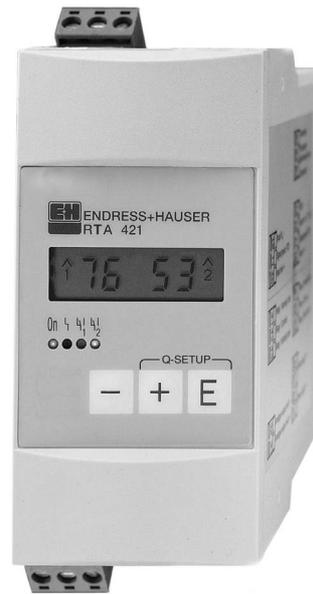


Contactor RTA421

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



Endress + Hauser

The Power of Know How

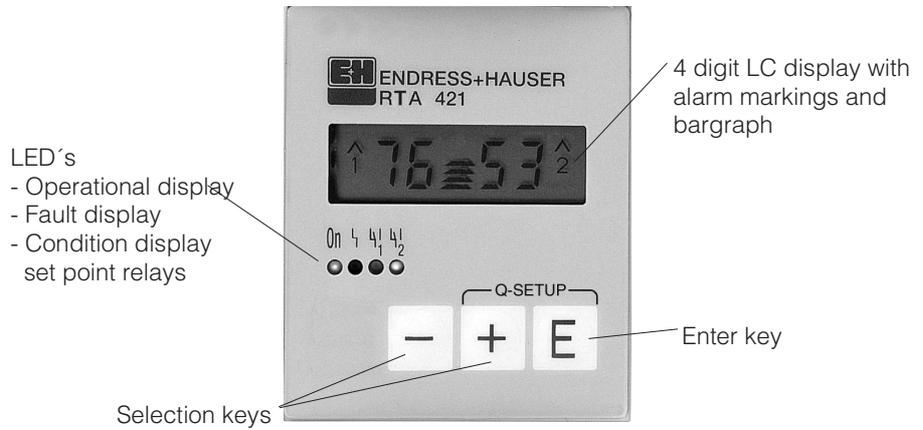


Application

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.

Display/operating elements



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

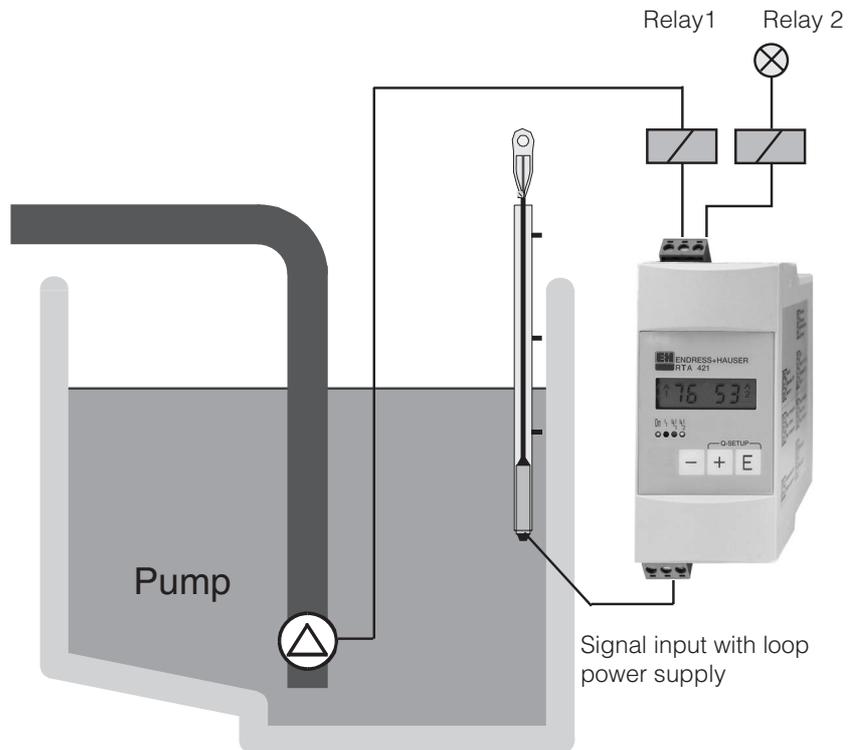
percentage measured value in the measurement circuit can be displayed by operating either the "+" or "-" push button.

