Contactor *RTA421*

Contactor with loop power supply for monitoring current or voltage signals





















Application areas

- Plant and machine construction
- Panel builders
- Process monitoring
- Process control

Features and benefits

- 2 relays for set point monitoring (with changeover contacts)
- Loop power supply for connected sensors
- LC display for alarm set points and bargraph
- Compact housing
- Front end setting up using 3 push buttons





Application

The RTA421 contactor monitors industrial processes for safe operation. The unit analyses current (0/4...20 mA) and voltage signals (0/2...10 V) and switches two independent output relays if the values either exceed or undercut the preset alarm set points. Applications include pump control in the waste water industry, level measurement in silos can be economically achieved.



Both set points are simultaneously visible in the newly developed display. The ten segment bargraph additionally displays the percentage value of the connected signal. The actual

The unit is fitted with a quick set up menu so that if the set points are to be frequently changed this feature can be started by operating the "+" and "E" push buttons. This means that the set points SP1 and percentage measured value in the measurement circuit can be displayed by operating either the "+" or "-" push button.

SP2 can be easily changed even during operation without opening the setting up menu. If required a 2 digit security code is available in order to stop any changes being made to the alarm set points.



Quick Set up

Application (schematic)



in mm (inches)

0

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Technical data	Manufacturer	Endress+Hauser
	Description	RTA421
General information	Unit function	Alarm set point switch with loop power supply. Used for monitoring either current or voltage signals
Application area	Contactor	The unit monitors the input signal and checks if it is within the preset alarm set points. The two built-in relays switch if the signal wanders either above or below the preset alarm set point values. A built-in loop power supply can be used to power connected sensors.
Function and system construction	Measurement principle	The analog signal connected to the input is digitalised, analysed and shown in the display. When the preset alarm set point is reached one of the two relays is, independently switched.
	Measurement system	Micro-controlled measurement system with LC display, analog input, alarm set points and loop power supply.
Input	Number of inputs	1
	Туре	Voltage and current
	Measurement range	Voltage: 0/210 V, max. voltage 50 V Ri: 1 MOhm
		Current: 0/420 mA; max. current 150 mA Ri: 5 Ohm
	Resolution	Voltage: 41 mV, 8 Bit
		Current: 83 µA, 8 Bit
	Over range	10 %
Output (Loop power supply)	Output signal signal	Terminals 81: 24 V +/- 20 %, 30 mA
	Galvan isolation	I Between nower supply and relay outputs
	Cignal signal	Disary, quitabas when clarm act point is reached
Output (Relays)	Number of outputs	2
	Contact type	2 1 potential free changeover contact per relay
	Contact load	≤ 250 V AC. 8(2) A / 30 V DC. 5(2) A
Accuracy	Voltage	Accuracy: 0.5 % FSD Temperature drift: 0.02 % / K ambient temperature
	Current	Accuracy: 0.5 % FSD Temperature drift: 0,02 % / K ambient temperature
Application conditions	Installation conditi	ons
	Installation angle	No limitation
	Ambient conditions	
	Ambient temperature	- 20 °C+ 70 °C (-4 °F+158 °F)
	Storage temperature	- 20 °C+ 70 °C (-40 °F+158 °F)
	Climatic classification	To IEC 60654-1 Class B3
	Electrical safety	To IEC 61010-1: Environment < 2000 m (6562 ft) height above MSL
	Ingress protection	IP 20
	EMC / immunity	
	Norm	To IEC 61326, Class A (Industrial conditions)
	Safety	
	Norm	To IEC 61010-1
	NOITI	Installation area excessive current system ≤ 10 A
Mechanical construction	Construction	Housing for top hat DIN rail mounting to IEC 60715 TH 35
	Dimensions	H: 110 mm (4.33 in), W: 45 mm (1.77 in), D: 112 mm (4.41 in)
	Weight	ca. 150 g (5.29 oz)
	Materials	Housing: Plastic PC/ABS, UL 94V0
	Electrical connection	Keyed, plug on screw terminals, core sizes flexible to 2,5 mm ² (13 AWG)

Display and operating system Operation, 1 x green (2.0 mm / 0.078 in) LED: Fault condition, 1 x red (2.0 mm / 0.078 in) Alarm set point, 2 x yellow (2.0 mm / 0.078 in) Display LC display: Numeric display: 4 x 7 segment (6 mm / 0.24 in) Alarm set point condition:2 x channel number, 4 x 1 segment Bargraph: 10 x 1 segment 2 x 0 to 99 % Display range Operation 3 push button operation (-/+/E) Mode Minimum, maximum Alarm set point function Switch threshold 00 to 99 % Hysteresis 00 to 99 % 00 to 99 s Time delay Reaction time 0.4 s Power supply 196...250 VAC, 50/60 Hz 98...126 VAC, 50/60 Hz Power supply 20...250 V DC/AC, 50/60 Hz Power consumption Max. 9 VA 315 mA, slow blow Fuse Input current limit I_{max} / In < 15 Certification CE mark Guide lines 89/336/EWG and 73/23/EWG GL Marine approval / Germanische Lloyd UL UL recognized component to UL 3111-1 How to order Order structure See "How to order"

Technical alterations reserved!

How to order

Contactor RTA421

Contactor MTA421		
Certification A Version of non-Ex area		
Power supply 1 196250 V AC, 50/60 Hz 2 98126 V AC, 50/60 Hz 3 20250 V DC/AC, 50/60 Hz Loop power supply 1 1 Loop power supply not required 2 With loop power supply		
Model A Standard B Works calibration certificate J Japan version, standard		
TA421- ←Order code		

Further documentation

Operating instructions BA101R/09/

Accessories

IP66 protective housing for field mounting (Ordercode: **51002468**)

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