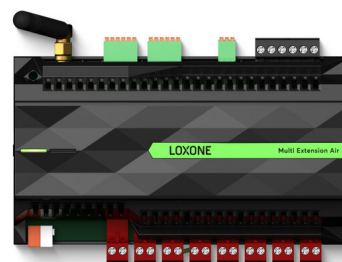


## Datasheet

### Multi Extension Air

Part No: 100116



### About the product

The LOXONE Multi Extension Air provides **8 outputs with potential-free bistable relays**, **12 digital inputs**, **a 1-wire interface** and **4 PWM outputs**.

#### Features:

- Can be placed anywhere, making it the most versatile extension for retrofitting projects
- 12 digital inputs:
  - 0 - 28 VDC
  - Can be used as a frequency counter (max 200Hz)
- Outputs:
  - 8x digital: (relay), bistable, potential-free
  - 4x PWM: 2.1A per channel (12-28VDC)
- 1-Wire interface:
  - max. 20 sensors, (max. 50mA)

### Electrical Specifications

|                         |                          |
|-------------------------|--------------------------|
| Supply voltage          | 18 ... 28 VDC            |
| Power consumption       | typ. 0.34 W, max. 1.74 W |
| Power loss at max. load | 8.7 W                    |
| Max. inrush current     | 24 A                     |

### Inputs

|              |                                                                                                                                                                                                                 |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Digital (12) | Logic 0: 0 ... 2.2 VDC<br>Undefined: 2.2 ... 3.8 VDC<br>Logic 1: 3.8 ... 28 VDC<br><br><b>Useable as frequency counter:</b><br>- Max. frequency: 200 Hz<br>- Min. pulse width: 2.5 ms<br>- Accuracy: $\pm 1$ Hz |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Outputs

|             |                                                                                                                                             |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Digital (8) | bistable, dry contact<br>max. 250 VAC 16 A at cos = 1 (IEC)<br>max. 250 VAC 15 A at cos = 1 (UL)<br>max. 30 VDC 5 A<br>total load max. 48 A |
| PWM (4)     | 2.1 A per channel, 12 ... 28 VDC<br>PWM Frequency:<br>lighting: 123 Hz; control signal: 26 ... 1627 Hz                                      |

## Interfaces

|            |                                                                                                                                                                                     |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LOXONE Air | max. 128 devices<br>868 MHz (SRD Band Europe), 4 channels, max. 15.1 mW e.r.p.<br>915 MHz (ISM Band Region 2), 10 channels, max. 13.2 mW<br>SMA connector with 1.8 dBi stub-antenna |
| 1-Wire     | max. 20 sensors, max. 50 mA<br>or 1 iButton key reader<br>max. 100 ... 300 m wire length (depending on wiring topology)                                                             |

## Ambient Conditions

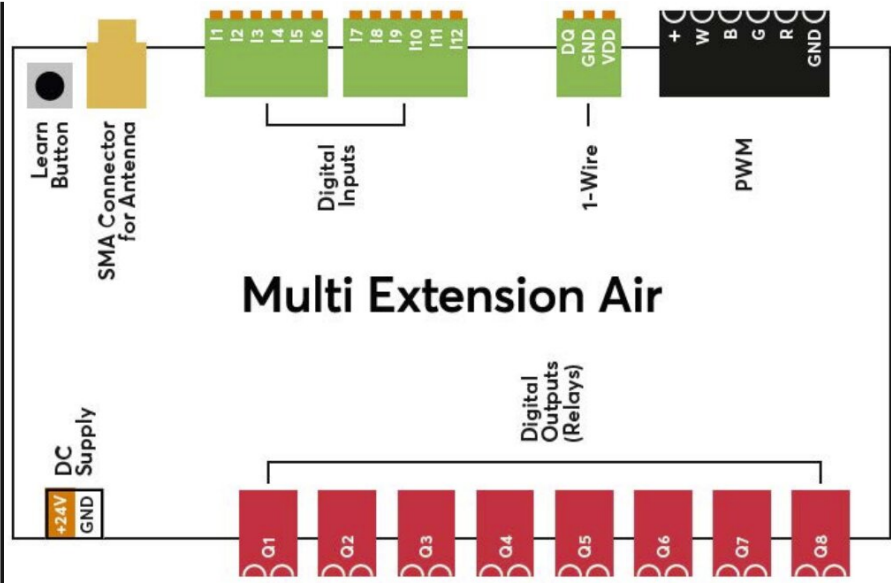
|                    |                               |
|--------------------|-------------------------------|
| Temperature        | -20 ... 55 °C / -4 ... 131 °F |
| Humidity           | max. 95 % RH (non-condensing) |
| Ingress protection | IP20                          |

