

Potentiometer modules

In control systems, units are often used which require analog control signals (i.e. 0...10 V DC). This signal can either originate from an analog card, or via a potentiometer (voltage distributor). Frequency inverter or proportional control electronics are examples of these applications.

Murrelektronik potentiometer modules MPOT for set-point adjustment can be snapped onto 35mm DIN-rail. Complex and time consuming improvisation disappears.

270° potentiometer or 3600° (10-turn) potentiometer for fine adjustment are available. Power supply is 24 V DC (with integrated resistor) or via a 10 V DC terminal.

Diode modules

For use within the control panel, these modules are for DIN-rail mounting and have screw terminal connections. Diode modules are available for use in the suppression of inductive loads. Other types of diode modules are available for logic, lamp test etc.

Assembly modules

Consisting of a printed circuit board with screw terminals and solder tags, these modules are intended for assembly by the user of components, circuit etc. They may be open or fitted with a plastic cover. The MVCO housing option has a P.C.B. grid into which components may be fitted.

LED indicators

For status indication, Murrelektronik offers a range of LED indicators. Versions are available for use on 24, 110 or 230 V without the need of external components, e.g. resistors.

For front panel mounting, the indicators are made with black or chrome bezels and connection is by fast-on lugs.

Single color and 2 color options are available with built-in lamp test diode on some versions.

Potentiometer modules



MPOT

With these practically designed potentiometer modules, it is simple, cheap and easy to solve your set-point problems. Standard versions are potentiometers with 270° turn or with 10-turn (3600°). Snap on to 35mm DIN-rail to EN 60715.

from page 3.9.2

Diode modules



MKS-D, MKS-LDP, MKS-BCD

Diode modules with single diode outputs onto terminals or resp. commonly joined on one side. For coupling or suppressor applications. Pairs of joined diodes with common control for lamp test applications. Diode logic to convert from hexadecimal in binary code or savings on PLC inputs. Snap on to DIN-rail to EN 60715.

from page 3.9.5

Assembly modules



MKS-M, ML 14, MP

Assembly modules can be put together as desired. Snap on to DIN-rail mounting to EN 60715.

page 3.9.7

LED-Indicators



IP65, IP40

LED-indicators are available in single color and voltage and 2 color options with built in lamp test diode on some versions. LED-indicators 3 mm, 5 mm and 10 mm for front panel mounting in metal housing.

from page 3.9.8

270° and 10-turn Potentiometer with relay contact

MPOT-REL

Potentiometer for set-point adjustment
set-point via relay or can be switched off
270° potentiometer

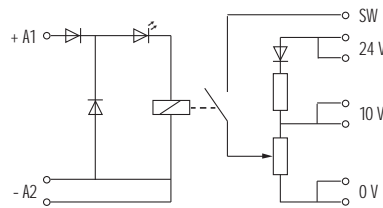


MPOT-REL

Potentiometer for set-point adjustment
set-point via relay or can be switched off
3600° potentiometer / 10-turn



Circuit diagram



Ordering data

	270°	Art.-No.	10-turn	Art.-No.
Potentiometer value				
1 k-Ohm		67551		67561
5 k-Ohm		67555		67565
10 k-Ohm		67552		67562
100 k-Ohm		67553		67563

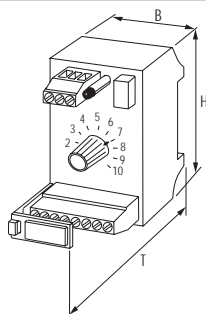
Technical data

Pot. resistance tolerance	± 20 %	± 5 %
Linearity	± 3 %	± 0.25 %
Power: potentiometer	1 W	1.4 W (2 W at 40 °C)
Power: resistor	0.25 W	
Control voltage/current	24 V DC/20 mA	
Contact material/relay	Pd Ni-Au Rh	
Switched current min./max.	1 mA/1 A	
Status indicator	green LED in control circuit	
Temperature range	0...+60 °C	
Mounting method	DIN-rail mounting EN 60715	
Dimensions H x B x T	75 x 45 x 65 mm	

Description

Murrelektronik potentiometer modules can be fitted with individual potentiometers and are available in 2 standard versions. The first version is a simple 270° potentiometer, the second a 10-turn potentiometer with fine adjustment. The module operates with 10 V or 24 V DC. A resistor reduces the voltage so that a 24 V DC voltage can be reduced to operate between 0...11 V. The connection is via terminals. A set-point can also be switched-on using an integrated relay and separate output. Many elements can be combined. The modules are for mounting on DIN-rail to EN 60715.

Dimension drawing



Notes

The 10-turn potentiometer has a decimal scale and locking lever.

