PROFINET IO SLAVE DEVICE

DAT11130PN

FEATURES

- **PROFINET IO slave device**
- **Certified with Test Bundle v2.44 for RT CLASS 1, Conformance Class B, Netload Class III**
- **N.4 Digital Inputs - N.4 SPDT Relays**
- **Integrated web server for the visualization of digital inputs and outputs states**
- **Remotely Programmable**
- **Connection by removable screw-terminals**
- **LED signalling for Link/Act Ethernet, power supply and diagnostic**
- **LED signalling for digital inputs and outputs state**
- **Galvanic isolation on all the ways**
- **CE / UKCA mark**
- **In compliance to EN-50022 DIN rail mounting**

GENERAL DESCRIPTION

The device DAT11130PN is a certified PROFINET IO slave with 4 digital input channels and 4 relay outputs type SPDT.
For the digital inputs are available up to four 32 bit counters with debouncing function active.
The built-in Web Server allows the remote visualization of the digital inputs and outputs state and of the main Ethernet parameters via web browser.
The device realizes a full electrical isolation between the lines, introducing a valid protection against the effects of all ground loops eventually existing in industrial applications.
The LEDs of signalling of Ethernet activity, diagnostic, input, output and power supply allow a direct monitoring of the system functionality.
The connection is made by removable screw-terminals (inputs, outputs and power supply) and RJ45 plug (Ethernet).
The device is housed in a rough self-extinguishing plastic enclosure which, thanks to its thin profile of 22.5 mm only, allows a high density mounting on EN-50022 standard DIN rail.

USER INSTRUCTIONS

Before to install the device, please read the “Installation Instruction” section.
At the power up, the device will automatically be set to the default configuration (see User Guide).
Connect power supply, Ethernet, digital inputs and relay outputs as shown in the “Wiring” section.
The LEDs state depends on the working condition of the device: see the "Light Signalling" section for details. To perform configuration and calibration operations, read the instructions in the User Guide of the device. To simplify handling or replacing of the device, it is possible to remove the wired terminals even with the device powered.

TECHNICAL SPECIFICATIONS (Typical @ 25 °C and in the nominal conditions)

DIGITAL INPUTS (WET CONTACTS)

Channels	4
Input voltage (bipolar)	
OFF state	0 ÷ 3 V
ON state	10 ÷ 30 V
Impedance	4.7 KΩ
Sample time	5 ms
Number of counters	4
Counters register bit-length	32 bit
Counters frequency	up to 300 Hz
Minimum pulse width	1 ms

ETHERNET INTERFACE

In compliance with Ethernet IEEE 802.3

Network interface	Ethernet 100Base-T
Protocol	PROFINET IO
Ethernet ports	2 x RJ45
Max. cable length	100 meters

DIGITAL OUTPUTS

Channels	4
Type	SPDT relay
Max. switching power with resistive load per contact	2 A @ 250 Vac 2 A @ 30 Vdc
Max. voltage:	250 Vac(50/60Hz) 30 Vdc
Dielectric strength between contacts	1000 Vac, 50 Hz, 1 min.
Dielectric strength between coil and contacts	4000 Vac, 50 Hz, 1 min.
Response time(*)	5 ms

(*) Ethernet communication time not included

GENERAL SPECIFICATIONS

Power supply voltage	20 .. 30 Vdc
Reverse polarity protection	40 Vdc max
Current Consumption	200 mA max

ISOLATION (test time : 1 minute)

Power Supply / Ethernet	1500 Vac, 50 Hz
Inputs / Power supply	1500 Vac, 50 Hz
Inputs / Ethernet	1500 Vac, 50 Hz
Input / Output	1500 Vac, 50 Hz

ENVIRONMENTAL CONDITIONS

Operative Temperature	-10°C .. +50°C
Storage Temperature	-40°C .. +85°C
Humidity (not condensed)	5 .. 90 %
Maximum Altitude	2000 m
Installation	Indoor
Category of installation	II
Pollution Degree	2

CONNECTIONS

Ethernet	RJ-45 (on side)
Inputs / Outputs	Screw terminal block
Power Supply	Screw terminal block

MECHANICAL SPECIFICATIONS

Material	Self-extinguish plastic
IP Code	IP20
Wiring	wires with diameter 0.8÷2.1 mm² /AWG 14-18
Tightening Torque	0.5 N m
Mounting	in compliance with DIN rail standard EN-50022
Weight	about 150 g

CERTIFICATIONS

PROFINET IO device

Certificate number	Z13985

EMC (for industrial environments)

Immunity	EN 61000-6-2
Emission	EN 61000-6-4
Electrical Safety	EN 61010-1

UKCA (ref S.I. 2016 N°1091)

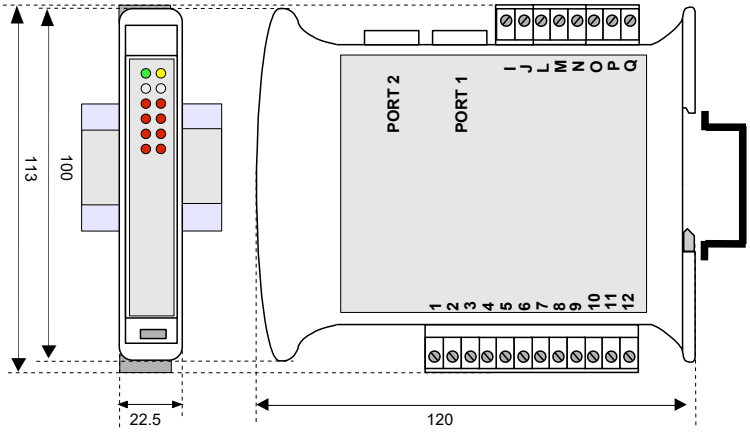
Immunity	BS EN 61000-6-2
Emission	BS EN 61000-6-4