## Connection Terminals

|                        |                                                                                                     |
|------------------------|-----------------------------------------------------------------------------------------------------|
| Wire cross-section     | 0.05 ... 2.5 mm <sup>2</sup> / AWG 30 ... 12<br>Load > 12 A: min. 2.5 mm <sup>2</sup> / min. AWG 12 |
| Stripping length       | 6 ... 7.5 mm / 0.24 ... 0.30"                                                                       |
| Tightening torque      | 0.5 ... 0.6 N·m / 0.37 ... 0.44 lb·ft                                                               |
| Temperature resistance | min. 80 °C / 176 °F for IEC,<br>min. 75 °C / 167 °F for UL                                          |

Connection Diagram

Connection Diagram



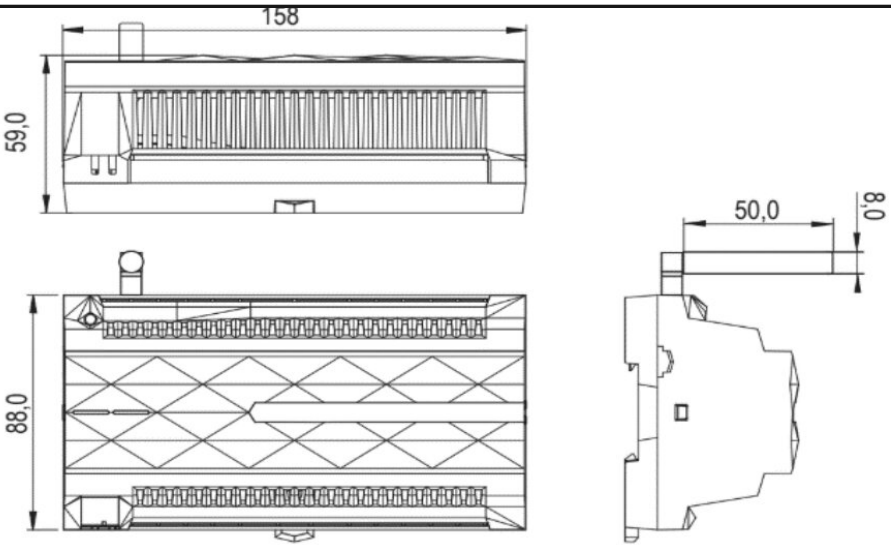
Product Characteristics

|               |                                       |
|---------------|---------------------------------------|
| Mounting type | DIN rail according to EN 50022, 35 mm |
| Colours       | Black: RAL 9005                       |
| Finish        | Matte                                 |

Weight & Dimensions

|                    |                                                    |
|--------------------|----------------------------------------------------|
| Net weight         | 338 g                                              |
| Total weight       | 412 g                                              |
| Product dimensions | 158 x 88 x 59 mm / 6.22 x 3.46 x 2.32" (L x W x H) |

Product dimensions drawing



|           |                                                     |
|-----------|-----------------------------------------------------|
| Pack size | 180 x 110 x 65 mm / 7.08 x 4.33 x 2.56" (L x W x H) |
|-----------|-----------------------------------------------------|

**Certifications & Standards**

|                                          |                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operation                                | Type 1 (EN 60730-1)                                                                                                                                                                                                                                                                                                                     |
| Rated impulse voltage for digital output | 2.5 kV (UL 60730-1, max. altitude 2000 m)                                                                                                                                                                                                                                                                                               |
| Degree of pollution                      | 2                                                                                                                                                                                                                                                                                                                                       |
| Standards                                | UL 60730-1<br>IEC 60730-1                                                                                                                                                                                                                                                                                                               |
| Certifications                           |     |

Installation must be carried out by a qualified electrician in accordance with the relevant regulations.