Quick Set up

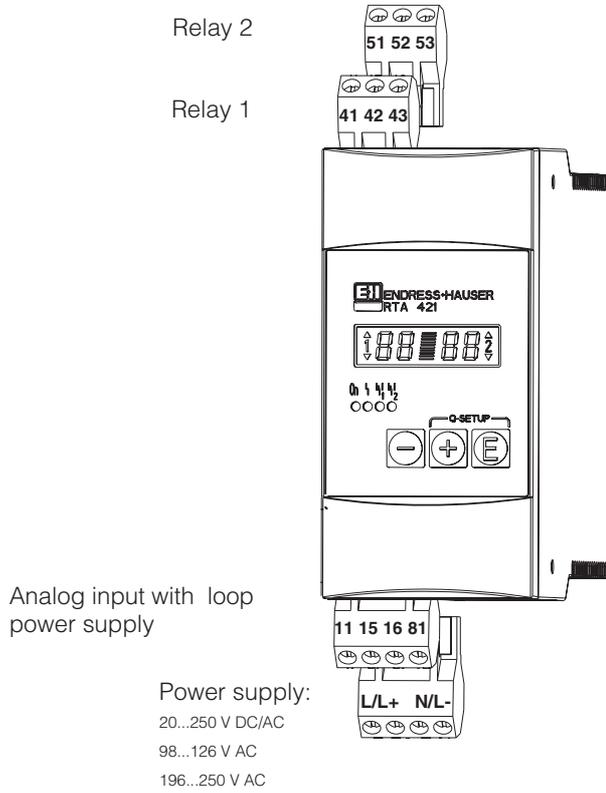
The unit is fitted with a quick set up menu so that if the set points are to be frequently changed this feature can be started by operating the "+" and "E" push buttons. This means that the set points SP1 and

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.

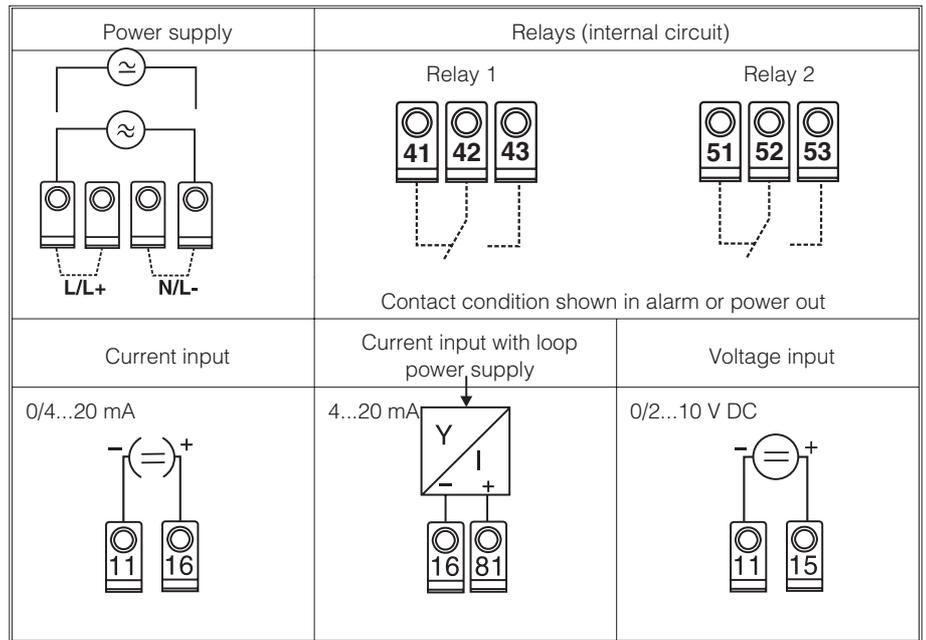
Application (schematic)