270° and 10-turn Potentiometer

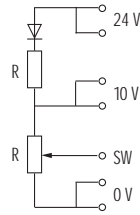
MPOT
Potentiometer for set-point adjustment
270° potentiometer



MPOT
Potentiometer for set-point adjustment
3600° potentiometer/10-turn



Circuit diagram



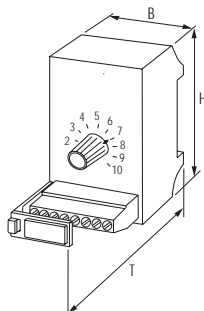
Ordering data	270°	Art.-No.	10-turn	Art.-No.
Potentiometer value				
1 k-Ohm		67501		67511
5 k-Ohm		67505		67515
10 k-Ohm		67502		67512
100k-Ohm		67503		67513

Technical data	270°	10-turn
Pot. resistance tolerance	± 20 %	± 5 %
Linearity	± 3 %	± 0.25 %
Power: potentiometer	1 W	1.4 W (2 W at 40 °C)
Power: resistor	0.25 W	
Temperature range	0...+60 °C	
Mounting method	DIN-rail mounting EN 60715	
Dimensions H x B x T	75 x 45 x 65 mm	

Description

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Dimension drawing



Notes

The 10-turn potentiometer has a decimal scale and locking lever.

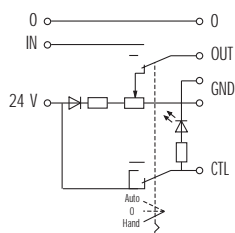
10-turn Potentiometer for use in Building Management Systems

MPOT-H

Potentiometer for set-point adjustment with HAND-O-AUTO slide switch and CTL-monitoring output



Circuit diagram



Ordering data

10-turn

Art.-No.

Potentiometer value

1 k-Ohm

67581

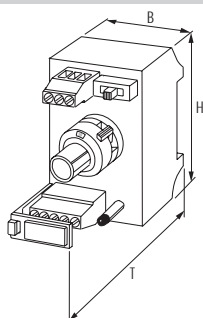
Technical data

Pot. resistance tolerance	± 5 %
Linearity	± 0.25 %
Power: potentiometer	1.4 W (2 W bat 40 °C)
Power: resistor	0.25 W
Control voltage	24 V DC
Switched current min./max.	5 mA/300 mA
Status indicator	yellow LED if CTL active (switch "HAND" or "0" position)
Temperature range	0...+60 °C
Mounting method	DIN-rail mounting EN 60715
Dimensions H x B x T	75 x 45 x 65 mm

Description

Murrelektronik MPOT-H modules are fitted with a HAND-OFF-AUTO slide switch. The analog output from, for example, a DDC is connected to the IN terminal and, if the slide switch is in the AUTO position, appears on the OUT terminal. When the slide switch is in the O (off) position the signal is removed from the OUT terminal. In the HAND position, which is supplied by 24 V DC, an analog signal can be manually set by means of the potentiometer. The slide switch position at "O" or "HAND" 24 V or CTL spring clamp terminals can be used as a signal.

Dimension drawing



Notes

The 10-turn potentiometer has a decimal scale and locking lever.

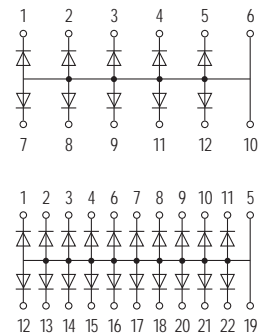
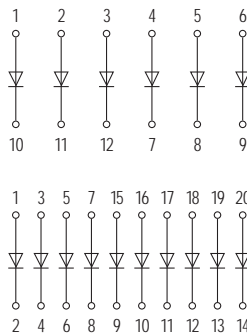
DIN-rail mounting diode modules

MKS-D
individually wired to screw terminals

MKS-D
diodes with common potential



Circuit diagram



Picture:
com. potential anode

Ordering data

Art.-No.

Art.-No.

Circuit	No. of diodes
Single	6
Single	10
Com. potential anode	10
Com. potential anode	20
Com. potential cathode	10
Com. potential cathode	20

67063
67066

67040
¹⁾**67052**
67045
67057

Technical data

Diode type	universal diode 1300 V, 1 A
Wiring method	screw terminals 4 mm ²
Temperature range	-20...+60 °C
Mounting method	DIN-rail mounting to EN 60715 (TH35) or (G32)

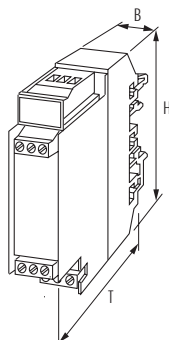
Description

diode modules are also available for the suppression of inductive loads (valves, contactors, motors etc.)

