## NAMUR NE43 Dual Level Trip Amplifier BD9432

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

Function: The BD9432 is a DIN rail mounting (TS35) Dual Level Trip Amplifier monitoring a 4 to 20mA input signal, which can be loop powered from the BD9432. 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.

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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**
115±15% Volt AC 50/60 Hz
230±15% Volt AC 50/60 Hz

**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

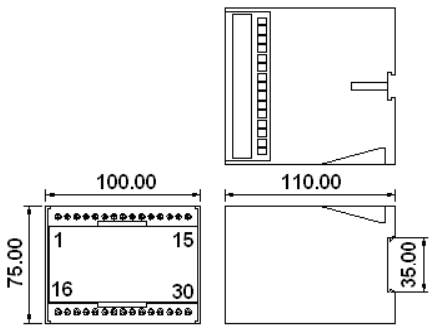
**EMC**
EN 61000-6-2:2001 Industrial
EN 61000-6-4:2001 Industrial

**Weight**
295 gms

**Enclosure IP Rating**
IP20

**IEC 61508 SIL Rating**
Generally, SIL2 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 230V AC
29 Trip Amp Power Supply 115V AC
30 Trip Amp Power Supply Neutral

**ORDERING DETAILS**

a) Give identification code, i.e. BD9432
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: BD9432/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