

Type: **MFD-TAP13-PT-A**

Article No.: **106045**

Sales text **E/A MFD 24VDC,Trans., 2E x PT100, 1QA**

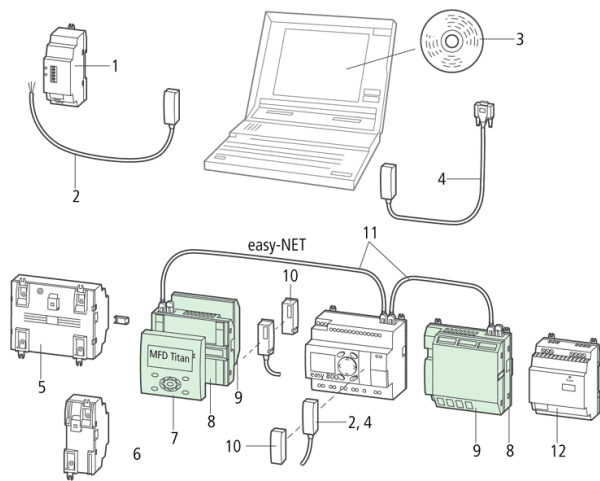


IP20, springloaded terminals

### Ordering information

Description			24 V DC for MFD-CP8.. (from device version 08), temperature range can be set.
Inputs			
Digital			6
of which can be used as analog			2
Upper value of setting range			2
Outputs			
Transistor			4
Analog			1
Temperature range			-40...+90 °C 0...+250 °C 0...+400 °C

### Notes concerning the product group



<b>Accessories</b>	<b>Page</b>
1 Ethernet gateway	→ <a href="#">101520</a>
2 Connection cable	→ <a href="#">280887</a>
3 Programming software	→ <a href="#">266040</a>
4 PC programming cable	→ <a href="#">256277</a>
5 I/O expansion	→ <a href="#">212314</a>
6 Output expansion, bus module, coupling module	→ <a href="#">212315</a>
7 Display/keypad	→ <a href="#">265251</a>
8 Power supply unit/CPU	→ <a href="#">265253</a>
9 I/O module	→ <a href="#">265254</a>
10 Memory card	→ <a href="#">256279</a>
11 easy-NET	→ <a href="#">256283</a>
12 Switched-mode power supply unit	→ <a href="#">212319</a>

<b>General</b>			
Standards			EN 61000-6-1/-2/-3/-4, IEC 60068-2-6, IEC 60068-2-27
Weight		kg	0,14
Mounting			Fitted into the power supply unit.
<b>Terminal capacities</b>			
Solid		mm <sup>2</sup>	0.24 (AWG 24 – 12)
Flexible with ferrule		mm <sup>2</sup>	0.22.5 (AWG 24 – 12)
Standard screwdriver		mm	3.5 × 0.6
<b>Climatic environmental conditions</b>			
Operating ambient temperature		°C	–25 to 55, cold as per IEC 60068-2-1, heat as per IEC 60068-2-2
Condensation			Take appropriate measures to prevent condensation
Storage		°C	... 40...+70
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5...95
Air pressure (operation)		hPa	795...1080
<b>Ambient conditions, mechanical</b>			
Pollution degree			2