Dimensions H x B x T

86 x 22.5 x 62 mm	67063	86 x 22.5 x 62 mm	67040
86 x 45 x 62 mm	67066	86 x 45 x 62 mm	67052
		86 x 22.5 x 62 mm	67045
		86 x 45 x 62 mm	67057

Dimension drawing



Notes

DIN-rail mounting diode modules

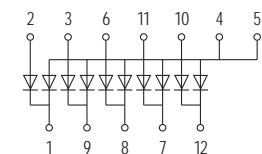
MKS-LDP
diodes wired in pairs with common potential



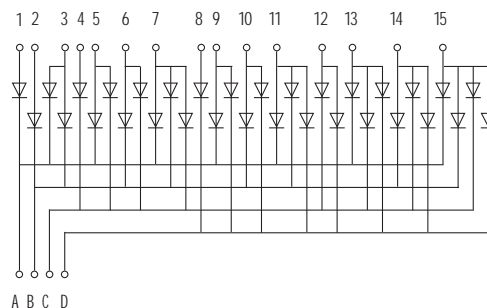
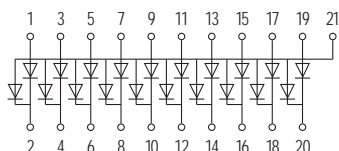
MKS-BCD
diode logic for converting hexadecimal into binary numbers



Circuit diagram



Picture:
Com. potential anode



Ordering data

Circuit	No. of diodes
Com. potential anode	5 pairs
Com. potential anode	10 pairs

Art.-No.

67072
67096

Art.-No.

67079

Technical data

Diode type	universal diode 1300 V, 1 A
Wiring method	screw terminals 4 mm ²
Temperature range	-20...+60 °C
Mounting method	DIN-rail mounting to EN 60715 (TH35) or (G32)

Description

diode gathered for lamp test function

diodes gathered to convert hexadecimal to binary numbers

Dimensions H x B x T

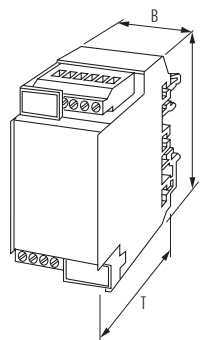
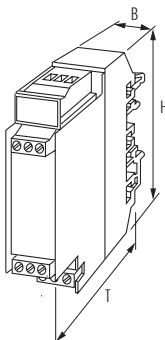
86 x 22.5 x 62 mm
86 x 45 x 62 mm

67072
67096

86 x 67.5 x 62 mm

67079

Dimension drawing



Notes

Assembly modules for self-wiring of components

MKS-M

screw terminals
connected to solder tag pairs



ML 14

MCVO housing 14-pole
with bread board

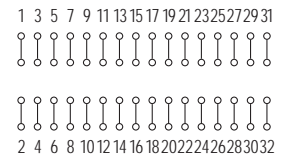
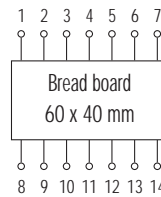
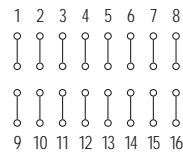


MP

screw terminals
connected to solder tag pairs



Circuit diagram



Ordering data

	Art.-No.	Art.-No.	Art.-No.
Pairs of solder pins			
4	67081		
6			62001
6			¹⁾ 62030
8	67083		
12			62010
14		92200	
16			62020

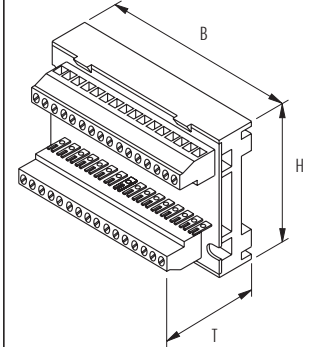
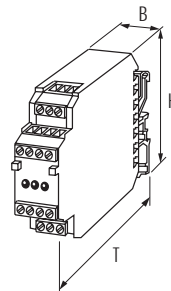
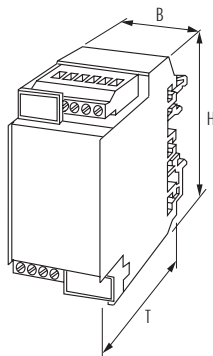
Technical data

