SDP-M010-XT

Potentiometer with Modbus RTU, min & max settings

SDP-M010-XX potentiometers can control equipment that need a stepless control signal. The supply voltage is 24 VDC (suitable for PoM). The output voltage is adjusted steplessly from Vmin to Vmax or from Vmax to Vmin via a rotary knob. There is a version without OFF-position and a version with OFF-switch at the leftmost position. The potentiometer is suitable for both flush (IP44) and surface mounting (IP54). All parameters can be set via Modbus RTU.

Key features

- Stepless control of the output signal between Vmin and Vmax
- Minimum (Vmin) and maximum (Vmax) output adjustable via Modbus RTU
- Normal (Vmin to Vmax) or reverse (Vmax to Vmin) control selectable via Modbus RTU
- Analogue / modulating output type selectable via Modbus RTU
- Versions available with or without OFF-switch at the leftmost position
- Additional BMS features like Output overwrite and Modbus timeout available in the Modbus registers
- A splash waterproof enclosure
- Inset or surface mounting

Article codes

Article code	Output	Off-position
SDP-M010-AT	0, Vmin—Vmax	yes
SDP-M010-BT	Vmin—Vmax	no

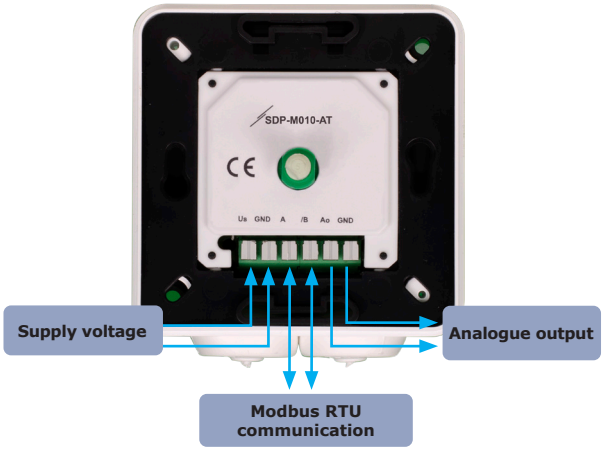
Area of use

- A variety of applications where a DC control signal is required

Technical specifications

	SDP-M010-AT	SDP-M010-BT
Supply voltage	24 VDC	
Selectable analogue / modulating output	0—10 VDC mode	min. load 50 kΩ (R_L ≥ 50 kΩ)
	0—20 mA mode	max. load 500 Ω (R_L ≤ 500 Ω)
	PWM mode	PWM frequency: 1 kHz, min. load 50 kΩ (R_L ≥ 50 kΩ)
		PWM voltage level: 3,3 VDC or 12 VDC
Output	0, Vmin—Vmax	Vmin—Vmax
Vmin	0 - 7 VDC / 0 - 14 mA / 0 - 70 % PWM	
Vmax	7.5 - 10 VDC / 15 - 20 mA / 75 - 100% PWM	
Consumption	≤ 20 mA incl. load	
Off-position	yes	no
Ambient conditions	Operating temperature	0—50 °C
	Relative humidity	< 95 % rH (non-condensing)
Protection standard	IP44 / IP54 (according to EN 60529)	

Wiring and connections



Us	Supply voltage (max 24 VDC)
GND	Supply, ground
A	Modbus signal A
/B	Modbus signal /B
Ao	Output signal (0-10 VDC, 0-20 mA, 0-100% PWM)
GND	Output, ground

Standards

- Low Voltage Directive 2014/35/EU
  - EN 60529:1991 Degrees of protection provided by enclosures (IP Code) Amendment AC:1993 to EN 60529
  - EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
- EMC directive 2014/30/EU:
  - EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
  - EN 61000-6-1:2007 Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light industrial environments
  - EN 61000-6-3:2007 Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments. Amendments A1:2011 and AC:2012 to EN 61000-6-3
- WEEE Directive 2012/19/EU
- RoHs Directive 2011/65/EC

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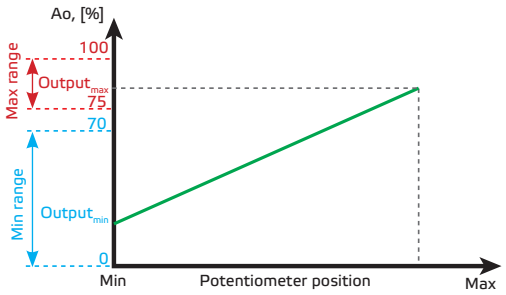
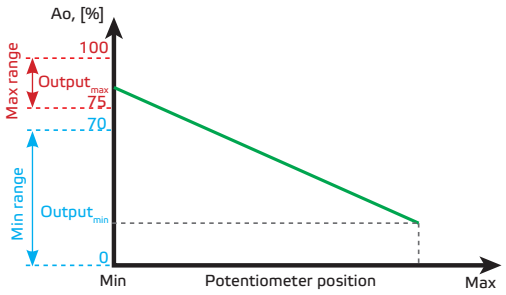
Operational diagram

