GENERAL	
Standard	EN61010-1 EN61010-2-201 EN61131-2
Dimensions (W × H × D)	72x90x62mm
Weight	250g
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
Ethernet	RJ45, 10/100Mbps
RS485 (no termination inside)	250kb
Inputs, no galvanic insulation	12
Common analog/digital	10
Fixed digital, ext. Interrupt usable	2
Digital Outputs, no galvanic insulation	12
Relay Outputs, galvanic insulation	10
PIN Header, no galvanic insulation	
Logic level I/Os	42, partially parallel to terminal I/Os
Analog 0-5V Inputs	14
Communication	SPI, 2xUART, I2C, Reset
Internal Power	+3,3V, +5V, ARef, GND
TERMINAL CAPACITIES	
Relay Output, Power Input	2,5mm² (24-12AWG)
Strip length	6-7mm
Max. tightening torque	0,5Nm
Digital, Analog Input Output	1,5mm² (30-16AWG)
Strip length	5-6mm
Max. tightening torque	0,2Nm
Pin header connector	2x 26 Pin, Dual row, 2.54 pitch
PROTECTION	
ESD HBM Class 0	Contact discharge: ±4kV Air discharge: ±8kV
Supply input over current protection	Internal Fuse 20A
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		Vin – 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	Color of power LED	
only USB powered	12V green, 24V green	
input voltage out of range	12V orange, 24V orange	
input voltage 10.2V – 15,0V	12V green, 24V orange	
input voltage 20.4V – 30,0V	12V orange, 24V green	
input voltage < 7V	both LEDs off	
Device in reset state	Reset LED yellow	
Device in run state	Reset LED off	
Signal input at high (logic 1) level	Corresponding LED green	
Signal input at low (logic 0) level	Corresponding LED off	
Signal input in use as analog input	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