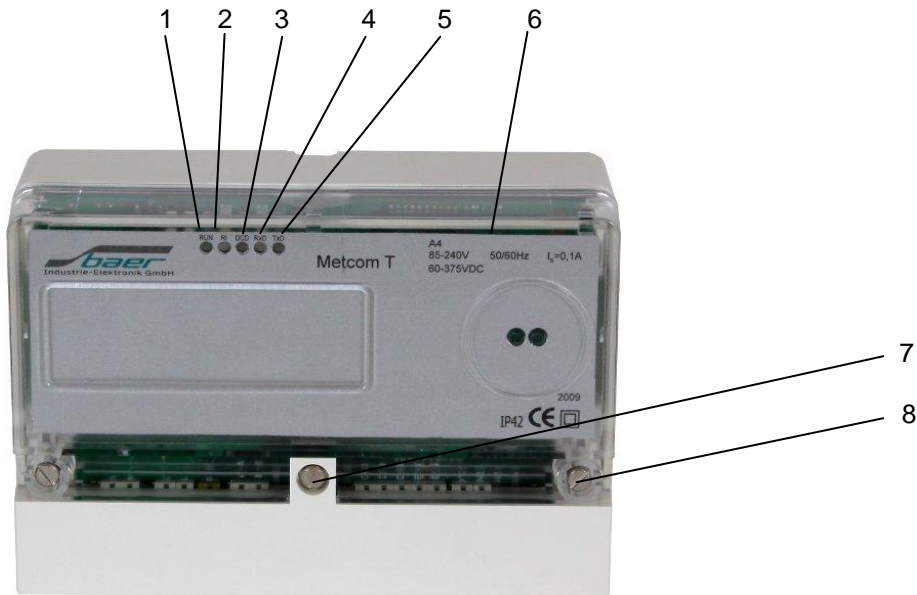


# Universal communications device Metcom T X..



- |   |                       |   |                             |
|---|-----------------------|---|-----------------------------|
| 1 | RUN-LED for power on  | 5 | TxD-LED: Transmit Data      |
| 2 | RI-LED: non active    | 6 | Technical Data              |
| 3 | DCD-LED: non active   | 7 | Sealed device cover screw   |
| 4 | RxD-LED: Receive Data | 8 | Sealed terminal cover screw |

Figure 1: Display and control panel Metcom T X..

## 1 General

The universal communications device Metcom T X.. is supposed for remote inquiry of measurement data of any kind, especially however for telecounting applications.

## 2 Requirements

The universal communications device Metcon T X.. can be used to convert two data levels:

- 1<sup>st</sup> Interface: RS232
- 2<sup>nd</sup> Interface: M-Bus (active: max. 25 slaves/meter) or 20mA/CS (active: 6 to 8 meter) or 20mA/CS (passive) or RS485 (2 wires)

### 3 Montages and connections (see chapter 8 Terminal Assignment)

The device Metcom T X.. is equipped with a built-in, low-loss switched power supply, which enables it to operate on a wide-range AC or DC supply voltage:

- AC: 85 V - 240 V or DC: 60 V - 375 V

The installation must be done in a way, that even in the case of cable break no dangerous voltages are applied to touchable parts of the device including the antenna. This can be accomplished e.g. by using cable ties and appropriate shortening of the cables.

#### Attention:

- Wrong connection made with Metcom T X.. may destroy the device.
- Therefore attention has to be taken, that
  - only the clamps shown in the terminal assignment diagram are connected.
  - devices with the same type designation may have different designations for the clamps. Please connect the device as shown in the delivered circuit diagram (in terminal cover).
  - the device must be supplied with the voltage given on the nameplate only.
- Open the device in voltage free state only!
- Capacitors inside may be loaded to dangerous voltage even after the device is disconnected from mains. Be careful when touching parts inside !
- The RTS/CTS jumper must be set if a bus interface (e.g. 20mA/CS, M-Bus, RS485) or a three wired RS232 (GND, TxD, RxD) is used (see Figure 2: Terminal assignment).

### 4 Installation Hints

The device can be immediately connected to supply voltage.

