

NAMUR NE43 Dual Level Trip Amplifier **BM9432**

IEC61508: Typically, SIL2. (Please contact Sales Office for details)

Function: The BM9432 is a DIN rail mounting (TS35) Dual Level Trip Amplifier monitoring a 4 to 20mA input signal, which can be loop powered from the BM9432. It has two process trips and additional internal alarm relays/LEDs for "Out of Range Input" and "Power OK/Fail".

Each process trip can be configured as a Low or High trip, as required. The trip amplifier is compliant with NAMUR NE43, being able to detect faulty transmitters whose outputs are below 3.8mA or above 20.5mA.

Data Sheet Issue 8.0

Mar 18



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SPECIFICATIONS

INPUT:

D C Current

4 to 20mA into internal 10 ohms

Remote Transmitter Power Supply

Unregulated nominal 24 Volt DC
24mA supply to power input loop

OUTPUTS: Four SPCO relays

Process Trips

Two relays (Trip 1 and Trip 2) that are configurable as High or Low Trips, Fail-Safe or Non-Fail Safe.

One pre-set relay for "Trip Amplifier Power" alarm (loss of power – fixed fail-safe)

One pre-set relay for "Input Out of Range" (<3.8mA >20.5mA fixed fail-safe)

OUTPUTS (Continued):

Contact Ratings

Maximum current 2A
Maximum voltage 250V AC
Maximum voltage 24 Volt DC

Switching Differential

0.5% of span approx

Switching Mode (Process Trips)

Relays can be factory set or user configured to energise (Non Fail-Safe) or de-energise (Fail-Safe) on a rising (High Trip) or falling (Low Trip) signal – see ordering details for further explanation

Set Points (Process Trips)

270° screw driver operated potentiometers through front panel

OUTPUTS (Continued):

Relay State Indication

Set-Points Alarms
Bi-colour Red/Green LED
Green = Healthy State
Red = Tripped State
Instrument Power OK
Green LED = Healthy

Out of Range Input Alarm
Red LED = Out of Range

SUPPLY:

Trip Amp Power Supply
12 to 30 Volt DC

Input/Supply Isolation
600 Volts > 20M ohms

Power Required
2.5 Watts Maximum

GENERAL:

Temperature Coefficient
±0.1% of span/Δ10°C

Operating / Storage Temperature Range
0 to +50°C / -20 to +60°C

Operating / Storage Humidity Range
0 to 95% RH non-condensing

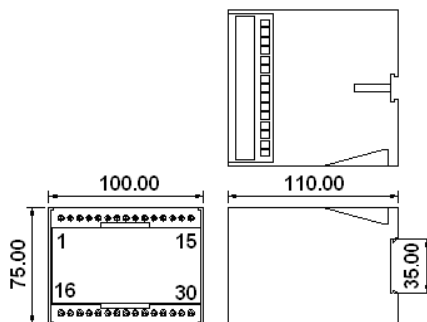
EMC
EN 61000-6-2:2001 Industrial
EN 61000-6-4:2001 Industrial

Weight
295 gms

Enclosure IP Rating
IP20

IEC 61508 SIL Rating
Generally, SIL 2 with a Proof Test Interval of 12 months

MECHANICAL DETAILS



TERMINATION DETAILS

Inputs

- 1 Input -ve 4 to 20mA
- 2 Input +ve 4 to 20mA
- 3 Unused
- 4 Tx Power Supply -ve
- 5 Tx Power Supply +ve
- 6 to 15 Unused

Outputs

- 16 Relay N/O
- 17 Common Trip 1
- 18 Relay N/C

Outputs

- 19 Relay N/O
- 20 Common Trip 2
- 21 Relay N/C
- 22 Relay N/O
- 23 Common "Power OK"
- 24 Relay N/C
- 25 Relay N/O
- 26 Common "Input Out Of Range"
- 27 Relay N/C
- 28 Trip Amp Power Supply +ve
- 29 Unused
- 30 Trip Amp Power Supply -ve

ORDERING DETAILS

- a) Give identification code, i.e. BM9432
- b) Give details of trip action required,

For each set-point:

H = High Trip = Alarm condition above the set point

L = Low Trip = Alarm condition below the set point

Order example: BM9432/HLFS

and for the operation of the set-point relays:

FS = Fail Safe = Relays normally energised to de-energise in the alarm condition

NF = Non Fail Safe = Relays normally de-energised to energise in the alarm condition

DOCUMENTATION

- a) O & M Manual
- b) Independent EMC Testing Report
- c) FMEDA SIL Rating Report