

Bluetooth and USB Optical Interfaces

The Bluetooth and USB optical interfaces comply with the IEC 62056-21 Standard and are compatible with all measuring instruments having communication interfaces compliant with that same Standard.

When paired with the Microclima App (available on the Play Store) or the Device Monitor PC software (available in the Software page of the Maddalena web site) they can be used to configure and maintain all heat energy meters and heat allocators supplied by Maddalena S.p.A.

The Bluetooth optical interface, additionally, features an internal automatic baud rate controller.

The optical interface is available in three versions:

- USB A 1.ETRMCOM.0003 (fig.2)
- USB C 1.ETRMCOM.0002 (fig.2)
- Bluetooth 1.ETRMCOM.0001 (fig.1)
- Variant 1.ETRMD.1510
Optical head with connector for UniCo (new radio receiver)



Fig. 1



Fig. 2

BLUETOOTH VERSION SPECIFICATIONS

- IEC 62056-21 Standard
- Compatible with all IEC meters by any manufacturer
- Wireless Bluetooth connection
- Bluetooth detects IEC62056-21 and DLMS / COSEM
- Automatic baud rate adaptation

USB VERSION SPECIFICATIONS

- IEC 62056-21 Standard
- Compatible with all IEC meters by any manufacturer
- Wired versions available
- Male connector Type A
1.ETRMCOM.0003
- Male connector USB Type C
1.ETRMCOM.0002

TECHNICAL SPECIFICATIONS

	BLUETOOTH VERSION	USB VERSION
MECHANICAL SPECIFICATIONS		
Diameter:	32 mm	32 mm
Depth:	21 mm	
Body and back Covering material	ABS	ABS
Height:	57 mm	28.5 mm
Magnetic force	N36	N36
Transparent parts	Transparent polycarbonate	Transparent polycarbonate
Weight	70 g	125 g
ELECTRICAL SPECIFICATIONS		
Standard:	IEC 62056-21 (former IEC 1107)	IEC 62056-21 (former IEC 1107)
Cable length:		3 m
Data transfer speed:	Max. 19200 baud	Max. 19200 baud
Operating voltage:	3.3V (Rechargeable battery powered via Micro USB)	5 V (Passive port powered via USB)
Electrical interface:		USB Type-A and Type-C
Receiver sensitivity:	Can be selected at the programming level in command mode	
Wavelength:	~ 900 nm	~ 900 nm
BLUETOOTH SPECIFICATIONS		
Standard:	Ver. 2.0 + EDR compliant, Max. 4 dBm (Class2)	
Operating modes:	<ul style="list-style-type: none"> • IEC 62056-21 Auto Detection, • DLMS/COSEM Auto Detection, • 9600 baud 7E1 fixed, • 9600 baud 8N1 fixed, • Command mode, etc. The operating modes can be changed instantly by easily loading firmware via the Bluetooth connection 	
Running hours:	> 24 ore	
LEDs	Power, charge, BT link, Data Rx/Tx,	
Battery:	600 mAh rechargeable. The battery can be charged via the micro USB connector	
Operating range:	Maximum 15 metres	

