



FEATURES

- ✓ 12/24Vdc or 12/18Vac power supply
- ✓ 4 multi-mode inputs: either to be used as digital or as 0÷10V or 0÷20mA analog signals
- ✓ 2 digital inputs for potential-free contacts
- ✓ 1 analog output 0÷10V controlled by PWM signal
- ✓ redundancy of common terminals for simplified wiring
- ✓ 6 power relay outputs rated for 12A at 250V, which can tolerate large peak currents (inrush current) up to 80A
- ✓ output relays with bistable coil, to minimize the current consumption
- ✓ built in slot for the installation of an Ethernet boards, leaving the USB or Ethernet connector accessible
- ✓ 1 terminal block with asynchronous communication port (TX / RX) at TTL level removable terminal blocks for easier installation
- ✓ inputs protected against electrostatic discharges and temporary over voltages
- ✓ doubled internal insulation between high voltage areas (relay outputs) and all other components
- ✓ compliance with Electromagnetic Compatibility and Electrical Safety standard
- ✓ standard modular housing 9 units size, suitable for mounting on Omega rail.

SPECIFICATIONS

Power supply	12/24V \equiv nom. (11...30V \equiv) 12/18V \sim nom. (10.8...21.0V \sim)
Current consumption at VS+=12V \equiv and unconnected inputs	8mA w/o microcontroller 32mA with microcontroller UNO 92mA with Ethernet
Current consumption at VS+=12V \equiv and digital inputs closed to C+	26mA w/o microcontroller 51mA with microcontroller UNO 111mA with Ethernet
Current consumption at VS+=24V \equiv and unconnected inputs	7mA w/o microcontroller 20mA with microcontroller UNO 49mA with Ethernet
Current consumption at VS+=24V \equiv and digital inputs closed to C+	42mA w/o microcontroller 56mA with microcontroller UNO 85mA with Ethernet
Platform compatibility	MT-Uno Ethernet
Inputs	4 multi-mode (digital or analog 0...10V or 4...20mA) 2 digital
Voltage range at digital inputs (1-6)	9...40V \equiv
Current for each digital input (1-6)	2,7mA at VS+=12V \equiv 5,5mA at VS+=24V \equiv
Voltage threshold digital inputs 1-4 (typ.)	V _{IH} : 7.3V V _{IL} : 6.2V
Voltage threshold digital inputs 5-6 (typ.)	V _{IH} : 5.1V V _{IL} : 4.5V
Impedance for analog 0...10V inputs (1,4)	94 k Ω
Impedance for analog 0...20mA inputs (1-4)	250 Ω
Conversion error for analog 0...10V inputs (1-4)	2% of full scale
Conversion error for analog 0...20mA inputs (1-4)	2% of full scale
Max cable length for digital inputs (1-6)	30 meters
Max cable length for analog inputs (1-4)	15 meters
Digital outputs	6 power relays with bistable coil
MAX output contact rating (each output)	Resistive load ($\cos \phi = 1$): 12A at 250V \sim (3000VA) Inductive load ($\cos \phi = 0.5$): 3.6A at 250V \sim (900VA) Incandescent lamps: 8A at 250V \sim (2000VA) Fluorescent lamps: 350W with 42 μ F MAX p.f. correction capacitor Resistive load (DC): 12A at 24Vdc / 1A at 60Vdc
Analog output	0...10V max 10 mA source/sink current
Suggested minimum PWM frequency for analog output	120 Hz
Duty cycle to voltage error for analog output	2% of full scale
Communication ports	USB Ethernet Async serial port at TTL level on terminal block
Housing	standard 9M for DIN rail
Operating temperature	0...+50 $^{\circ}$ C
Storage temperature	-20...+70 $^{\circ}$ C
Protection degree	IP20

Installation and use restrictions



(Applicable in the European Union and other European countries with separate collection systems). This marking on the product, accessories or literature indicates that the product should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Standards and regulations

The design and the setting up of electrical systems must be performed according to the relevant standards, guidelines, specifications and regulations of the relevant country. The installation, configuration and programming of the devices must be carried out by trained personnel. The installation and wiring of connected devices must be performed according to the recommendations of the manufacturers (reported on the specific data sheet of the product) and according to the applicable standards. All the relevant safety regulations, e.g. accident prevention regulations, law on technical work equipment, must also be observed.

Safety instructions

Protect the unit against moisture, dirt and any kind of damage during transport, storage and operation. Do not operate the unit outside the specified technical data. Never open the housing. If not otherwise specified, install in closed housing (e.g. distribution cabinet). Earth the unit at the terminals provided, if existing, for this purpose. Do not obstruct cooling of the units. Keep out of the reach of children.

Standards

- ✓ 2014/35/UE (Low Voltage), 2014/30/UE (EMC)
- ✓ EN61000-6-2:2005 (EMC Immunity), EN60664-1:2007 (Electrical safety), EN61000-6-3:2007 (Emission)
- ✓ 2011/65/UE (RoHS).