

PROFINET IO SLAVE DEVICE

DAT1188PN

FEATURES

- PROFINET IO slave device
- Certified with Test Bundle v2.44 for RT CLASS 1, Conformance Class B, Netload Class III
- N.8 Digital Inputs - N.8 PNP outputs
- 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 DAT1188PN is a PROFINET IO slave with 8 digital input channels and 8 PNP transistor outputs.

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 state 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 digital 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)		ETHERNET INTERFACE		GENERAL SPECIFICATIONS	
Channels	8	In compliance with Ethernet IEEE 802.3		Power supply voltage	20 .. 30 Vdc
Input voltage (bipolar)		Network interface	Ethernet 100Base-T	Reverse polarity protection	40 Vdc max
OFF state	0 ÷ 3 V	Protocol	PROFINET IO	Current Consumption	120 mA max
ON state	10 ÷ 30 V	Ethernet ports	2 x RJ45	ISOLATION (test time : 1 minute)	
Impedance	4.7 KΩ	Max. cable length	100 meters	Power Supply / Ethernet	1500 Vac, 50 Hz
Sample time	5 ms			Inputs / Power supply	1500 Vac, 50 Hz
		DIGITAL OUTPUTS		Inputs / Ethernet	1500 Vac, 50 Hz
Number of counters	4	Channels	8	Input / Output	1500 Vac, 50 Hz
Counters register bit-length	32 bit	Type	PNP	ENVIRONMENTAL CONDITIONS	
Counters frequency	up to 300 Hz	Voltage	10.5÷30 Vdc	Operative Temperature	-10°C .. +50°C
Minimum pulse width	1 ms	Max Load(**) per single channel	500 mA	Storage Temperature	-40°C .. +85°C
		per module(***)	1 A	Humidity (not condensed)	5 .. 90 %
		Inductive Load	48 Ω – 2H max	Maximum Altitude	2000 m
		Response time(*)	5 ms	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 mm ² /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	Z14005
				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
				(*) Ethernet communication time not included	
				(**) Protection against over current and temperature	
				Short-circuit current 1.7 A	
				(***) Sum of all of the currents flowing in the output channels	

INSTALLATION INSTRUCTIONS

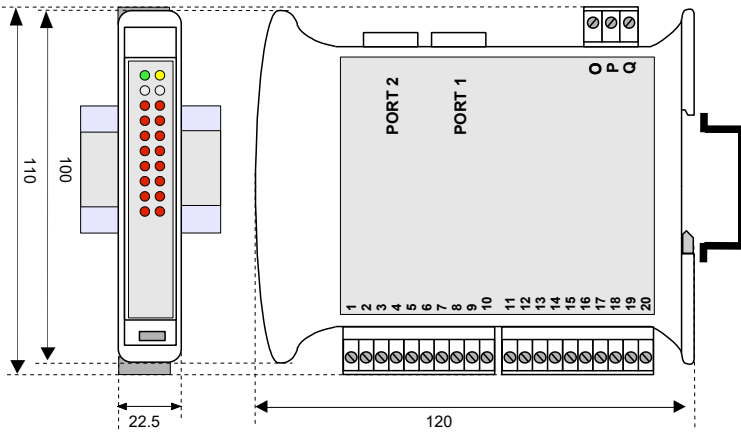
The device is suitable for fitting to DIN rails in vertical position. For optimum operation and long life follow these instructions:

When the devices are installed side by side it is necessary to separate them by at least 10 mm.

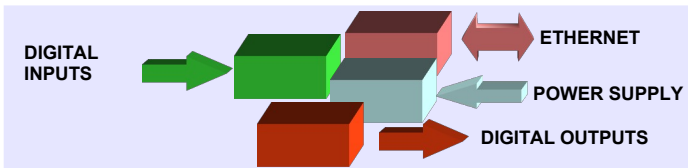
Make sure that sufficient air flow is provided for the device avoiding to place raceways or other objects which could obstruct the ventilation slits. Moreover it is suggested to avoid that devices are mounted above appliances generating heat; their ideal place should be in the lower part of the panel. 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.

