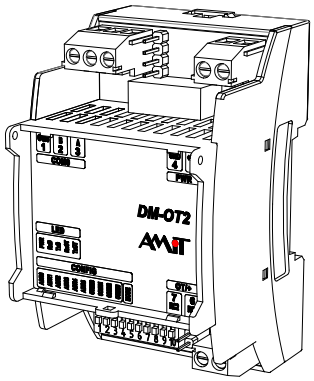
DM-OT2

Converter of OpenTherm interface

- **Control of one boiler (with one or two independent circuits) equipped with OT/+ interface**
- **Communication indication**
- **Galvanically isolated RS485 line**
- **MODBUS RTU / ARION communication**
- **DIN rail mounting**
- **Power supply 24 V DC**



TECHNICAL DATA

Communication	1× RS485, 1× OpenTherm
Galvanically isolated RS 485 [1])	Yes
RS485 overvoltage protection	Transil 600 W
RS485 communication protocol	MODBUS RTU / ARION (selectable)
No. of stations per RS485 network/segment	63
Power supply	20 V DC to 30 V DC
Maximum consumption	30 mA at 24 V DC
Surge protector	Yes
Other	
Connection	Screw terminals
Ingress protection rate	IP20
Operating temperature range	-40 °C to 70 °C
Maximum ambient humidity	< 95 % non-condensing
Mounting	On a 35 mm DIN rail
Weight	0.09 kg
Dimensions (w × h × d)	(54 × 90 × 61) mm

[1]) Isolation strength 500 V AC, galvanic isolation must not be used for separation of safe parts from dangerous parts.

ORDERING INFORMATION

DM-OT2	Converter of OpenTherm interface

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Naskove 1100/3, 150 00 **PRAHA**, Czech Republic
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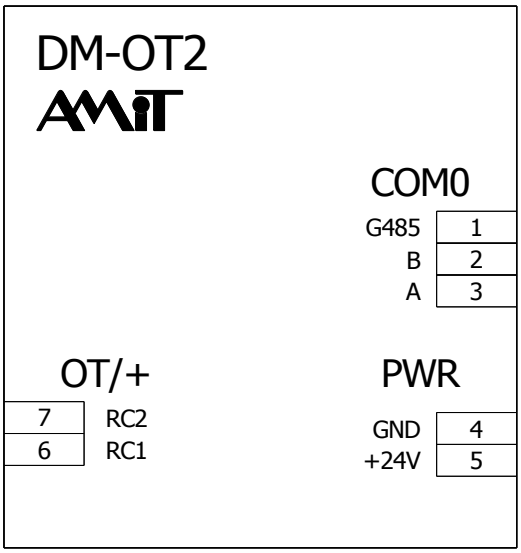
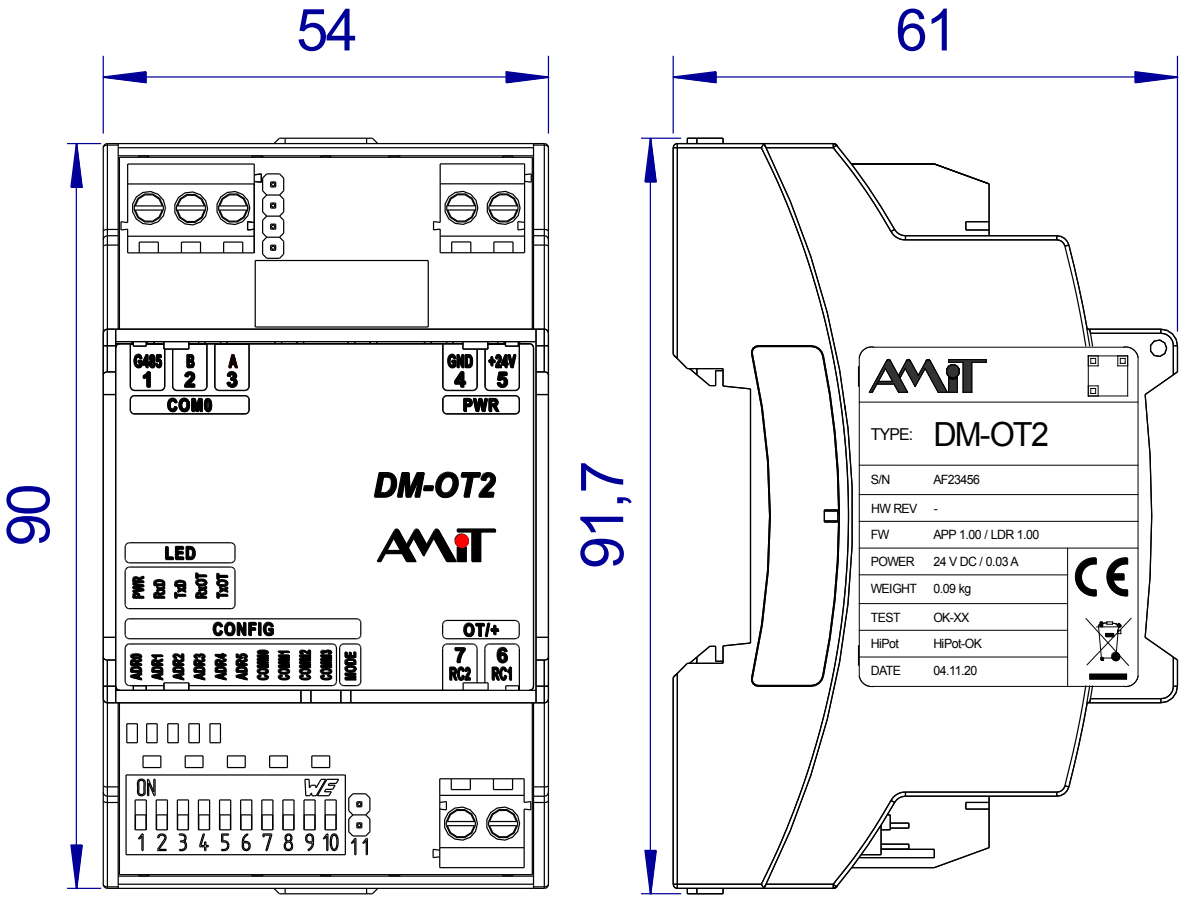
Bank: Komerční banka, a.s., Na Prikope 33, Praha 1, 11407, IBAN: CZ55 0100 0000 4341 4734 0227, SWIFT: KOMBCZPP

