



Introduction

passive distribution I/O Box with MINI I/O Typ 1 connector

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Preliminary

***all informations
preliminary***

Executive Summary (PIOB)

Passiv I/O Box

The new IP20 passive Distribution I/O Box is a very small and cost effective DIN Rail mountable device for decentralised sensor / actuator applications. Up to 14 digital and analog I/O's could be connected. With the integrated POWER distribution, it is possible to supply all sensors with 24V DC up to 6A.

In combination with the TE MINI I/O Connectors you will find a very cost effective and easy cabling in a very small form factor.



Markets and Segments

Markets

- Sensor / Actuator Market
- Industrial Automation
- Factory Automation
- Process Automation

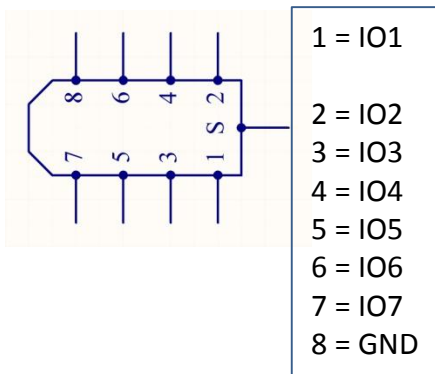


Segments

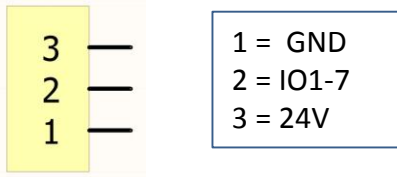
- Sensor / Actuator
- Machinery (gen.)
- Machinery
 - Pulp and Paper
 - Robotics
 - Packaging
 - Textile
 - Print
 - Automotiv

Description (1) general

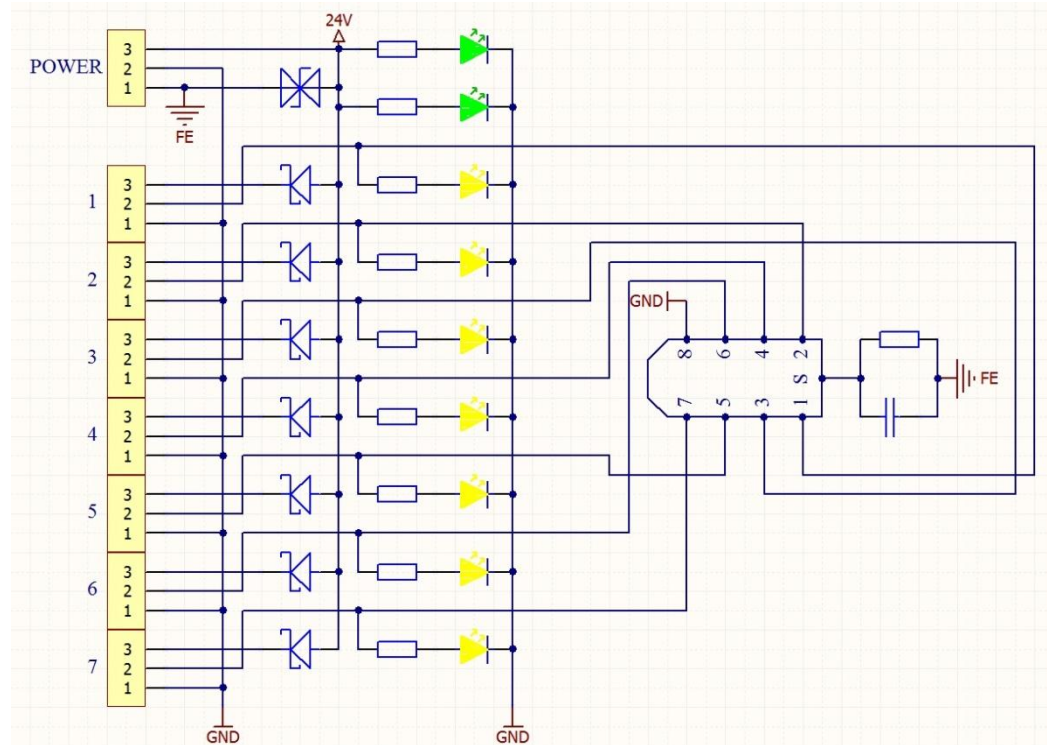
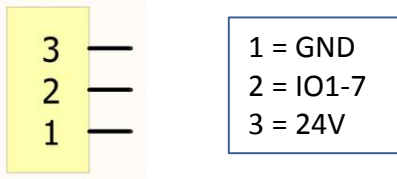
Pin assignment Mini IO



