Dual Trip Alarm v5 DTA137

DESCRIPTION

The DTA137 is suitable for all standard process signals and all common types of sensors, featuring two independently adjustable trip points with true relay contact outputs.

The standard Dual Trip Alarm will accept DC voltage or current input signals directly (0.1V up to 2kV, 0.1mA up to 2A). Low level sensor or AC input signals require an optional input conditioning card, which is factory fitted.

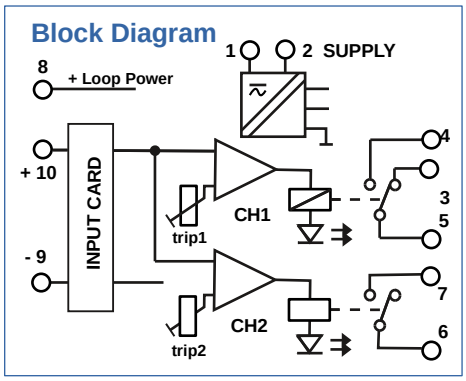
Special requirements for input response time variation can be accommodated using the customised response option.

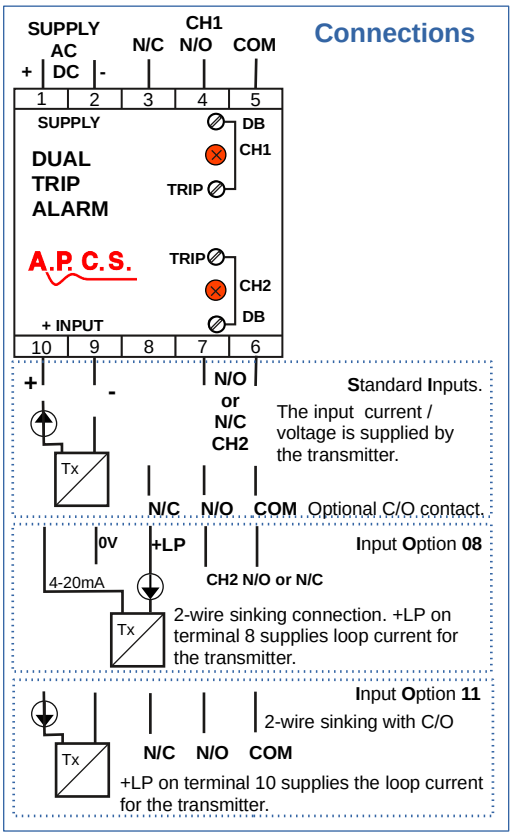
The trip circuits are operated directly from the conditioning input circuit. Trip status is indicated by red LED's. Dead band is adjustable from 0.5 to 30% via the front accessible trim pots.

Various power supply choices are available ranging from 240Vac down to 8Vdc.

General Specifications

Size:	52 W x 70 H x 110 D (mm).
Housing material:	ABS.
Mounting:	DIN-Rail, gear plate.
Termination:	Screw terminals on front Terminal covers standard.
Weight:	0.300 kg.
Protection class:	IP40.
Operating temperature range:	-10…+60°C.
Storage temperature range:	-20...+70°C.
Repeatability:	0.1% of range.
Temperature drift of trip-point:	0.01% / °C.
Relay contact:	Change-over and N/O or N/C 8A/250V resistive 3.5A/250V inductive.
Contact isolation:	2kV.
Loop power supply:	22 to 27Vdc, 24mA max (inputs 08 and11).
Dead band:	0.5% to 30% default
Power requirements:	3W.
Electromagnetic compatibility:	AS/NZ 4251.1 (EN 50081.1)





Dead-band Example

If the trip points are required:

- Switch on at 16mA (80% of 20mA)
- Switch off at 6mA (30% of 20mA)

The dead band required is 80% minus 30% = 50% so a deadband adjustment with a range of 1 to 60% would be required.

Standard Ordering Example

Part Number: DTA137-408500

Power Supply: 8 to 60Vdc

Input: 0/4-20mA + 24V AUX

Trip Action: CH1 DIR C/O, CH2 REV N/O

CH1 ON/OFF: 16 / 6mA, DB 60%

CH2 OFF/ON: 16 / 12mA, DB 30%

The dead-band specified the approximate DB when the pots are fully clockwise.

For input / output combinations refer to TYPE NO. DESIGNATION overleaf.

A.P.C.S.

DTA137 - X XX X XX

TYPE NO. DESIGNATION

Power Supply:

1 = 90 to 280Vac 50/60Hz (65 to 280Vdc).
*) 3 = 16 to 48Vac 50/60Hz (10-60Vdc)
*) 4 = 8 to 60Vdc.
*) 9 = 30 to 80Vdc

Input:

01 = 0 – 0.1V (100kΩ).
02 = 0 – 1V (100kΩ).
03 = 0 – 2V (100kