

Trip Amplifier - Loop Powered

Relay output with change-over function or
opto relay output

Galvanic isolation min. 500 V_{ac}

Loop powered from the 4...20 mA signal

Input protected against polarity and current overload

Front adjusted set point and hysteresis



Description

The relay is activated when the measured current is greater than, or equal to, the value set on the potentiometer (set point). If the hysteresis is set at e.g. 2%, the relay will be deactivated when the current decreases at least 2% under the set point value.

The potentiometer is used to adjust the set point between 0...100%, corresponding to 4...20 mA. The hysteresis can be set from 0.5...10% of the span, corresponding to 0.08...1.6 mA.

The trip amplifier module is used if a limit switch is required when measuring a 4...20 mA signal.

It can be used together with a FlexTemp temperature transmitter to control a heating element.

Pressure in compressors can be controlled when the trip amplifier is connected with a pressure transmitter, e.g. FlexBar HRT.



Technical Data

Data common for both types

Electrical data	
Input/supply	4...20 mA, 2-wire system
Voltage drop	< 4 V at 20 mA
Set point	0...100%, 4...20 mA
Hysteresis	0.5...10%, 0.08...1.6 mA
Repeatability	< 0.25%
Temperature drift	±0.01% per °C

Scale accuracy

Internal scale	< ±5%
External scale	< ±0.5%
Ext. potentiometer	10...100 kOhm
Reference voltage	nom. 2.8 V

Mechanical data

Dimensions	62 x 88 x 24 mm
DIN-rail mounting	DIN 46277
Weight	0.1 kg

Environmental conditions

Protection class	Housing: IP 30 Terminals: IP 10
Operating temperature	0...60°C
Storage temperature	-35...85°C
Humidity	< 90% R.H., non condensing
Vibrations	Lloyds Register, test 2

EMC

Immunity	EN 50082-2
Emission	EN 50081-2

Change-over relay (84 13-115)

Voltage	< 250 V _{ac/dc}
Current	< 2 A
Power	< 120 VA/50W
Sample time	Nom. 0.5 sec.
Note: When the power supply is off, the position of the relay contact is random.	

Opto relay (84 13-215)

Voltage	< 30 V _{ac/dc}
Current	< 0.1 A
Power	< 3 VA/W
Delay	10 msec.
Note: When the power supply is off, the opto relay is disconnected.	

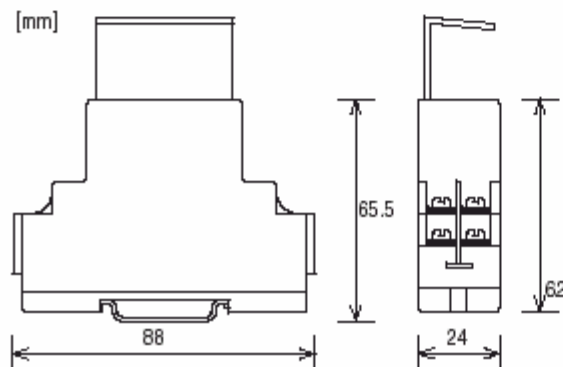
Disposal of product and packing

According to national laws or by returning to Bourdon-Haenni

Ordering Details - Trip Amplifier

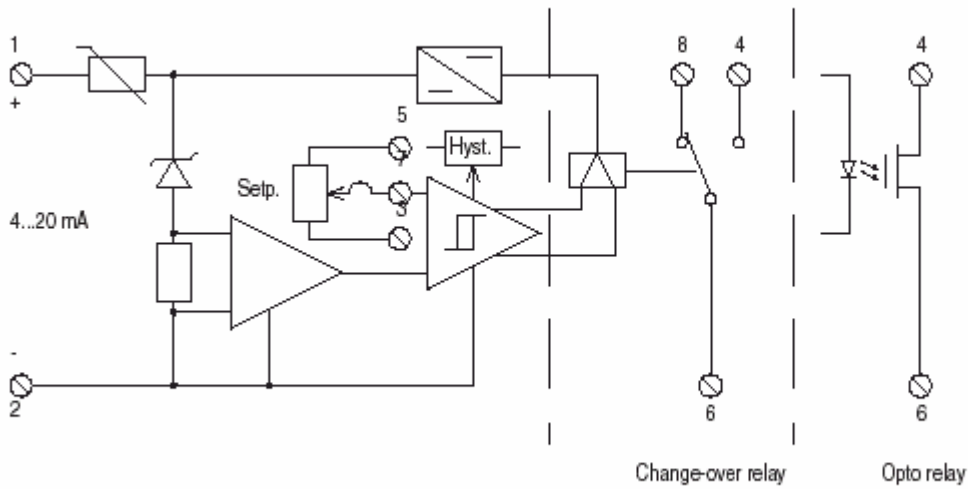
Input	Relay	84 13 - x15	5' digit
4...20 mA	Change-over relay		1
4...20 mA	Opto relay		2

Dimensional Drawings

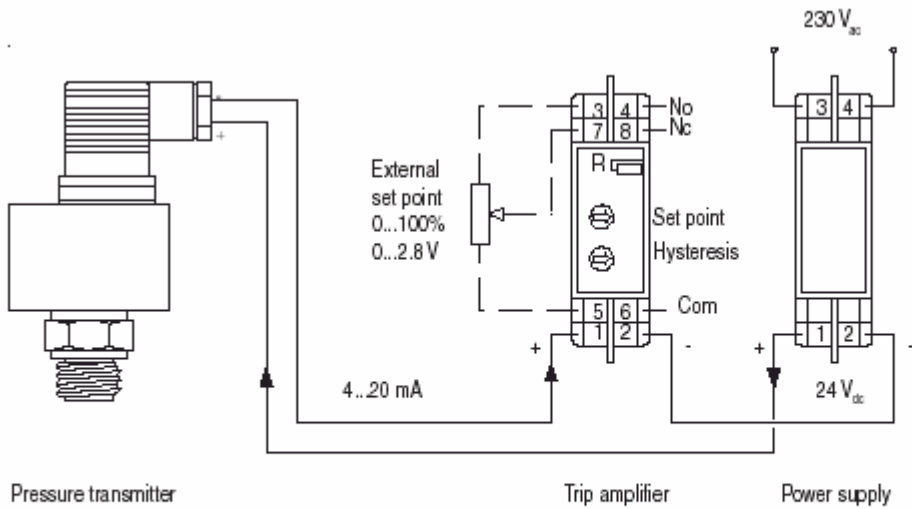




Block Diagram



Example of Application



Note: If an external set point potentiometer is required, open the module and cut the resistance pin R.
The trip amplifier is connected in the 4...20 mA loop, and no separate power supply is needed.