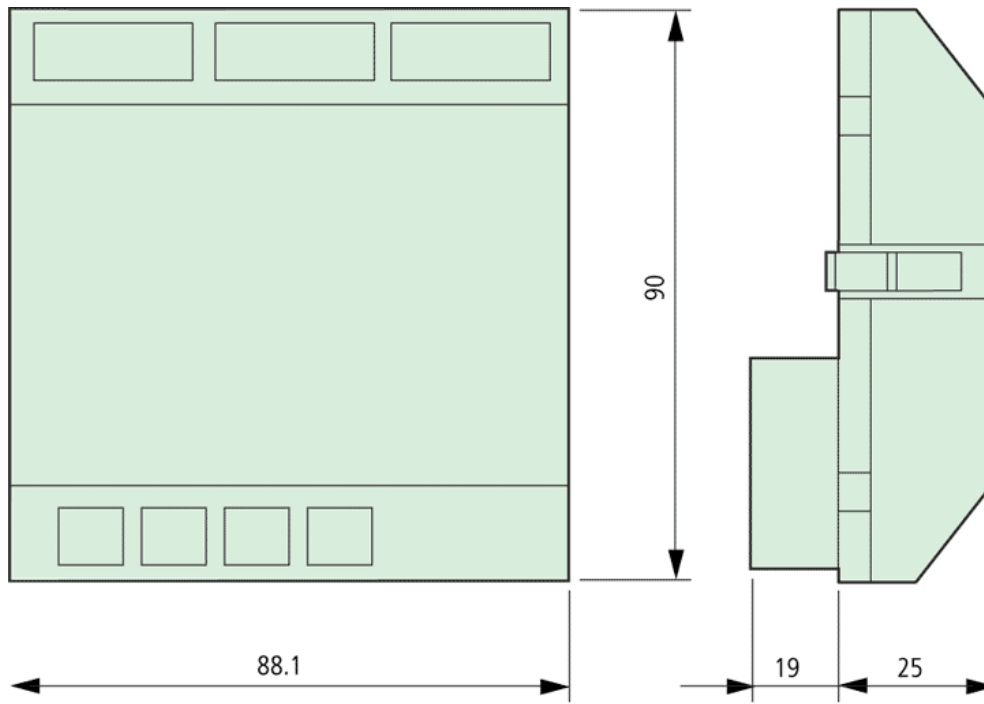
Degree of protection IEC/EN 60529			IP 20
Vibrations (IEC/EN 60068–2–6)			
Constant amplitude 0.15 mm		Hz	10...57
Constant acceleration 2 g		Hz	57...150
Mechanical shock resistance (IEC/EN 60068–2–27) semi-sinusoidal 15 g/11 ms		Impacts	18
Drop to IEC/EN 60068–2–31	Drop height	mm	50
Free fall, packaged (IEC/EN 60068–2–32)		m	1
Mounting position			horizontal, vertical
<b>Electromagnetic compatibility (EMC)</b>			
Electrostatic discharge (IEC/EN 61000–4–2, Level 3, ESD)			
Air discharge		kV	8
Contact discharge		kV	6
Electromagnetic fields (IEC/EN 61000–4–3, RFI)		V/m	10
Radio interference suppression (EN 55011)			EN 55011 Class B, EN 55022 Class B
Burst pulses (IEC/EN 61000–4–4, level 3)			
Supply cables		kV	2
Signal lines		kV	2
High-energy pulses (surge) (IEC/EN 61000–4–5)		kV	2 (supply cables, symmetrical)
High-energy pulses (surge) (IEC/EN 61000–4–5, level 2)		kV	0.5 (supply cables, symmetrical)
Immunity to line-conducted interference to (IEC/EN 61000–4–6)		V	10
<b>Insulation resistance</b>			
Clearance in air and creepage distances			EN 50178, UL 508, CSA C22.2, no. 142
Insulation resistance			EN 50178
<b>Digital inputs 24 V DC</b>			
Number			6
Inputs can be used as analog inputs			2 (I11, I12)
Potential isolation			
From power supply			No
Between digital inputs			No
From the outputs			Yes

for Program code			Yes
Rated operational voltage	$U_e$	V DC	24
On 0 signal	$U_e$	V DC	< 5.0 (I1 – I4) < 8.0 (I11, I12)
On 1 signal	$U_e$	V DC	>15.0 (I1 – I4) > 8.0 (I11, I12)
Input current on 1 signal I11, I12		mA	2.2 (at 24 V DC)
Delay time from 0 to 1 Debounce ON		ms	20
Debounce OFF		ms	Normally 0.1 (I1 – I4), Normally 0.25 (I11 – I12)
Delay time from 1 to 0 Debounce ON		ms	20
Debounce OFF		ms	Normally 0.1 (I1 – I4), normally 0.2 (I11, I12)
Cable length (unscreened)		m	100
Frequency counter			
Quantity			4 (I1, I2, I3, I4)
Counter frequency		kHz	< 3
Pulse shape			Square
Incremental counter			
Quantity			2 (I1 + I2, I3 + I4)
Counter frequency		kHz	3
Pulse shape			Square
Signal offset			90°
Rapid counter inputs			
Number			4 (I1, I2, I3, I4)
Counter frequency		kHz	< 3
Pulse shape			Square
Cable length, screened		m	< 20
<b>Analog inputs</b>			
Potential isolation			
From power supply			No
From the digital inputs			No
From the outputs			Yes
for Program code			Yes
Input type			DC voltage
Signal range		V DC	0 – 10
Resolution, analog		V	0,01
Resolution, digital		V	0,01

Resolution		Bit	10 (value 0 – 1023)
Input impedance		k	11,2
Accuracy of actual value			
two MFD devices		%	± 3
Within a single device		%	± 2
Conversion time, analog/digital		ms	Each CPU cycle
Input current		mA	< 1
Cable length screened		m	< 30
<b>Analog outputs</b>			
Number			1
Potential isolation			
From the digital outputs			Yes
for Program code			Yes
Output type			DC voltage
Signal range		V DC	0 – 10
Max. output current		A	0,01
Load resistance			1 k
Overload and short-circuit protection			Yes
Resolution, analog		V DC	0,01
Resolution, digital		Bit	12 (value 0 – 4095) at QA01, MD
Recovery time		µs	100
Accuracy			
–25 °C – 55 °C		%	2
25 °C		%	1
Conversion time			Each CPU cycle

---

## Dimensions



---

Moeller GmbH, Hein-Moeller-Str. 7-11, D-53115 Bonn  
E-Mail: [catalog@moeller.net](mailto:catalog@moeller.net), Internet: [www.moeller.net](http://www.moeller.net), <http://catalog.moeller.net>  
Copyright 2006 by Moeller GmbH. HPL-C2007G V2.1