SDP-M010-BT

Regulation type from minimum to maximum

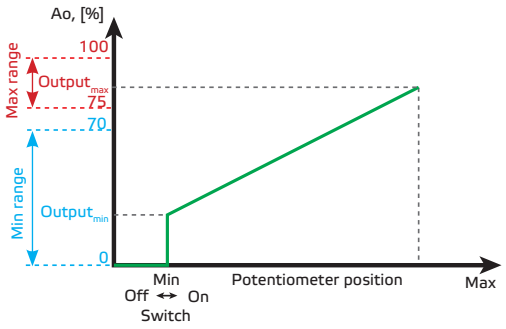


Regulation type from maximum to minimum

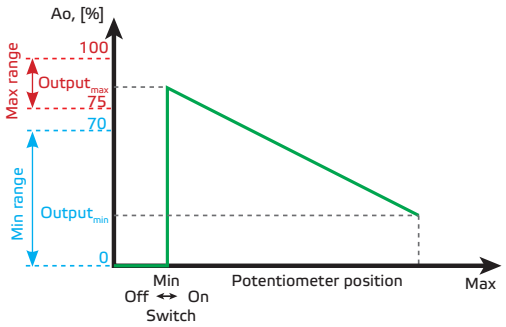


SDP-M010-AT

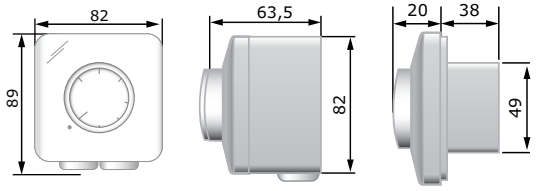
Regulation type from minimum to maximum



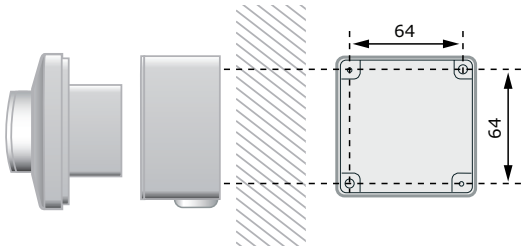
Regulation type from maximum to minimum



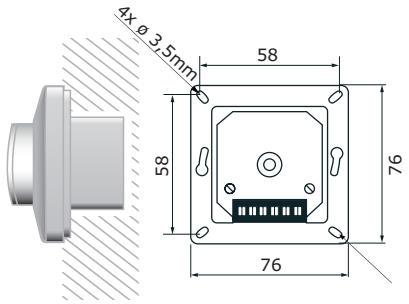
Fixing and dimensions

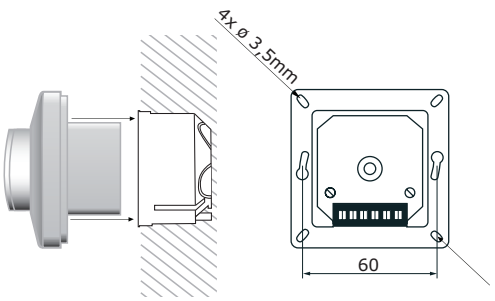


Surface mounting



Inset mounting





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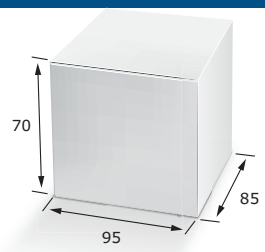
Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
SDP-M010-AT	Unit (1 pc.)	95	85	70	0,14 kg	0,17 kg
	Carton (10 pcs.)	492	182	84	1,49 kg	1,85 kg
	Box (60 pcs.)	590	380	280	8,94 kg	12,035 kg
SDP-M010-BT	Unit (1 pc.)	96	86	77	0,14 kg	0,17 kg
	Carton (10 pcs.)	492	182	84	1,49 kg	1,85 kg
	Box (60 pcs.)	590	380	280	8,94 kg	12,035 kg

Global trade item numbers (GTIN)

Packaging	SDP-M010-AT	SDP-M010-BT
Unit	05401003018446	05401003018439
Carton	05401003302798	05401003302781
Box	05401003504093	05401003504086
Pal	05401003701140	05401003701133