## **Datasheet**



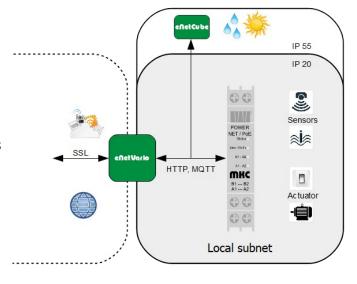
The eNetIO-4-ajjj provides you with one output in the form of a relay normally open contact, one digital input and six analogue current outputs.

It works both stand-alone and integrated in control systems in industry or in the home user area (e.g. openHAB, **Node-Red**).

The device is an independent part of a whole series, for the connection of different sensors and actuators for industrial applications and the private environment.

The network interface is used for communication (HTTP, JSON REST-API, MQTT) as well as for power supply of the device via PoE.

The integrated HTTP server enables convenient setting of all system-relevant parameters.



All software interfaces are based on open protocols. Thus, all devices can be operated directly in your network environment without registration, app or cloud connection. This offers the highest possible protection for your data.



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# eNetIO-4-ajjj

## **Datasheet**

#### Case

 Robust and compact enclosure for top-hat rail mounting according to EN 60715

#### **Galvanic isolation**

 The device is completely galvanic decoupled from the power supply and from the sensors and actuators connected to the screw terminals.

#### **Communication interface**

- RJ45, LAN Ethernet 10/100MBit
- M2M Communication
- MQTT Client
- HTTP Homepage

#### **Power supply**

- Network, PoE
- Alternatively 18 48V DC (protected against polarity reversal)

### 1x digital output

- Configurable as mono/bistable switch
- LED status indicator

## 1x digital input

Sampling interval: ca. 2ms

Weighted arithmetic mean as input filter

LED status indicator

## 6x analogue current output

16 bit converter
Resolution: 0.3µA
Accuracy: 0.075% FSR
(full scale range: 20mA)

