



## FEATURES

- Interface Ethernet 10/100 Base-T, Modbus TCP Server
- N.8 Digital inputs
- N.8 PNP outputs
- Built-in Web server to acquire the digital inputs state and drive the digital outputs via web browser
- Remotely programmable
- Connection by removable screw-terminals
- LED signalling for Link/Act Ethernet, power supply
- LED signalling for digital inputs and outputs state
- Galvanic isolation on all the ways
- EMC compliant – CE mark
- In compliance to EN-50022 DIN rail mounting

## GENERAL DESCRIPTION

The device SS8188 is a Modbus TCP server unit with 8 digital input channels and 8 PNP outputs.

For the digital inputs are available up to 4 counters at 32 bit with measure of frequency up to 300 Hz.

The Ethernet interface allows to read and write in real time the value of device's internal registers.

The built-in Web Server of SS8188 allows the remote visualization and acquisition of the digital inputs state, to drive the digital outputs and access to and configure the main Ethernet parameters via web browser.

The device SS8188 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, input and 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.

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

<b>In compliance with Ethernet IEEE 802.3</b>		<b>Digital Inputs</b>		<b>Power supply</b>	
<b>Network interface</b>	Ethernet 10/100Base-T	Channels	8	Current consumption	10 ÷ 30 Vdc 60 mA typ @24 Vdc(standby) 110 mA max @24Vdc 210 mA max
Protocol	Modbus TCP	Input voltage (bipolar)	0 ÷ 3 V	<b>Isolations</b>	
Max. cable length	100 meters	OFF state	10 ÷ 30 V	Power supply / Ethernet	1500 Vac, 50 Hz, 1 min.
		ON state	4.7 KΩ	Inputs / Ethernet	1500 Vac, 50 Hz, 1 min.
		Impedance	5 ms	Inputs / Outputs	1500 Vac, 50 Hz, 1 min.
		Sample time		Inputs / Power supply	1500 Vac, 50 Hz, 1 min.
		Number of counters	4	<b>Temperature &amp; Humidity</b>	
		Counters register bit-length	32 bit	Operative temperature	-10 ÷ +60 °C
		Counters frequency	up to 300 Hz	Storage temperature	-40 ÷ +85 °C
		Minimum pulse width	1 ms	Relative humidity (not cond.)	0 ÷ 90 %
		<b>Digital Outputs</b>		<b>Connections</b>	
		Channels	8	Ethernet	RJ-45 (on terminals side)
		Type	PNP	Inputs / Outputs/ Supply	Removable screw terminals
		Voltage	10.5÷30 Vdc	<b>Housing</b>	
		Max Load(*)	500 mA per channel 1 A per module	Material	Self-extinguishing plastic
		Inductive Load	48 Ω – 2H max	Mounting	DIN rail EN-50022
		(*) Protection against overcurrent and temperature		Dimensions in mm.(WxHxT)	100 x 120 x 22.5
		Short-circuit current 1.7 A		Weight	about 160 gr.
				<b>EMC ( for industrial environments )</b>	
				Immunity	EN 61000-6-2
				Emission	EN 61000-6-4

## INSTALLATION INSTRUCTIONS

The device is suitable for fitting to DIN rails in the vertical position. It is always a good thing to space the devices together 5mm. 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. Install the device in a place without vibrations. It is also suggested to avoid routing conductors near power signal cables and to use shielded cables for connecting signals.

## MODULE CONFIGURATION

To configure the SS8000 series devices, it is necessary to enable the INIT mode. This mode allows you to access the device with the following default parameters :

**IP Address:** 192.168.1.174 (DHCP disabled), or IP provided by DHCP (if enabled)  
**Modbus Address:** 245

To enter the INIT mode follow these steps:

- Turn off the device;
- Connect the INIT terminal to the -V terminal as shown in figure.
- Turn on the device and connect with an internet browser to the device using the default parameters listed above and using the default login credentials:

**Username:** admin  
**Password:** admin

To exit INIT mode follow these steps:

- Turn off the device;
- Remove the INIT connection;
- Turn on the device and connect with the new parameters.

## RESET FUNCTION- "P" BUTTON

If it is necessary to restore the default device parameters, with device powered and not in INIT condition, push the front located "P" button for at least 5 seconds. The green led PWR will switch-off, the yellow led STS will become orange and the reset of the device will occur. When the reset procedure will be finished, both the leds will set back to the default condition and the following parameters will be loaded :

**Ethernet:**  
 - IP Address: 192.168.1.100  
 - Subnet Mask : 255.255.255.0  
 - Gateway Mask: 192.168.1.1

**Username:** admin  
**Password:** admin  
**Modbus Address:** 1

## MAPPATURA REGISTRI MODBUS

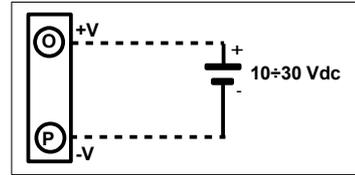
Register Position	Winlog Syntax	Description	Access
40007	3:06	Node ID	R/W
40011	3:10	System Flags	R/W
40012	3:11	Power Up / Safe	R/W
40013	3:12	Watchdog timer	R/W
40031	3:30	Digital Outputs	R/W
40032	3:31	Digital Inputs	RO
40033	3:32	Digital Inputs Rise Latch	R/W
40034	3:33	Digital Inputs Fall Latch	R/W
40035	3:34	Freq. Digital Input 0	RO
40036	3:35	Freq. Digital Input 1	RO
40037	3:36	Freq. Digital Input 2	RO
40038	3:37	Freq. Digital Input 3	RO
40039	35:38	32 bit Counter Digital Input 0	R/W
40041	35:40	32 bit Counter Digital Input 1	R/W
40043	35:42	32 bit Counter Digital Input 2	R/W
40045	35:44	32 bit Counter Digital Input 3	R/W