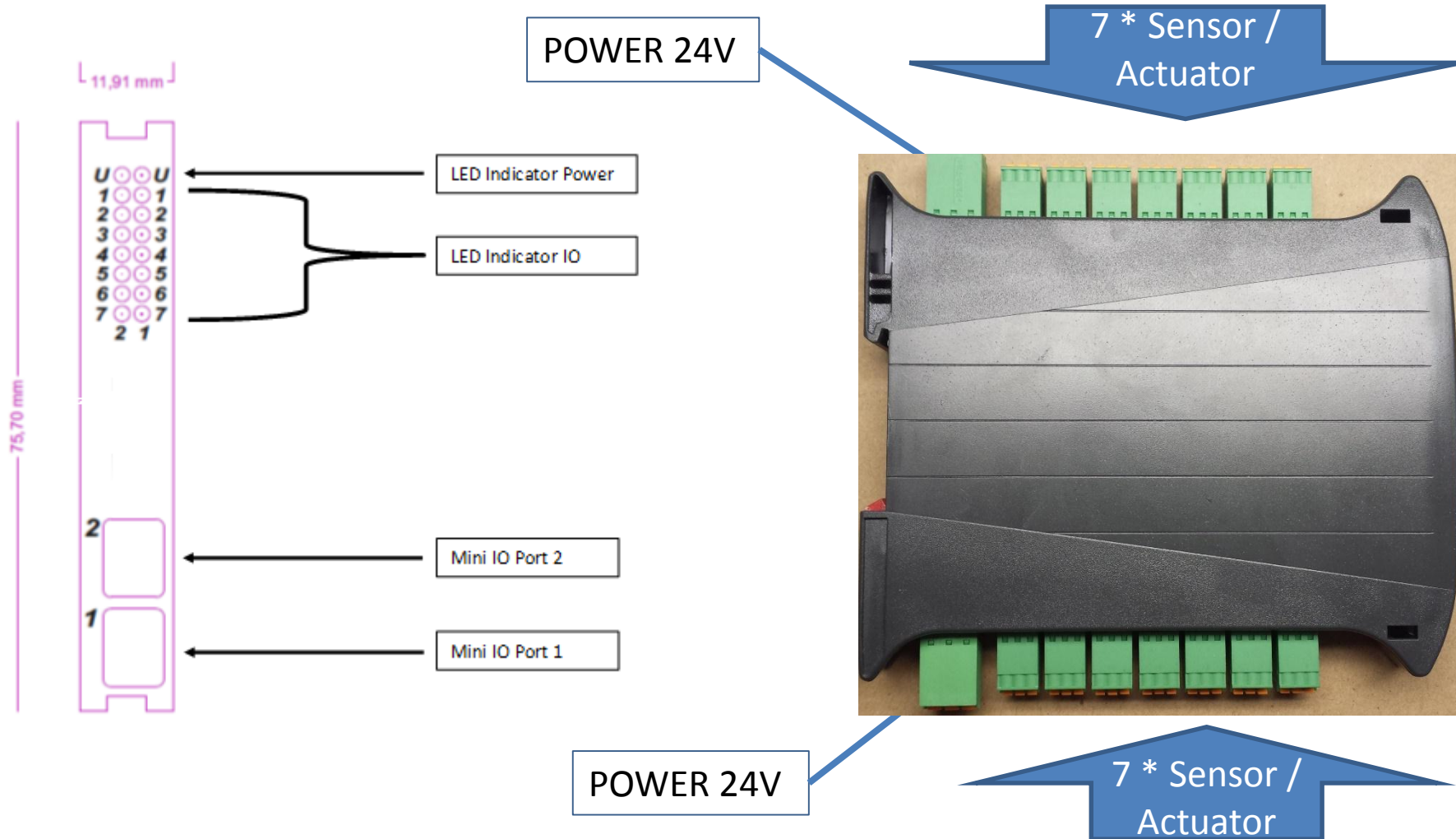
Pin assignment sensor plug



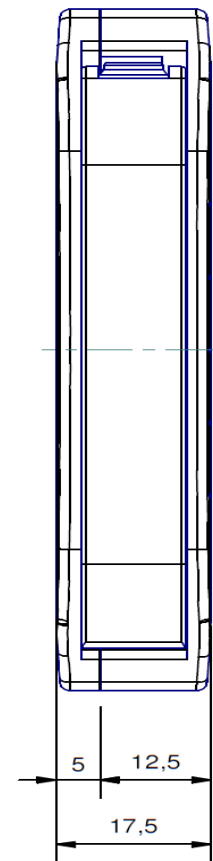
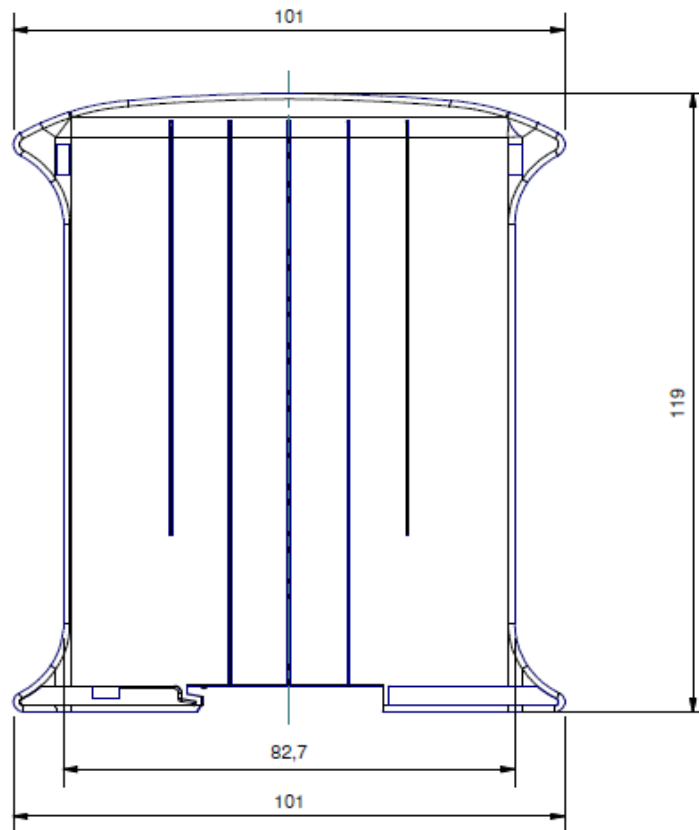
Pin assignment power plug



Description



Device (Housing Dimensions)



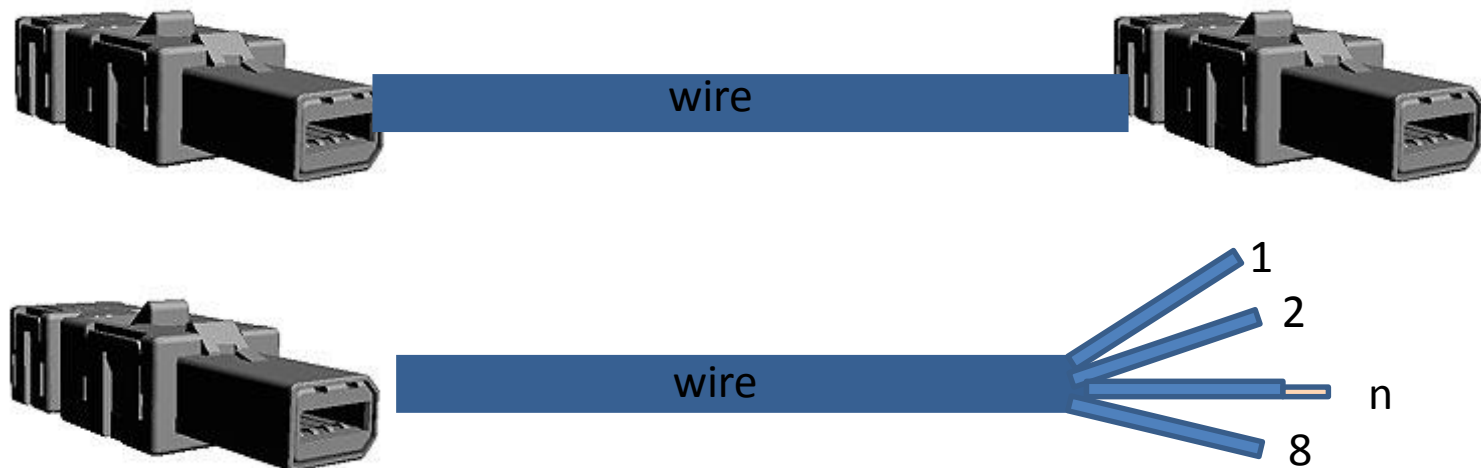
technical details

Rated voltage	24V DC
Max. operating voltage U _{max}	30V DC
Current carrying capacity per I/O signal	6A max
Total rated current	8A max
Number of Slots	14
Housing material	Plastic, flame retardant