• Short-circuit proof: < 1 second

### **Technical specifications**

Dimensions LxWxH [mm]   90 x 70 x 60				
- Operation   min: 0   max: 50 - Storage   min: -40   max: 80 Air humidity [% r.H.]   min: 0   max: 90  Power supply   Network PoE   IEEE802.3af, Class 0   - Voltage [V]   min: 18   max: 48 - power consumption [W]   typ: 0,5   max: 3,84  Digital outputs   1  Contacts   A1 - A2   Implementation   Relay, normally open   Rated voltage   max: 250V~  Switching voltage   max: 440V~  Breaking capacity   max: 1500VA   Rated current   max: 6A   Galvanic isolation   ≥ 3KV   Wire cross-section [AWG]   min: 24   max: 16  Contact ratings [cycles] (VDE0660, VDE0631, UL508)   - 3x10 <sup>5</sup> with 6A & 250V~ - 5x10 <sup>5</sup> with 6A (resistive) & 30V= - 5x10 <sup>5</sup> with 6A (resistive) & 30V= - 3x10 <sup>6</sup> with 0,3A (L/R=40ms) & 50V=  Digital inputs   1  Contacts   B1 - B2   V <sub>IH</sub>   min: 12V AC/DC   max: 230V AC/DC		90 x 70 x 60		
- Storage   min: -40   max: 80   Air humidity [% r.H.]   min: 0   max: 90   Power supply   - Network PoE   IEEE802.3af, Class 0   - Voltage [V]   min: 18   max: 48   - power consumption [W]   typ: 0,5   max: 3,84   Digital outputs   1   Contacts   A1 − A2   Implementation   Relay, normally open   Rated voltage   max: 250V~   Switching voltage   max: 440V~   Breaking capacity   max: 1500VA   Rated current   max: 6A   Galvanic isolation   ≥ 3KV   Wire cross-section [AWG]   min: 24   max: 16   Contact ratings [cycles] (VDE0660, VDE0631, UL508)   - 1x10 <sup>5</sup> with 6A & 250V~   - 5x10 <sup>5</sup> with 6A (resistive) & 30V=   - 3x10 <sup>6</sup> with 0,3A (L/R=40ms) & 50V=   Digital inputs   Quantity   1   Contacts   B1 − B2   V <sub>IH</sub>   min: 12V AC/DC   max: 230V AC/DC	Ambient temperature [°C]			
Air humidity [% r.H.] min: 0 max: 90  Power supply  - Network PoE	- Operation	min: 0	max: 50	
Power supply  - Network PoE  - Voltage [V]  - power consumption [W]  Digital outputs  Quantity  1  Contacts  A1 − A2  Implementation  Relay, normally open  Rated voltage  Switching voltage  Breaking capacity  Rated current  Galvanic isolation  Wire cross-section [AWG]  UL508)  Digital inputs    IEEE802.3af, Class 0   max: 48   max: 48   max: 3,84     IEE802.3af, Class 0   max: 48   max: 3,84     IEE802.3af, Class 0   max: 3,84     IEE802.3af, Class 0   max: 48   max: 3,84     IEE802.3af, Class 0   max: 3,84     I max: 48   max:	- Storage	min: -40	max: 80	
- Network PoE	Air humidity [% r.H.]	min: 0	max: 90	
- Voltage [V] min: 18 max: 48  - power consumption [W] typ: 0,5 max: 3,84  Digital outputs  Quantity 1  Contacts A1 − A2  Implementation Relay, normally open  Rated voltage max: 250V~  Switching voltage max: 440V~  Breaking capacity max: 1500VA  Rated current max: 6A  Galvanic isolation ≥ 3KV  Wire cross-section [AWG] min: 24 max: 16  Contact ratings [cycles] (VDE0660, VDE0631, UL508) -3x10 <sup>6</sup> with 6A (resistive) & 30V=  Digital inputs  Quantity 1  Contacts B1 − B2  V <sub>IH</sub> min: 12V AC/DC max: 230V AC/DC	Power supply			
- power consumption [W] typ: 0,5 max: 3,84  Digital outputs  Quantity 1  Contacts A1 − A2  Implementation Relay, normally open  Rated voltage max: 250V~  Switching voltage max: 440V~  Breaking capacity max: 1500VA  Rated current max: 6A  Galvanic isolation ≥ 3KV  Wire cross-section [AWG] min: 24 max: 16  Contact ratings [cycles] (VDE0660, VDE0631, UL508) - 1x10 <sup>5</sup> with 6A & 250V~ - 5x10 <sup>5</sup> with 6A (resistive) & 30V= - 3x10 <sup>6</sup> with 0,3A (L/R=40ms) & 50V=  Digital inputs  Quantity 1  Contacts B1 − B2  V <sub>IH</sub> min: 12V AC/DC max: 230V AC/DC	- Network PoE	IEEE802.3af, Class 0		
Digital outputs  Quantity  I  Contacts  A1 – A2  Implementation  Rated voltage  Switching voltage  Breaking capacity  Rated current  Galvanic isolation  Wire cross-section [AWG]  (VDE0660, VDE0631, UL508)  Digital inputs  Quantity  I  Contacts  B1 – B2  V <sub>IH</sub> Max: 250V~  max: 250V~  max: 250V~  max: 440V~  max: 440V~  max: 6A  SakV  max: 1500VA  max: 6A  - 1x10 <sup>5</sup> with 6A & 250V~  - 5x10 <sup>5</sup> with 6A (resistive) & 30V=  - 3x10 <sup>6</sup> with 0,3A (L/R=40ms) & 50V=  Digital inputs  Quantity  I  Contacts  B1 – B2  V <sub>IH</sub> min: 12V AC/DC  max: 230V AC/DC	- Voltage [V]	min: 18	max: 48	
