

GENERAL

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|------------------------|---|
| Standard | EN61010-1 EN61010-2-201 EN61131-2 |
| Dimensions (W × H × D) | 36x90x60mm |
| Weight | 145g |
| Mounting | Top hat rail EN50022, 35mm |

ENVIRONMENTAL CONDITIONS

| | |
|------------------------------------|--|
| Operating ambient temperature | 0°C – 55°C |
| Relative humidity – non-condensing | 80 % for temp. up to 31 °C, decreasing linearly to 50 % relative humidity at 55 °C |
| Pollution Degree | PD2 |
| Altitude | up to 2000m AMSL |
| Vibration (5 ≤ f ≤ 9 Hz) | 1,75 mm amplitude sinus 3,5 mm amplitude random |
| Vibration (9 ≤ f ≤ 150 Hz) | 0,5 g acceleration sinus 1,0 g acceleration random |
| Transport and Storage | -20°C – +70°C 10 to 90% no condensation Altitude 3000m AMSL |
| Shock response | 15g, 11ms half sinus all 3 axes |

I/O

| | |
|--|---|
| Supply voltage | 12V or 24V |
| USB (Power for programming only) | USB-B, 2.0 |
| Inputs, no galvanic insulation | 8 |
| Common analog/digital | 4 |
| Fixed digital | 2 |
| Fixed analog | 2 |
| Digital Outputs, no galvanic insulation | 8 |
| Relay Outputs (parallel to Digital, galvanic ins.) | 6 |
| PIN Header, no Galvanic insulation | |
| Logic level I/Os | 22, partially parallel to terminal I/Os |
| Analog 0-5V Inputs | 5 |
| Communication | SPI (switchable), UART, Reset |
| Internal Power | +3,3V, +5V, GND |

TERMINAL CAPACITIES

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|------------------------------|-------------------------------|
| Relay Output, Power Input | 2,5mm ² (24-12AWG) |
| Strip length | 6-7mm |
| Max. tightening torque | 0,5Nm |
| Digital, Analog Input Output | 1,5mm ² (30-16AWG) |
| Strip length | 5-6mm |
| Max. tightening torque | 0,2Nm |
| Pin header connector | 26 Pin, Dual row, 2.54 pitch |

PROTECTION

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|--------------------------------------|--|
| ESD HBM Class 0 | Contact discharge: ±4kV Air discharge: ±8kV |
| Supply input over current protection | Internal Fuse 8A |
| Relay Output | External Fuse required |
| Digital Output | Overload, short circuit, ESD |
| Signal Input | Overvoltage, ESD |
| Pin header connector | ESD |
| Current +5V, +3,3V | total 200mA, resettable fuse |

ELECTRICAL CHARACTERISTICS

| | Condition | Value |
|---------------------------------------|-----------------|-----------------------|
| Supply voltage | 12V range | 10,2V – 15,0V |
| | 24V range | 20,4V – 30,0V |
| Signal input low level | 12V range | 0V – 3,6V |
| | 24V range | 0V – 7,2V |
| Signal input high level | 12V range | 9V – 13,2V |
| | 24V range | 18V – 26,4V |
| Analog signal input | 12V range | 0 – 13,2V |
| | 24V range | 0 – 26,4V |
| Signal input current | max. current | < 3mA |
| Logic "0" level | @ pin header | 0V – 1,5V |
| Logic "1" level | @ pin header | 3V – 5,5V |
| Signal output low level | 12V range | 0V – 2,4V |
| | 24V range | 0V – 4,8V |
| Signal output high level | | V _{in} – 10% |
| Signal output – PWM functionality | Duty cycle | 5% - 95% |
| Relay output, Contact rating | Resistive | 6A 250V AC / |
| | Load | 30V DC |
| Common Relay terminal | max. current | 6A |
| Galvanic insulation | coil to contact | 3000VAC 1min |
| Relay ON in case of PWM functionality | Duty cycle | > 30% |

LED SIGNALIZATION

| | | |
|--------------------------------------|--|------------------------|
| Power LEDs coding | only USB powered | Color of power LED |
| | input voltage out of range | 12V green, 24V green |
| | input voltage 10.2V – 15,0V | 12V orange, 24V orange |
| | input voltage 20.4V – 30,0V | 12V green, 24V orange |
| | input voltage < 7V | 12V orange, 24V green |
| Device in reset state | both LEDs off | |
| Device in run state | Reset LED yellow | |
| Signal input at high (logic 1) level | Reset LED off | |
| Signal input at low (logic 0) level | Corresponding LED green | |
| Signal input in use as analog input | Corresponding LED off | |
| | Corresponding LED green on when input level reach high (logic 1) state | |
| Signal/Relay output set to active | Corresponding LED green | |
| Signal/Relay output set to inactive | Corresponding LED off | |

PHYSICAL DIMENSIONS