Dimensions (BxHxT)	17,5mm x 101mm x 119mm
LED Indicator Power	Green
LED Indicator IO	Green
Galvanic isolation	No
Protection class	IP20
Temperature range (operating)	-45°C ... +85°C

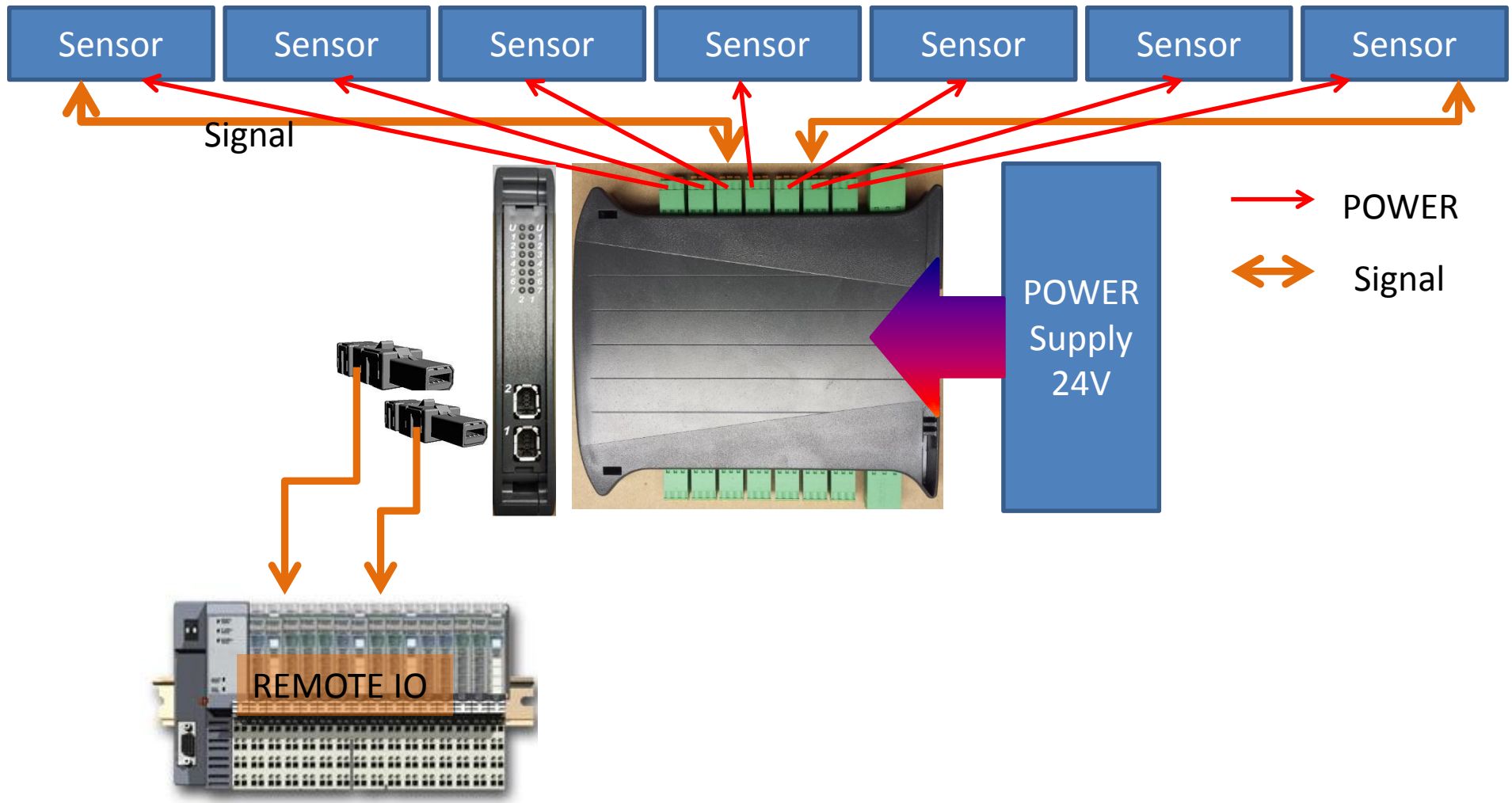
Description (cabeling)