## 5 Display and control panel (Figure 1) – differently according to appliance-implementation

Pos.	Function
1	<b>RUN-LED for power on</b> lights by power on
2	<b>RI-LED</b> reserved, non active
3	<b>DCD-LED</b> reserved, non active
4	<b>RxD-LED: Receive Data</b> lights, when data is transferred from modem to target device
5	<b>TxD-LED: Transmit Data</b> lights, when data is transferred from target device to modem
6	<b>Technical Data</b>
7	<b>Sealed device cover screw</b>
8	<b>Sealed terminal cover screw</b>

## 6 Interface

The interface for connecting the target device can be specified by plugging the appropriate interface module. The following module types are available now:

- 1<sup>st</sup> Interface: RS232 (uses signals RxD, TxD, CTS, RTS, GND): terminal – standard or RJ45 - option
- 2<sup>nd</sup> Interface (terminal):
  - 20mA/CS (current loop) active (supplies current) for max. 6 to 8 meters
  - or 20mA/CS (current loop) passive
  - or M-Bus interface module, active (can supply 25 slaves/meter max.)
  - or RS485 (2 wires)

Only one of multiple built-in interfaces (optional) can be active at the same time. The others serve in this case for level conversion.

Communication is possible with many standard protocols, like SCTM, LSV1, DLMS, IEC1107, IEC60870, Modbus (transparent reading) etc.

## 7 Technical Data

Housing:	Wall-mounted housing	
Degree of protection:	IP42 (IEC)	
Weight	0,6 kg	
Climate-proofness:	Conditions of storage and transport:	-25°C to +70°C
	Operating conditions:	-20°C to +55°C
Dimensions:	W = 171,6 mm H = 117 mm D = 66 mm	
Protection class:	2	
Supply voltage:	AC: 85 V – 265 V DC: 60 V – 375 V	
Power consumption:	4 VA max.	(depends upon supply voltage, kind of interface module and operating status of transmission unit)
Interfaces:	Fix: RS232 (supports signals RxD, TxD, RTS, CTS, GND, DTR, DCD, DSR) Pluggable modules; available are: - 20mA/CS (current loop) active, can supply 8 meters max. - 20mA/CS (current loop) passive - M-BUS active (can supply 25 slaves/meters max.) - RS485 (2 wires)	
Display:	LED's: RUN, RI, DCD, RxD, TxD	
Transmission rate Metcom to connected device:	300 to 19200 Baud	
Transmission mode:	7E1, 8N1, 8E1, ...	
Extent of delivery:	- Metcom T X.. including interface module as ordered - Operation manual	
Accessories:	- Adapter for parametering - RJ45 connector - Additional interface modules	

## 8 Terminal Assignment

When connecting the delivered circuit diagram or the diagram in the terminal cover must be obeyed ! The abbreviations in the circuit diagram are explained in the legend.

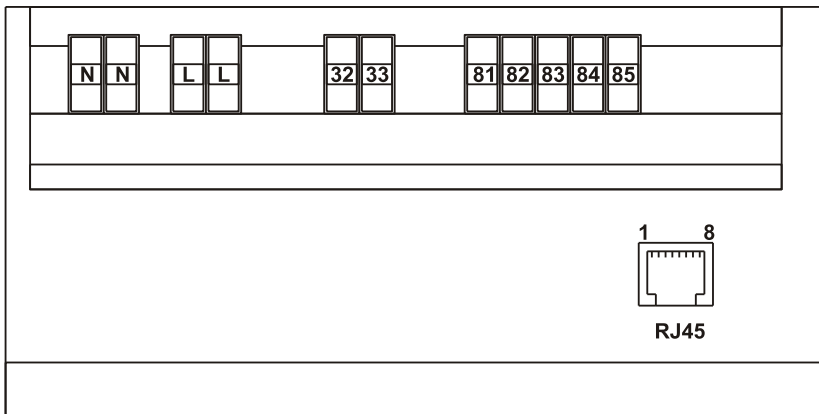


Figure 2: Terminal assignment

### Legend:

N Neutral  
L Phase

32	Additional feature: 20mA-Interface active (-)	Variant: Metcom T X2
33	Additional feature: 20mA-Interface active (+)	
or		
32	Additional feature: 20mA-Interface passive (+)	Metcom T X3
33	Additional feature: 20mA-Interface passive (-)	
or		
32	Additional feature: M-BUS-Interface active	Metcom T X4
33	Additional feature: M-BUS-Interface active	
or		
32	Additional feature: RS485-Interface (A)	Metcom T X6
33	Additional feature: RS485-Interface (B)	
81	RS232-Interface GND	
82	RS232-Interface TxD	
83	RS232-Interface RxD	
84	RS232-Interface RTS	
85	RS232-Interface CTS	

The RTS/CTS jumper must be set if a bus interface (e.g. 20mA, M-Bus, RS485) or a three wired RS232 (GND, TxD, RxD) is used.