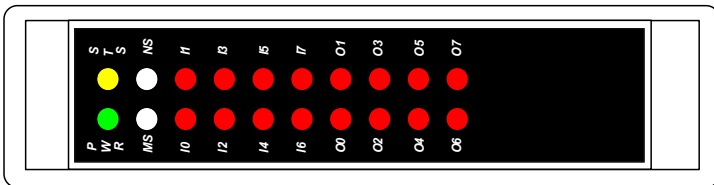
MECHANICAL DIMENSIONS (mm)



ISOLATION STRUCTURE



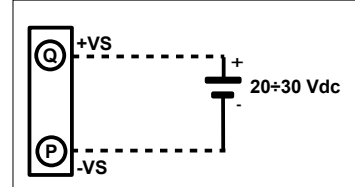
LIGHT SIGNALLING



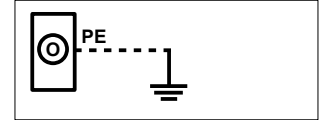
For the function of single LED refer to the User Guide of the device.

WIRING

POWER SUPPLY(*)

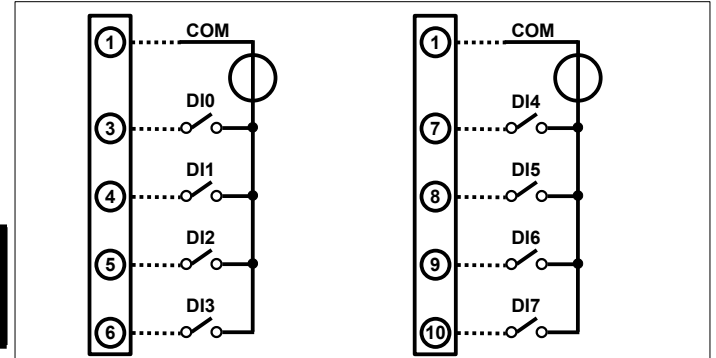


ETHERNET SHIELD



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

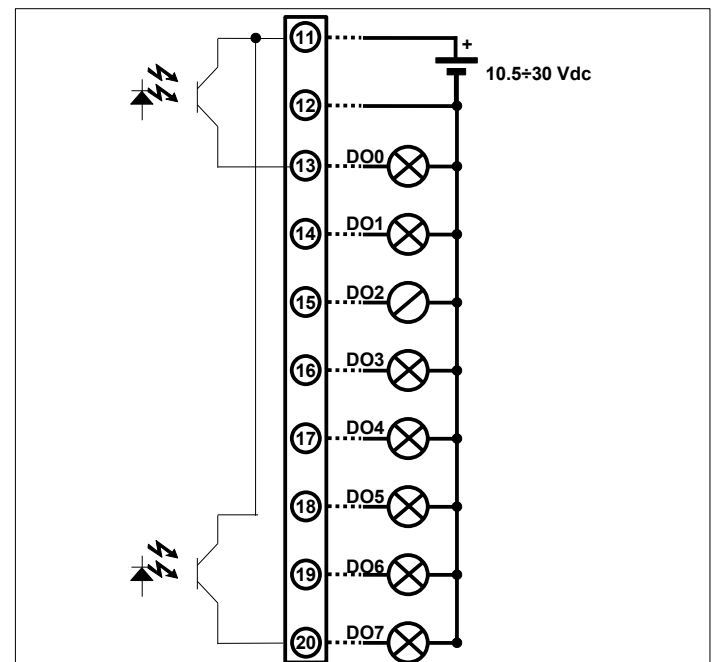
DIGITAL INPUTS



NOTES:

- The input channels are not isolated between them
- Terminals 1 & 2 (COM) internally tied together

DIGITAL OUTPUTS



NOTE: the output channels are not isolated between them

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 11188PN “



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.