**Published by**

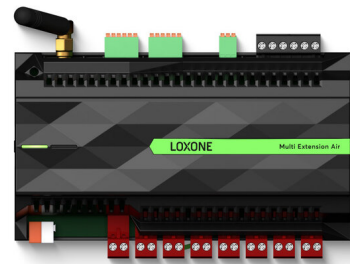
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# Datenblatt

## Multi Extension Air

Part No: 100116



### Über das Produkt

Die LOXONE Multi Extension Air stellt **8 Ausgänge mit potentialfreien bistabilen Relais**, **12 digitale Eingänge**, **eine 1-Wire Schnittstelle** und **4 PWM Ausgänge** zur Verfügung.

#### Features:

- Überall platzierbar und somit die vielseitigste Extension für Nachrüstprojekte
- 12 digitale Eingänge:
  - 0 - 28 VDC
  - als Frequenzzähler verwendbar (max 200Hz)
- Ausgänge:
  - 8x digital: (Relais), bistabil, potentialfrei
  - 4x PWM: 2,1A pro Kanal (12-28VDC)
- 1-Wire Schnittstelle:
  - max. 20 Sensoren, (max. 50mA)

### Elektrische Spezifikationen

|                               |                          |
|-------------------------------|--------------------------|
| Versorgungsspannung           | 18 ... 28 VDC            |
| Leistungsaufnahme             | typ. 0,34 W, max. 1,74 W |
| Verlustleistung bei max. Last | 8,7 W                    |
| Max. Einschaltstrom           | 24 A                     |

### Eingänge

|              |                                                                                                                                                                                                                                                                                                        |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Digital (12) | <p>Logik 0: 0 ... 2,2 VDC</p> <p>Undefiniert: 2,2 ... 3,8 VDC</p> <p>Logik 1: 3,8 ... 28 VDC</p> <p><b>als Frequenzzähler verwendbar:</b></p> <ul style="list-style-type: none"><li>- Max. Frequenz: 200 Hz</li><li>- Min. Impulsbreite: 2,5 ms</li><li>- Genauigkeit: <math>\pm 1</math> Hz</li></ul> |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Ausgänge

Digital (8)

bistabil, potentialfrei:  
max. 250 VAC 16 A at cos = 1 (IEC)  
max. 250 VAC 15 A at cos = 1 (UL)  
max. 30 VDC 5 A  
Gesamtlast max. 48 A

PWM (4)

2,1 A pro Kanal, 12 ... 28 VDC  
PWM Frequenz:  
Beleuchtung: 123 Hz; Kontrollsignal: 26 ... 1627 Hz

## Schnittstellen

LOXONE Air

max. 128 Geräte  
868 MHz (SRD Band Europa), 4 Kanäle, max. 15,1 mW e.r.p.  
915 MHz (ISM Band Region 2), 10 Kanäle, max. 13,2 mW  
SMA-Buchse mit 1,8 dBi Stabantenne

1-Wire

max. 20 Sensoren, max. 50 mA  
oder 1 iButton Schlüsselleser  
max. 100 ... 300 m Kabellänge (abhängig von der  
Verdrahtungstopologie)

## Umgebungsbedingungen

Temperatur

-20 ... 55 °C / -4 ... 131 °F

Luftfeuchtigkeit

max. 95 % r. F. (nicht kondensierend)

