



## DR 60 / DR 60 FA DR 60 PW

M-Bus data centre / M-Bus remote display  
M-Bus level converter

### Your benefits

- Modular design:  
**Can be used as data centre, remote display or level converter**
- M-Bus data centre, remote display or level converter with integrated modem connection:  
**Remote meter reading without access to the object**
- Transparent operation:  
**Unchanged transfer of read-out data to the communication device**
- Several interfaces (RS232 and RS485) for PC communication:  
**Greater distances (up to 1000m via RS485) possible between M-Bus data centre, remote control or level converter and PC**

### Application

- Remote supply and remote reading of M-Bus end devices
- On-site read-out of M-Bus meters via keypad and LCD

### Features

- M-Bus data centre, remote display or level converter for 60 M-Bus end devices with a standard load of 1,5mA
- Can be used as level converter for RS232 and RS485
- Read-out via keypad and display (except for level converter) or RS232 interface
- Transfer rates: 300 to 9'600 baud
- M-Bus protocol according to EN 1434-3
- Galvanic separation
- Collision detection
- Echo cancellation
- Bit recovery (restoration of the bit times)
- Continuous short-circuit protection
- Automatic switch-off for excessive current flow
- Integrated mains adapter

#### **Additional for M-Bus data centre DR 60**

- Periodic storage of meter data possible (interval of between 1 minute and 1 year)
- 512KByte flash memory

## Technical Data

<b>Mains adapter</b>	
Input	230V 50Hz AC
Output	11W
<b>Housing</b>	
Dimensions (WxHxD)	166x190x112mm
Protection class	IP53 (sealed PG screw connections)
Material	PS
Colour	Light grey (similar to RAL 7035)
Weight	app. 1,3kg
<b>Ambient conditions</b>	
Operating temperature	0 to +45°C
Storage temperature	-10 to +60°C
Humidity (non-condensing)	10 to 70%
<b>EMC data</b>	
Emission	<ul style="list-style-type: none"> <li>▪ DIN EN 50081-1</li> <li>▪ EN 55022 class B</li> <li>▪ EN 60555</li> </ul>
Immunity	<ul style="list-style-type: none"> <li>▪ DIN EN 50082-2</li> <li>▪ ENV 50104</li> <li>▪ ENV 50204</li> <li>▪ EN 61000-4-4</li> </ul>

## Terminals

M-Bus	(+), (-)	3 terminal pairs
RS485	S+, S-	Terminal pair for RS485 interface
RS232	GND, TX, RX	Terminals for RS232 interface (PC)
230V	N, P, E	Terminals for voltage supply 230VAC

## M-Bus specifications

Execution		DR 60 / DR 60 FA / DR 60 PW		
		min.	type	max.
Max. no. of connectable devices (load unit 1,5mA each)		-	-	60
Internal resistance	Ohm	-	-	15
Display alarm current	mA	90	100	110
Excessive current switch-off	mA	130	140	160
Bus voltage MARK (normal operating current)	V	38,5	39	39,5
Bus voltage SPACE (normal operating current)	V	12	12,5	13
Bit threshold end device > centre	mA	-	7	-
Collision threshold	mA	-	30	-