RECOMMENDED DRAWING SYMBOL



MECHANICAL DIMENSIONS



DESCRIPTION OF TERMINALS

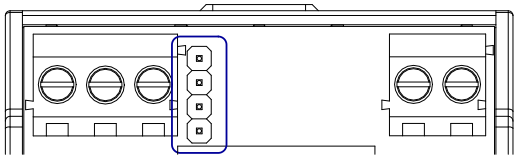
Terminal	Signal	Significance
1	G485	RS485, ground
2	B	RS485, signal B
3	A	RS485, signal A
4	GND	Power supply, ground
5	+24V	Power supply, +24 V DC
6	RC1	Interface OT/+
7	RC2	Interface OT/+

DM-OT2

Converter of OpenTherm interface

RS485 JUMPERS

Locations of jumpers:

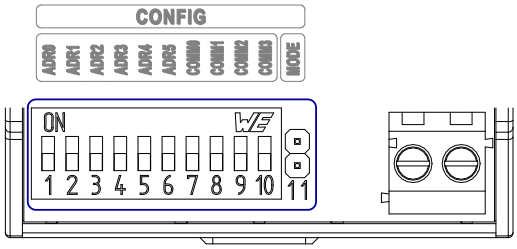


Jumpers	Significance
Fitted	Terminal station – idle states and terminations are active.
Not fitted	Intermediate station – idle states and terminations are inactive.

Note: Jumpers are always fitted simultaneously.

COMMUNICATION PARAMETER SETTINGS

DIP and MODE jumper location:



Number	Name	Significance
1	ADR0	Converter address settings
2	ADR1	Converter address settings
3	ADR2	Converter address settings
4	ADR3	Converter address settings
5	ADR4	Converter address settings
6	ADR5	Converter address settings
7	COMM0	Communication speed and parity settings
8	COMM1	Communication speed and parity settings
9	COMM2	Communication speed and parity settings
10	COMM3	Communication speed and parity settings
11	MODE	Communication protocol settings

Converter address settings

All devices in the network must have unique address. The address can be set by using switches ADR0 to ADR5; its value can be between 1 and 63. **Address 0 is not permitted!**

Address example: address = 40, switches ADR0, ADR1 and ADR5 (8 + 32) are in the ON position.

A change in the address settings manifests immediately.

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Setting communication speed and parity
All devices in the network need to have identical communication speeds and parities. It is possible to set communication speed settings and parity settings by DIP combinations according to the following tables.

COMM0	COMM1	COMM2	Baud speed	Parity
OFF	OFF	OFF	9,600	According to COMM3
ON	OFF	OFF	19,200	According to COMM3
OFF	ON	OFF	38,400	According to COMM3
ON	ON	OFF	57,600	According to COMM3
OFF	OFF	ON	9,600	**No parity**, status COMM3 insignificant
ON	OFF	ON	19,200	**No parity**, status COMM3 insignificant
OFF	ON	ON	38,400	**No parity**, status COMM3 insignificant
ON	ON	ON	115,200	According to COMM3

COMM3	Parity
OFF	Even
ON	Odd

The number of stop bits is set automatically according to the parity set:
Even parity 1 stop bit,
Odd parity 1 stop bit,
No parity 2 stop bits.

Change in communication speed settings and parity settings manifest immediately.

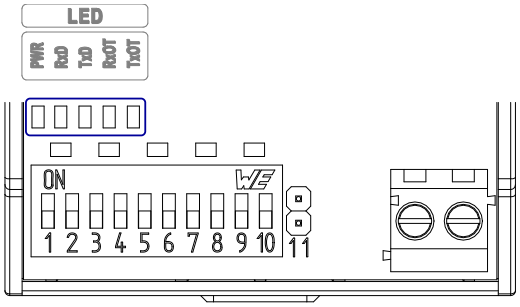
Setting the protocol
Set the ARION / MODBUS RTU by using the MODE jumper.

MODE jumper	Significance
Not fitted	MODBUS RTU protocol
Fitted	ARION protocol

A change in the protocol settings manifests after a restart.

LED DESCRIPTION

Location of LEDs:



LED	Significance
PWR	The converter is powered
RxD	Receiving data on the RS485 interface
TxD	Broadcasting data on the RS485 interface
RxOT	Receiving data on the OpenTherm/+ interface
TxOT	Broadcasting data on the OpenTherm/+ interface

Procedures of setting communication parameters – including the list of supported MODBUS functions and mapping of signals in the ARION protocol – are included in the operation manual for this converter (**dm-ot2_g_en_xxx.pdf**).

Data in this datasheet is informative only. Binding detailed information can be found in the operation manual (**dm-ot2_g_en_xxx.pdf**). Documentation and examples are available at amitomation.com.