



M-Bus Signal Converter

WZC-P60

for plants with OZW10 (V3.0 or higher) as M-bus central unit

Signal converter for the conversion of RS-485, RS-232 or optical signals to M-bus signals.

Use

The M-bus signal converter is a component of the M-bus system. It serves for connecting an M-bus central unit with an RS-485 port to the M-bus. For the field of use of the M-bus system, refer to data sheet CE1N5361E.

Functions

The WZC-P60

- converts RS-485, RS-232 or optical signals to M-bus signals
- operates as a bus driver

Ordering

When ordering, please give type reference **WZC-P60**.

Equipment combinations

In the M-bus system, the WZC-P60 is connected to the RS-485 port of the M-bus central unit.

A maximum of 60 M-bus terminal units can be connected to the WZC-P60.

Technical design

Signal converter As a signal converter, the WZC-P60 converts RS-485, RS-232 or optical signals to M-bus signals. The signals between input and output are galvanically separated by means of optocouplers.

Bus driver As a bus driver, the WZC-P60 supplies a maximum of 60 M-bus devices with the bus zero-signal current. The M-bus output of the signal converter is protected against short-circuits.

Power supply Power is supplied via an external power pack.

LEDs The M-bus signal converter indicates the type and direction of data flow by means of LEDs.

<i>LED</i>	<i>Name</i>	<i>Status</i>	<i>Data flow</i>
LED 1 (green)	ON	On	Bus voltage present, WZC-P60 master in idle state
		Flashing	Bus voltage present, WZC-P60 master is sending
LED 2 (yellow)	SLAVE	On	Slave is sending
		Off	Slave in idle state
LED 3 (yellow)	MAX	On	Bus zero-signal current exceeded
LED 4 (red)	SHORT	Flashes at 2 Hz	Overcurrent

Mechanical design

The M-bus signal converter is of compact design. The front carries the LEDs, the optical interface and a DB9 socket. At the top of the casing, there is a terminal block with three pairs of terminals for connecting the M-bus. At the bottom, there are the connection terminals for the power supply and the RS-485 and RS-232 port. The connection terminals can accept two wires (1.5 mm²). The rear carries the facility for rail and wall mounting.

Engineering notes

The local regulations for electrical installations must be complied with. Power must be supplied by an isolation transformer which meets the SELV requirements for powering devices of safety class III. For the design and engineering of the M-bus system, refer to the Basic Documentation CE1P5361en.

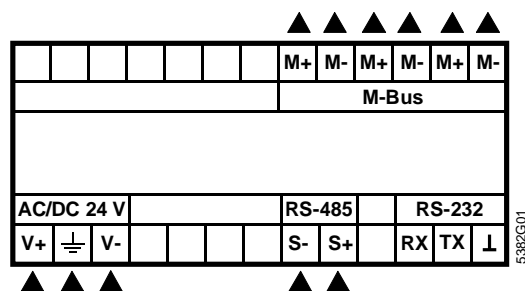
Mounting notes

The rear of the casing has a facility for fitting the signal converter to a wall mounting rail TS35 (EN 50022). The facility can be removed and reversed to be used for wall mounting with the help of two screws.

Technical data

General data	Operating voltage DC	DC 20...45 V
	Operating voltage AC	AC 20...30 V, 50/60 Hz
	Power consumption	16 VA
	Perm. ambient temperature	
	Transport and storage	-20...+60 °C
	Operation	0...55 °C
	Weight	0.3 kg
Norms and standards	CE conformity to	
	EMC directive	89/336/EEC
	Low voltage directive	73/23/EEC
	Electromagnetic compatibility	
	Immunity	EN 50082-2
	Emissions	EN 50081-1
Protection	Degree of protection	IP20 to EN 60529
	Safety class	III to EN 60730
M-bus data	Bus voltage Mark	36...40.7 V
	Bus voltage Space	24...26.9 V
	Bus zero-signal current	0...90 mA
	Bus overcurrent shutdown	130...160 mA

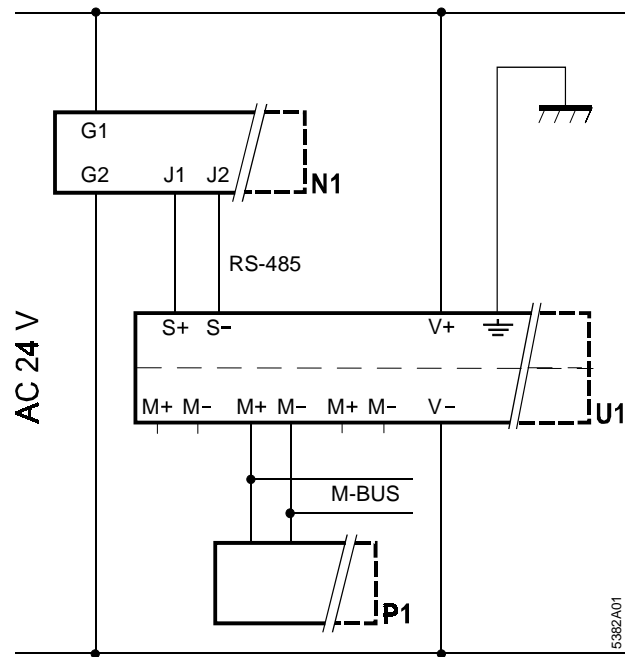
Connection terminals



Connection terminals used:

Port	Terminal	Device, signal, function
M-bus	M+	M-bus port to the M-bus terminal units
	M-	
RS-485	S+	RS-485 port for the M-bus central unit
	S-	
AC/DC 24 V	V+	Connection for power supply AC 20...30 V or DC 20...45 V
	V-	

Connection diagram



- N1 OZW10 M-bus central unit
 U1 WZC-P60 M-bus signal converter
 P1 M-bus terminal unit

Dimensions