Quantity         1           Contacts         A1 − A2           Implementation         Relay, normally open           Rated voltage         max: 250V~           Switching voltage         max: 440V~           Breaking capacity         max: 1500VA           Rated current         max: 6A           Galvanic isolation         ≥ 3KV           Wire cross-section [AWG]         min: 24         max: 16           Contact ratings [cycles]         - 1x10 <sup>5</sup> with 6A (resistive) & 30V = -5x10 <sup>5</sup> with 6A (resistive) & 30V = -3x10 <sup>6</sup> with 0,3A (L/R=40ms) & 50V =           Digital inputs         Quantity         1           Contacts         B1 – B2           V <sub>IH</sub> min: 12V AC/DC         max: 230V AC/DC	- power consumption [W]	typ: 0,5	max: 3,84	
Contacts         A1 – A2           Implementation         Relay, normally open           Rated voltage         max: 250V~           Switching voltage         max: 440V~           Breaking capacity         max: 1500VA           Rated current         max: 6A           Galvanic isolation         ≥ 3KV           Wire cross-section [AWG]         min: 24         max: 16           Contact ratings [cycles]         - 1x10 <sup>5</sup> with 6A & 250V~         - 5x10 <sup>5</sup> with 6A (resistive) & 30V=           VDE0660, VDE0631, UL508)         - 3x10 <sup>6</sup> with 0,3A (L/R=40ms) & 50V=           Digital inputs         1           Quantity         1           Contacts         B1 – B2           V <sub>IH</sub> min: 12V AC/DC         max: 230V AC/DC	Digital outputs			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Quantity	1		
Rated voltage	Contacts	A1 – A2		
Switching voltage $ \begin{array}{ccccccccccccccccccccccccccccccccccc$	Implementation	Relay, normally open		
Breaking capacity $max: 1500VA$ Rated current $max: 6A$ Galvanic isolation $≥ 3KV$ Wire cross-section [AWG] $min: 24$ $max: 16$ Contact ratings [cycles] $(VDE0660, VDE0631, UL508)$ $- 1x10^5$ with $6A & 250V \sim - 5x10^5$ with $6A$ (resistive) & $30V = - 3x10^6$ with $0,3A$ ( $L/R = 40ms$ ) & $50V = - 3x10^6$ with $0,3A$ ( $1/R = 40ms$ ) & $1/R = 40ms$ ) & $1/R = 40ms$ Quantity $1/R = - 3x10^6$ Contacts $1/R = - 3x10^6$	Rated voltage		max: 250V~	
Rated current	Switching voltage		max: 440V~	
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Breaking capacity		max: 1500VA	
Wire cross-section [AWG]         min: 24         max: 16           Contact ratings [cycles] (VDE0660, VDE0631, UL508)         - 1x10 <sup>5</sup> with 6A & 250V~ - 5x10 <sup>5</sup> with 6A (resistive) & 30V= - 3x10 <sup>6</sup> with 0,3A (L/R=40ms) & 50V=           Digital inputs         1           Quantity         1           Contacts         B1 – B2           V <sub>IH</sub> min: 12V AC/DC         max: 230V AC/DC	Rated current		max: 6A	
Contact ratings [cycles] (VDE0660, VDE0631, UL508) - 1x10 <sup>5</sup> with 6A & 250V~ - 5x10 <sup>5</sup> with 6A (resistive) & 30V= - 3x10 <sup>6</sup> with 0,3A (L/R=40ms) & 50V= Digital inputs  Quantity 1  Contacts B1 − B2  V <sub>IH</sub> min: 12V AC/DC max: 230V AC/DC	Galvanic isolation	≥ 3KV		
(VDE0660, VDE0631, UL508)       - 5x10 <sup>5</sup> with 6A (resistive) & 30V= - 3x10 <sup>6</sup> with 0,3A (L/R=40ms) & 50V=         Digital inputs       1         Contacts       B1 – B2         V <sub>IH</sub> min: 12V AC/DC       max: 230V AC/DC	Wire cross-section [AWG]	min: 24	max: 16	
Quantity         1           Contacts         B1 – B2           V <sub>IH</sub> min: 12V AC/DC         max: 230V AC/DC	(VDE0660, VDE0631,	- 5x10 <sup>5</sup> with 6A (resistive) & 30V=		
Contacts B1 – B2  V <sub>IH</sub> min: 12V AC/DC max: 230V AC/DC	Digital inputs			
V <sub>IH</sub> min: 12V AC/DC max: 230V AC/DC	Quantity	1		
	Contacts	B1 – B2		
V <sub>II</sub> max: 6V AC/DC	V <sub>IH</sub>	min: 12V AC/DC	max: 230V AC/DC	
1 1	V <sub>IL</sub>		max: 6V AC/DC	
Input resistance $\geq 50K\Omega$	Input resistance	≥ 50KΩ		
Galvanic isolation ≥ 3KV	Galvanic isolation	≥ 3KV		
Wire cross-section [AWG] min: 24 Max: 16	Wire cross-section [AWG]	min: 24	Max: 16	
Analogue outputs				
Quantity 6	Quantity	6		
Contacts A3 – A4, B3 – B4, A5 – A6, B5 – B6, A7 – A8, B7 – B8	Contacts			
Output range min: 0mA max: 20mA	Output range	min: 0mA	max: 20mA	
Load min: $50\Omega$ max: $400\Omega$	Load	min: 50Ω	max: 400Ω	
Galvanic isolation ≥ 3KV	Galvanic isolation	≥ 3KV		
Wire cross-section [AWG] min: 24 max: 16	Wire cross-section [AWG]	min: 24	max: 16	



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# **Datasheet**

SYSTEMS DEVICES PROTOTYPES





HARDWARE SOFTWARE DEVELOPMENT



ASSEMBLY SMD / THT AOI

**COMPETENCE** 

QUALITY

**SERVICE** 



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EMBEDDED MODULES SENSORS REMOTE IO REST / MQTT POE



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