70	°C		
Storage temperature	-55...+85	°C		
Quick temperature change	10	°C/Min		
Protection degree	IP62			

6 Safety instructions and warning

The MU343632012400 is for evaluation purpose only and has not qualified to standards required for conformity with the CE making. MU343632012400 are intended for feasibility and evaluation testing only in laboratory or development environments by qualified engineers or technicians because the risks associated of handling electrical.