Note: same cable like the ethernet network (CAT5e)

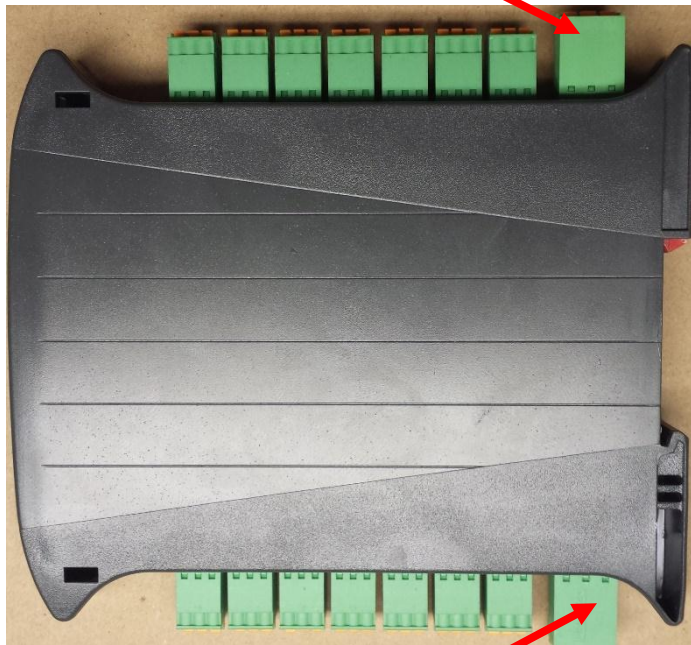


typical application (decentralized)

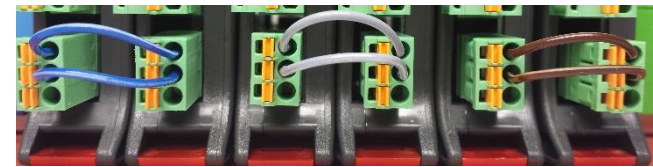
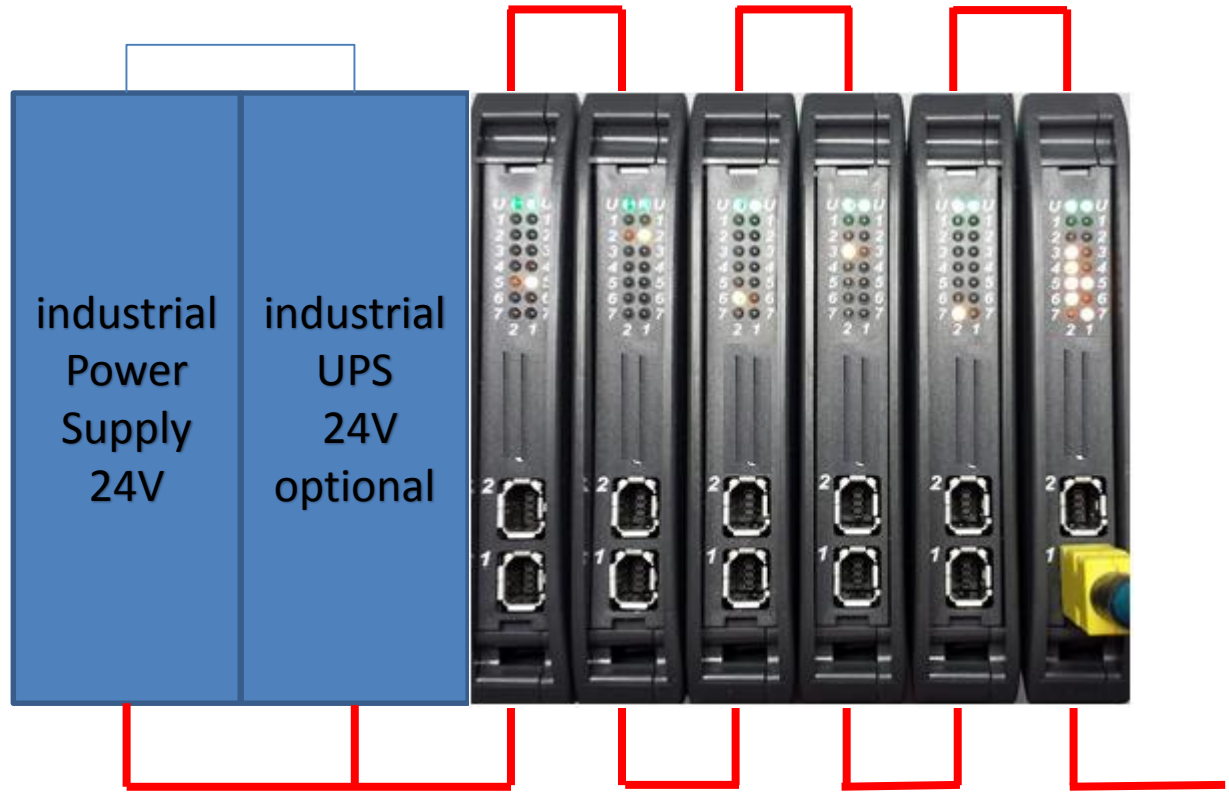