### RJ45 plug:

1	RS232-Interface RxD
2	RS232-Interface DSR
3	RS232-Interface CTS
4	RS232-Interface TxD
5	RS232-Interface DCD
6	RS232-Interface RTS
7	RS232-Interface DTR
8	RS232-Interface GND

## 9 Dimensions

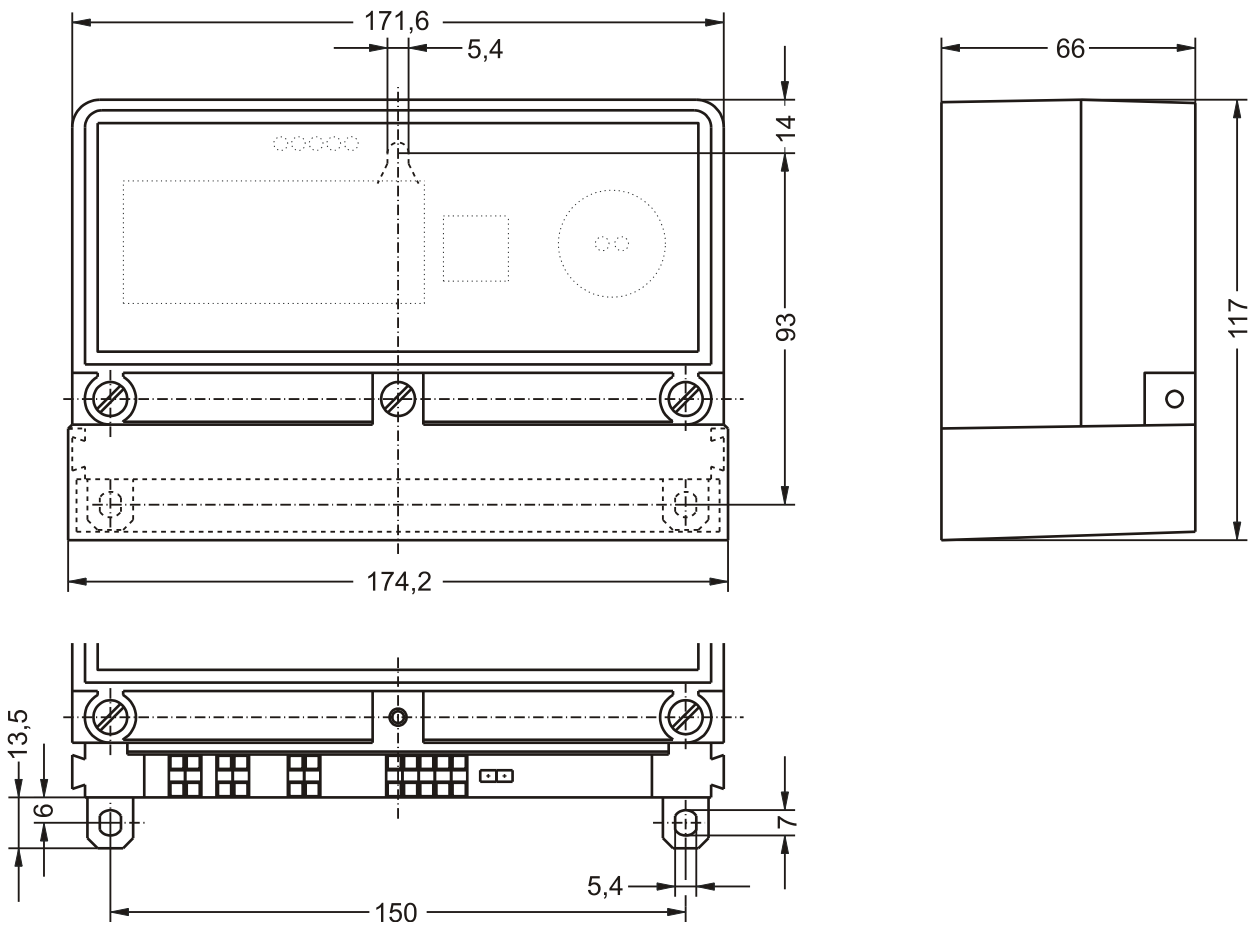


Figure 3: Dimensions of Metcom T X..