Voltage	max. 250 V AC/DC		
Current	max. 5 A Art.-No. 67081: 2.5 A		
Dist. between tag pairs	40 mm Art.-No. 67081: 30 mm	–	24 mm
Wiring method	screw terminals 4 mm ² ; connected to solder tag pairs spacing 5 mm		
Material	flame retardant plastic		
Housing	enclosed	MCVO housing, enclosed	open construction
Temperature range	-20...+60 °C		
Mounting method	DIN-rail mounting to EN 60715 (TH35) or (G32)		DIN-rail mounting to EN 60715 (TH35) or (G32) or screw fixing

Dimensions H x B x T

86 x 22.5 x 62 mm	67081	75 x 22.5 x 102 mm	92200	63 x 45 x 36 mm	62001
86 x 45 x 62 mm	67083			90 x 63 x 36 mm	62030
				63 x 70 x 36 mm	62010
				63 x 90 x 36 mm	62020

Dimension drawing



Notes

¹⁾Art.-No. 62030 has a spacing between solder tags of 50 mm.

LED indicators for front panel mounting

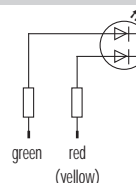
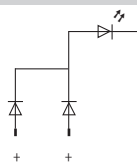
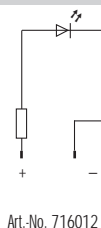
LED
plastic housing

LED
plastic housing
with lamp test input

LED 2F
2 color LED
in plastic housing



Circuit diagram



Ordering data

Ordering data		Art.-No.	Art.-No.	Art.-No.	Art.-No.
Voltage	LED-color				
	24 V	red	71261	71361	
		yellow	71271	71371	
		green	71281	71381	
		blue	716012		
		red/green			71250
		yellow/green			71255
110 V	red	71267			
	yellow	71277			
	green	71287			
230 V	red	71269			
	yellow	71279			
	green	71289			
	blue	716015			

Technical data

Voltage	24 V AC/DC	±15 %	24 V DC	±15 %	24 V DC	±15 %
	110 V AC/DC	±15 %	–	–	–	–
	230 V AC	±10 %	–	–	–	–

Current supply: 10 mA each LED

LED: ø 5 mm

Connection: Faston 2.8 x 0.8 mm

Protection to IEC529 (DIN 40050): IP65

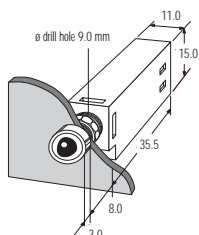
Temperature range: -20...+50 °C

Housing: flame retardant plastic

Accessories

Accessories	Art.-No.
Mounting key for plastic nut	71998
Metal front nut	71991
Blind plug	71995

Assembly/Dimension drawing



Notes

The LED modules are suitable for wall thickness between 1.5 and 5.0 mm.

LED indicators for front panel mounting

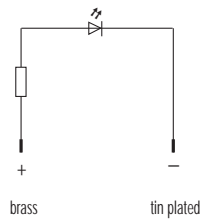
LED 3 M
metal housing

LED 5 M
metal housing

LED 10 M
metal housing



Circuit diagram

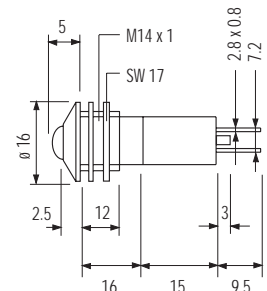
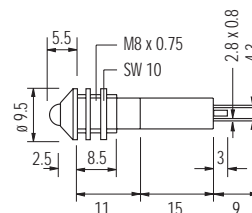
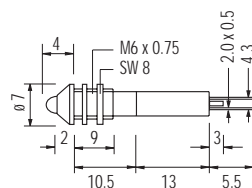


Ordering data		Art.-No.	Art.-No.	Art.-No.
Voltage	LED-color			
24 V DC ± 10 %	red Ø 3 mm	71403		
	yellow Ø 3 mm	71423		
	green Ø 3 mm	71443		
24 V DC ± 10 %	red Ø 5 mm		71405	
	yellow Ø 5 mm		71425	
	green Ø 5 mm		71445	
24 V DC ± 10 %	red Ø10 mm			71410
	yellow Ø10 mm			71430
	green Ø10 mm			71450

Technical data

Current supply	20 mA each LED		
LED	Ø 3 mm	Ø 5 mm	Ø 10 mm
Connection	Faston 2.0 x 0.5 mm	Faston 2.8 x 0.8 mm	
Protection to IEC 529 (DIN 40050)	IP40		
Temperature range	-30...+70 °C		
Housing	brass, chrome plated		
Dimension	Ø 7 x 33 mm	Ø 9.5 x 40 mm	Ø 16 x 45 mm
Front panel hole diameter	Ø 6 mm	Ø 8 mm	Ø 14 mm

Dimensioni drawing



Notes

+ connection brass, - connection tin plated