Schutzart

IP20

## Anschlussklemmen

Leiterquerschnitt

0,05 ... 2,5 mm<sup>2</sup> / AWG 30 ... 12  
Last > 12 A: min. 2,5 mm<sup>2</sup> / min. AWG 12

Abisolierlänge

6 ... 7,5 mm / 0,24 ... 0,30"

Anzugsdrehmoment

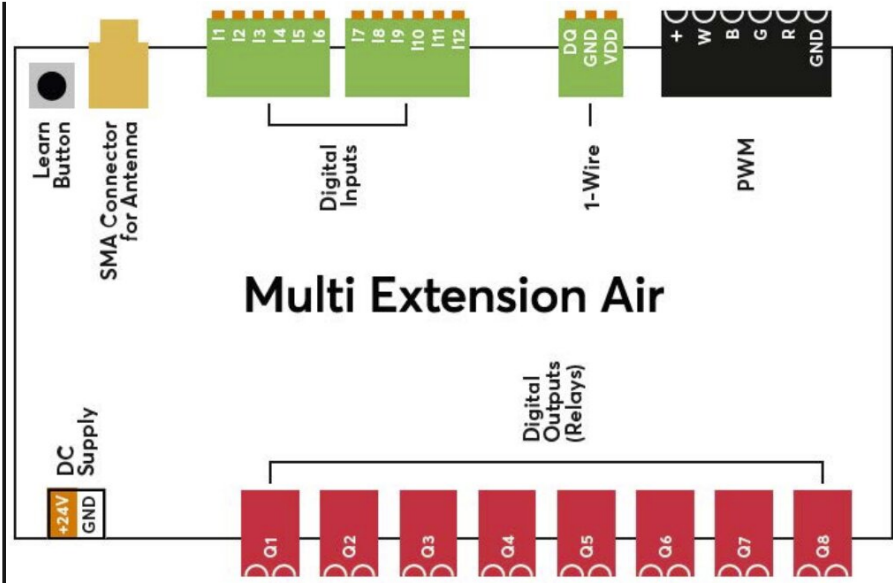
0,5 ... 0,6 N·m / 0,37 ... 0,44 lb·ft

Temperaturbeständigkeit

min. 80 °C / 176 °F für IEC,  
min. 75 °C / 167 °F für UL

Anschlussplan

Anschlussplan



Produkteigenschaften

|            |                                |
|------------|--------------------------------|
| Montageart | Hutschiene nach EN50022, 35 mm |
| Farbe      | Schwarz: RAL 9005              |
| Glanzgrad  | Matt                           |

Gewicht & Abmessungen

|               |                                                    |
|---------------|----------------------------------------------------|
| Nettogewicht  | 338 g                                              |
| Bruttogewicht | 412 g                                              |
| Produktmaße   | 158 x 88 x 59 mm / 6,22 x 3,46 x 2,32" (L x B x H) |

|                     |  |
|---------------------|--|
| Produktmaßzeichnung |  |
|---------------------|--|

|         |                                                     |
|---------|-----------------------------------------------------|
| Packmaß | 180 x 110 x 65 mm / 7,08 x 4,33 x 2,56" (L x B x H) |
|---------|-----------------------------------------------------|

## Zertifizierungen & Standards

|                                           |                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Einsatzgebiet                             | Typ 1 (EN 60730-1)                                                                                                                                                                                                                                                                                                                      |
| Bemessungsspannung der digitalen Ausgänge | 2,5 kV (UL 60730-1, max. Höhe 2000 m)                                                                                                                                                                                                                                                                                                   |
| Verschmutzungsgrad                        | 2                                                                                                                                                                                                                                                                                                                                       |
| Normen                                    | UL 60730-1<br>IEC 60730-1                                                                                                                                                                                                                                                                                                               |
| Zertifizierungen                          |     |

Die Installation muss von einer qualifizierten Elektrofachkraft gemäß den einschlägigen Vorschriften durchgeführt werden.

### Veröffentlicht von

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