

Data sheet:

Digital-I/O Extender Set 2*In / 2*Out Multimode ST



Article no.: 17633

EUR 558.00

*Net price for
commercial users

Reliably transmit switching signals over long distances

The Digital-I/O Extender Set 2x2 transmits up to four digital I/O signals over multi-mode glass fiber cable. The Set consists of two Converters Digital-I/O <-> glass fiber optics and supports two I/O channels in each direction.

Properties

Interfaces:

- **2 x digital output**
 - FET, short-circuit protected, 8..30V / 0.5A
- **2 x digital input**
 - Polarity reversal protected
- **1 x multi-mode fiber optic cable**
 - ST connector

Management and connectivity:

- **Noise-immune transmission of four I/O signals over a distance of up to 3800 meters e.g.:**
 - in extremely noisy industrial environments
 - in areas subject to lightning strikes
 - between two distant buildings
 - in the mountains
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- **Configurable output response when glass-fiber cable is interrupted**

Power supply:

- **External**
 - 12V-24V DC via plug-in screw terminal
 - Galvanically isolated power connection

Standards & more

- **Conforms to standards both in office and industrial environments:**
 - High noise resistance per EN 61000-6-2
 - Low noise emission per EN 55032:2015 + A1 Cl. B, EN 61000-3-2 & EN 61000-3-3
- **5 year guarantee**

♥ Wish for something!
Your suggestions for improvement and additions

Worth knowing

Although digital I/O signals are essentially insensitive to external noise due to their low bandwidth and the large voltage swing, as serial data signals for example the application conditions do still in many cases require transmission procedures which are completely resistant to local noise effects.

Glass fiber optic cables used as the transmission medium meet these requirements in ideal fashion and also offer the advantage of galvanic isolation of up to virtually any value between the connected devices. In installations which are subjected to high risk of lightning strikes, for example in outdoor locations or between distant buildings, such a solution ensures that the connected components will survive even under adverse conditions.

Plastic fibre optics have the advantage of simple to install connections over short distances of up to 100 meters, but at distances up to 3800m the use of glass fiber optics is mandatory. Light signal attenuation is significantly less in glass optical fibers compared with plastic.

Whereas routing and assembling glass fiber optic cables used to be problematic for the user, increasingly wide usage of glass fiber optic technology in networks has caused many companies to offer this service today at reasonable cost.

Technical data

Connections and displays:

Transmitted signals:	4 digital signals (two in each direction)
I/O connection:	Plug-in screw terminal
Digital outputs:	2 x Digital Out 6V-30V, 500mA, short-circuit-protected Configurable response to cable break
Digital inputs:	2 x Digital In, max. input voltage +/-30V protected against reverse connection within this range, Switching threshold $9V \pm 1V$, "On" current = 2.2mA
Glass fiber connection:	ST plug adapter
Signal propagation time:	Input to output: max. 250µs
Fiber-optic medium:	Multi-mode fiber 50/125µm, 62.5/125µm
Wavelength:	820nm
Optical budget:	50/125µm: typically 9.6dB, min. 4.2dB 62.5/125µm: typically 13.4dB, min. 8.0dB
Maximum distance:	50/125µm: typically 3200m, min. 1400m @3dB/km 62.5/125µm: typically 3800m, min. 2200m @3.5dB/km
Galvanic isolation:	Isolation voltage min. 1 kV DC between the I/O terminal and supply voltage
Supply voltage:	12V..24V AC/DC
Current consumption:	typ. 50mA @12V DC
Supply connection:	Plug-in screw terminal, 5.08mm spacing Labeled "L+" and "M"
Displays:	1x LED Data 1x LED Power

Housing and other data:

Housing:	Plastic housing for top hat rail installation 105 x 22 x 75mm (L x W x H)
Enclosure rating:	IP20
Weight:	approx. 200g
Ambient temperature:	Storage: -40..+70°C, Operation: 0..+60°C
Permissible relative humidity:	5..95% RH (non-condensing)
MTBF:	339,383h @25°C per MIL-HDBK-217
Life expectancy:	> 25 years at 25°C ambient temperature
Scope of delivery:	2 Converters Digital-I/O <> glass fiber optics If needed please order power supplies as separate accessories

Accessories

*Net unit price for commercial users

Power supplies

Plug-in power supply, 24V / 500mA DC with Euro plug	11021	21.00€	
Plug-in Power Supply, 24V / 750mA DC with Euro, US and UK plug	11026	38.00€	

Power supply for DIN rail, 24V / 630mA DC (merchandise, 2-year manufacturer's guarantee)	11080	33.00€	
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FO-Accessories

Patch cable ST/ST, 1 meter, 50/125um	81901	16.00€	
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Patch cable ST/ST, 2 meters, 50/125um	81902	21.00€	
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Patch cable ST/ST, 5 meters, 50/125um	81905	26.00€	
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Patch cable ST/ST, 10 meters, 50/125um	81910	37.00€	
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Patch cable ST/ST, 15 meters, 50/125um	81915	42.00€	
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Mechanical Accessories

Mounting bracket for wall mounting	58812	11.20€	
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19" DIN rail	58813	21.00€	
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* Our offering is intended only for commercial users. We will be happy to refer private end customers to trading partners through whom our products can be purchased.



We are available to you in person:

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