Power 24V (Cascading)

POWER – Input 1



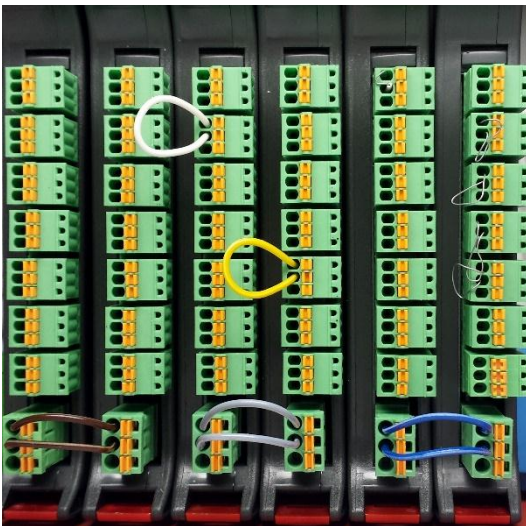
POWER – Input 2



Example



12 MINI I/O and 12 wire in a very small form factor
standard CAT5 cable



If you use (for example) 6 PIOB you distribute up to 84
signals (up to 252 wires)

EMC and other requirements

EMC

EN 61000-4-2 (ESD) 4kV/8kV

EN 61000-4-3 (radiated immunity) 80MHz-2.7GHz

ENV 50204 @AM 10V/average 80MHz - 1GHz

EN 61000-4-4 (burst) ~ 2kV; 2kV; I/O 1kV

EN 61000-4-5 (surge) 0.5kV

EN 61000-4-6 (conducted immunity)

ENV 50204 @10V 150kHz - 80MHz

EN 61000-4-11

EN 55022 (HF E)

conducted emissions 150kHz - 30MHz

radiated emissions 30MHz - 1GHz pp

radiated emissions 30MHz - 1GHz pp/qp



Shock- und Vibration-test

IEC 60068-2-6 sinusoidal vibrations

frequencies: 5-8,4 Hz, amplitude: 3,5 mm

frequencies: 8,4-150 Hz, acceleration: 1 g

IEC 60068-2-27 shock test, half-sinusoidal

shock acceleration: 15 g (operating) 30 g

(non operating)

shock period: 11 ms

IEC60068-2-1 and IEC 60068-2-2

with inspection severity

operating -40°C ... 70°C

non operating -40°C ... 70°C

IEC 60068-2-14 thermal shock

operating 5°C ... 55°C

non operating -40°C ... 70°C

IEC 60068-2-30 damp heat

Thermal Shock EN 61131-2

non Operating -40°C ... 70°C

Additional accessories

- **Modular Plugs and Accessories**
- **INDUSTRIAL MINI I/O PLUG KIT D1**
- **Art.No. 2013595-1**
- ***TE Internal Number: 2013595-1***
- **Industrial Mini Product Line**
- **Connector**
- **Connector Style = Plug - Modular**
- **8 Pins**
- **shielded**



package



Package

- different Frontsize possible (17,5mm to 45 mm)
- space for manual, packlist, Information Leaflet, testreport and marketing material (if it a big manual, than we use a CD)
- space for wire and additional accessories (if needed)
- OEM print possible
- covering box (5pcs) also possible

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