## LIGHT SIGNALLING

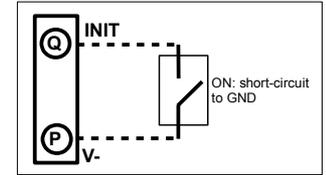
LED	COLOUR	STATE	DESCRIPTION
PWR	GREEN	ON	Device powered
		OFF	Device not powered
		BLINK	Watchdog alarm
STS	YELLOW	OFF	Device in RUN modality
		BLINK	Device in INIT modality
I n	RED	ON	Digital Inputs High Level (1)
		OFF	Digital Inputs Low Level (0)
O n	RED	ON	Digital Outputs High Level (1)
		OFF	Digital Outputs Low Level (0)

## CONNECTIONS

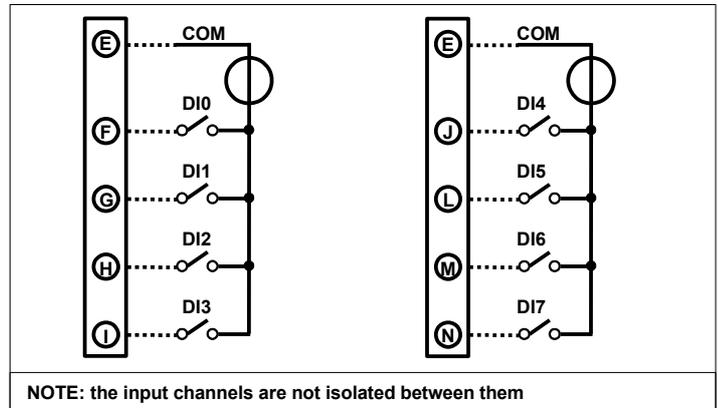
### POWER SUPPLY



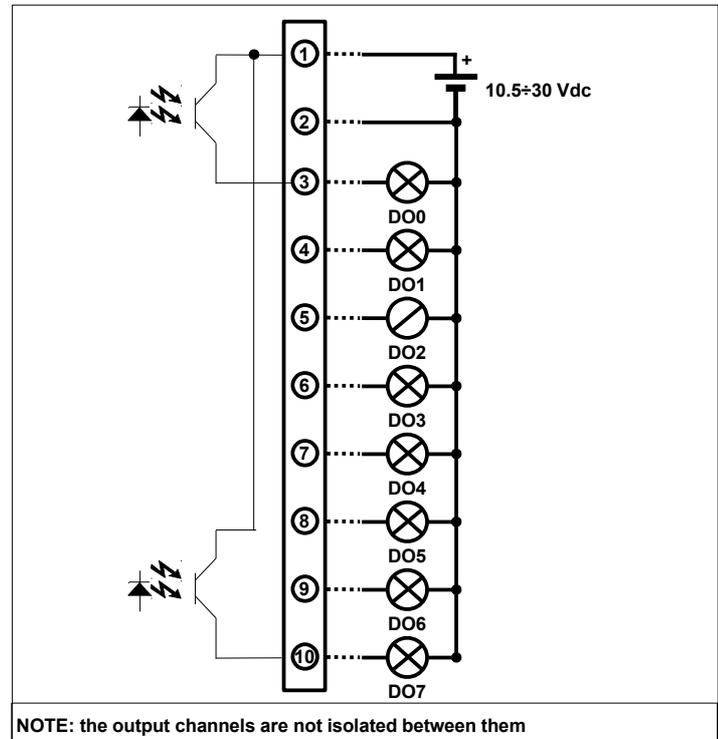
### INIT



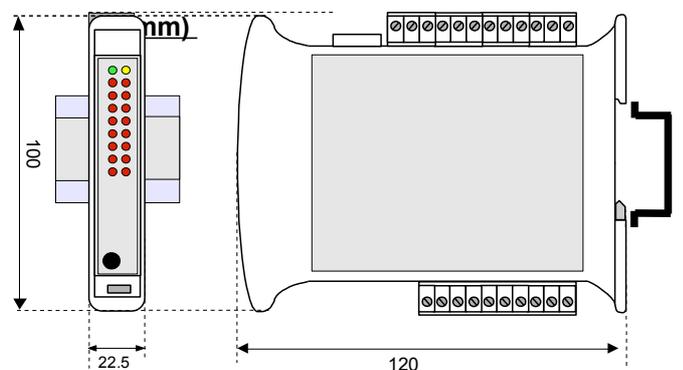
### DIGITAL INPUTS



### DIGITAL OUTPUTS



## MECHANICAL DIMENSIONS



### HOW TO ORDER

“ DAT 8188 “

Note: the device is provided with default configuration as:  
 IP address: 192.168.1.100  
 Modbus address: 1