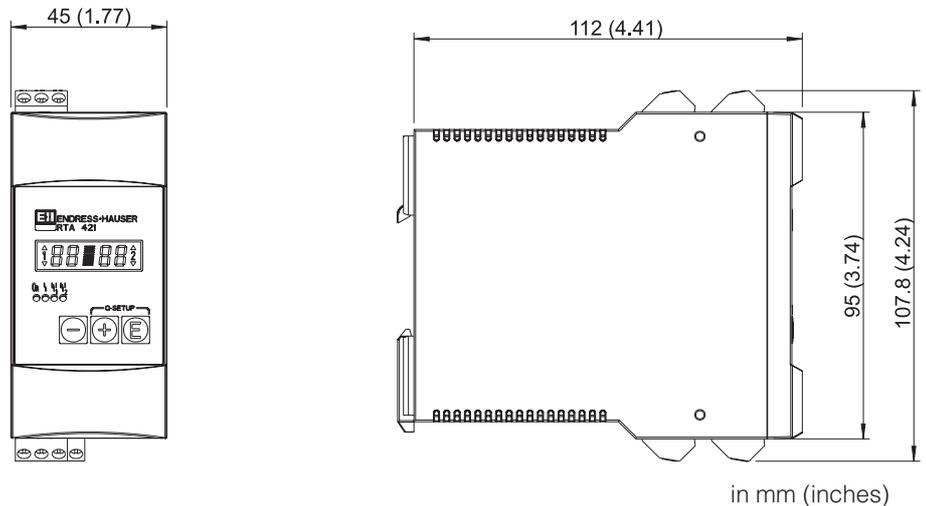
Terminal layout



Electrical connection



Housing



Technical data**General information****Application area****Function and system construction****Input****Output (Loop power supply)****Output (Relays)****Accuracy****Application conditions****Mechanical construction**

Manufacturer	Endress+Hauser
Description	RTA421
Unit function	Alarm set point switch with loop power supply. Used for monitoring either current or voltage signals
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.
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.
Number of inputs	1
Type	Voltage and current
Measurement range	Voltage: 0/2...10 V, max. voltage 50 V Ri: 1 MOhm Current: 0/4...20 mA; max. current 150 mA Ri: 5 Ohm
Resolution	Voltage: 41 mV, 8 Bit Current: 83 µA, 8 Bit
Over range	10 %
Integration time	4/s
Output signal signal	Terminals 81: 24 V +/- 20 %, 30 mA
Number of outputs	1
Galvan. isolation	Between power supply and relay outputs
Signal signal	Binary, switches when alarm set point is reached
Number of outputs	2
Contact type	1 potential free changeover contact per relay
Contact load	≤ 250 V AC, 8(2) A / 30 V DC, 5(2) A
Voltage	Accuracy: 0.5 % FSD Temperature drift: 0.02 % / K ambient temperature
Current	Accuracy: 0.5 % FSD Temperature drift: 0,02 % / K ambient temperature
Installation conditions	
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 Over voltage category II, Installation area excessive current system ≤ 10 A
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

Display	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) 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
Display range	2 x 0 to 99 %
Operation	3 push button operation (-/+E)

Alarm set point function

Mode	Minimum, maximum
Switch threshold	00 to 99 %
Hysteresis	00 to 99 %
Time delay	00 to 99 s
Reaction time	0.4 s

Power supply

Power supply	196...250 VAC, 50/60 Hz 98...126 VAC, 50/60 Hz 20...250 V DC/AC, 50/60 Hz
Power consumption	Max. 9 VA
Fuse	315 mA, slow blow
Input current limit	$I_{max} / I_n < 15$

Certification

CE mark	Guide lines 89/336/EWG and 73/23/EWG
GL	Marine approval / Germanische Lloyd

How to order

Order structure	See "How to order"
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Technical alterations reserved!

How to order**Contactor RTA421****Certification****A** Version of non-Ex area**Power supply****1** 196...250 V AC, 50/60 Hz**2** 98...126 V AC, 50/60 Hz**3** 20...250 V DC/AC, 50/60 Hz**Loop power supply****1** Loop power supply not required**2** With loop power supply**Model****A** Standard**B** Works calibration certificate**J** Japan version, standard

RTA421-

←Order code

Further documentationOperating instructions
BA101R/09/**Accessories**IP66 protective housing for field
mounting
(Ordercode: **51002468**)**Endress+Hauser GmbH+Co.**Instruments International
P.O. Box 2222
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Germany

Tel. (07621) 975-02

Tx 773926

Fax (07621) 975 345

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