Phone: +1 561 779 5660
E-mail : Info@datexel.com - Web Site www.datexel.com

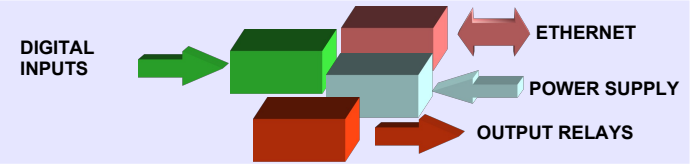
INSTALLATION INSTRUCTIONS

The device is suitable for fitting to DIN rails in vertical position.
For optimum operation and long life follow these instructions:
When the devices are installed side by side it is necessary to separate them by at least 10 mm.
Make sure that sufficient air flow is provided for the device avoiding to place raceways or other objects which could obstruct the ventilation slits. Moreover it is suggested to avoid that devices are mounted above appliances generating heat; their ideal place should be in the lower part of the panel.
Install the device in a place without vibrations.
Moreover it is suggested to avoid routing conductors near power signal cables (motors, induction ovens, inverters, etc...) and to use shielded cable for connecting signals.

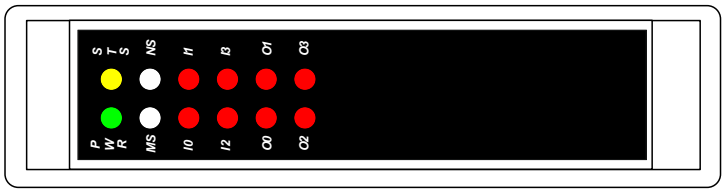
MECHANICAL DIMENSIONS (mm)



ISOLATION STRUCTURE



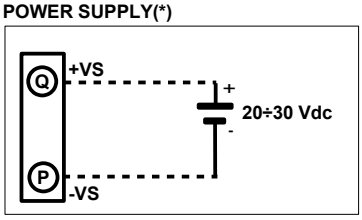
LIGHT SIGNALLING



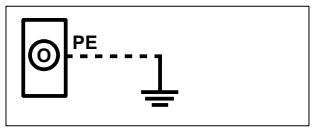
For the function of single LED refer to the User Guide of the device.

WIRING

POWER SUPPLY(*)

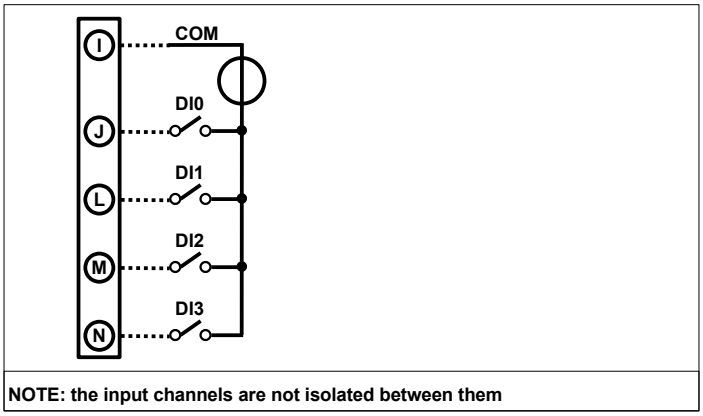


ETHERNET SHIELD



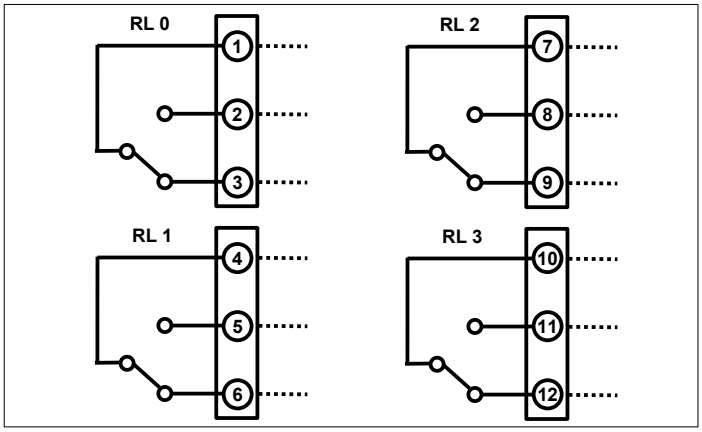
(*) Note: the device must be powered using a power supply unit classified NEC class 2 or SELV and Limited Energy

DIGITAL INPUTS



NOTE: the input channels are not isolated between them

RELAY OUTPUTS



DEFAULT CONFIGURATION

IP ADDRESS: 0.0.0.0
SUB-NET MASK: 0.0.0.0
GATEWAY MASK: 0.0.0.0
Station Name: “”

HOW TO ORDER

“ DAT 11130PN “

The symbol reported on the product indicates that the product itself must not be considered as a domestic waste.
It must be brought to the authorized recycle plant for the recycling of electrical and electronic waste.
For more information contact the proper office in the user's city , the service for the waste treatment or the supplier from which the product has been purchased.

Datexel s.r.l. reserves its right to modify the characteristics of its products totally or in part without warning at any time.