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Modbus 8 Relay Output

FEATURES

- Modbus Server device on RS-485
- Modbus RTU/ Modbus ASCII protocol
- 8 SPDT relay outputs
- Watch-Dog Alarm
- Remotely Configurable
- 1500 Vac 3-ways Galvanic Isolation
- LEDs of signalling on front side for power supply and communication
- LEDs of signalling on front side for digital inputs and outputs state
- Connection by removable screw terminals
- CE / UKCA mark
- DIN rail mounting in compliance with EN-50022

GENERAL DESCRIPTION

The device DAT3138 is able to drive up to 8 SPDT relay outputs. The data are transmitted with MODBUS RTU / MODBUS ASCII protocol over the RS-485 network.

To ensure the plant safety, a Watch-Dog timer alarm is provided.

The isolation between the parts of circuit removes eventual ground-loop effects, allowing the use of the device even in the heavy environmental conditions.

The device is housed in a rough self-extinguishing plastic enclosure which allows a high density mounting on EN-50022 standard DIN rail.

USER INSTRUCTIONS Before to install the device, please read the "Installation Instruction" section.

It is possible to configure the device via software using the INIT modality.

Connect the terminal INIT to the terminal -V; at the power-on the device will be automatically set in the configuration set-up (refer to the User Guide of the device).

Connect power supply, serial bus 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 to verify the device working state.

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 OUTPUTS		SERIAL OUTPUT		GENERAL SPECIFICATIONS	
Number of Channels	8	Data Transmission (asynchronous serial RS-48 Baud Rate	35) 115.2 Kbps	Power supply voltage Reverse polarity protectio Max. Current consumpti	20 30 Vdc n 60 Vdc max on 120 mA
гуре	N 8 relays SPD1	Max. distance	1.2 Km – 4000 ft		
Maximum Switching Power Resistive load - per contact	t _2 A @ 250 Vac			Between all ways	1500 Vac, 50 Hz, 1 min
	2 A @ 30 Vdc			ENVIRONMENTAL CONI	-20°C +60°C
Max. voltage	250Vac (50 / 60 Hz) 30Vdc			Storage temperature Humidity (not condensing) Maximum Altitude	-40°C +85°C) 0 90 % 2000 m slm
Dielectric strength between	1 contacts 1000 Vac, 50 Hz, 1 min.			Installation Category of Installation Pollution Degree	Indoor II 2
Dielectric strength between	a coil and contacts 4000 Vac, 50 Hz, 1 min.			MECHANICAL SPECIFIC Material IP Code Wiring Tightening Torque Mounting Weight	ATIONS Self-extinguish plastic IP20 wires with diameter 0.8÷2.1 mm ² AWG 14-18 0.5 N m in compliance with DIN rail standard EN-50022 about 210 g.
				CERTIFICATIONS EMC (for the Industrial Immunity Emission UKCA (ref S.I. 2016 N°10 Immunity Emission	Environments) EN 61000-6-2 EN 61000-6-4 191) BS EN 61000-6-2 BS EN 61000-6-4



DAT 3138

INSTALLATION INSTRUCTIONS

The device is suitable to be mounted on DIN rail, in vertical position. For an optimum operation and long life follow these instructions.

When the devices are installed side by side it may be necessary to separate them by at least 5 mm If panel temperature exceeds 45°C and power supply voltage 20 Vdc. 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.

CABLING SCHIELD v-POWER SUPPLY D+ \rightarrow V D-DITAL OUTPUTS 8 ÷ 15 RS-485 INIT ବତାତା ବାର୍ଚ୍ଚ ବାର୍ଚ୍ଚ ବାର୍ଚ୍ଚ ବାର୍ଚ୍ଚ 0020049 0000000000000000 DIGITAL OUTPUTS 0 ÷ 7

LIGHT SIGNALLING

LED	COLOR	STATE	DESCRIPTION	
PWR GREEN		ON	Device powered	
		OFF	Device not powered	
		BLINK	~1 sec Watch-Dog alarm condition occurred	
STS	YELLOW	BLINK	~1 sec INIT condition	
		ON	Short-Circuit alarm condition occurred	
Rx	RED	BLINK	Stream of data over receiving line of RS-485	
		OFF	No data over receiving line of RS-485	
Тх	RED	BLINK	Stream of data over transmission line of RS-485	
		OFF	No data over transmission line of RS-485	
DOn	RED	ON	Digital output ON state	
0011	ILD .	OFF	Digital output OFF state	

ISOLATION STRUCTURE



WIRING



(*) Note: the device must be powered using a power supply unit classified NEC class 2 or SELV with limited energy

DIGITAL OUTPUTS



ORDER CODE: DAT 3138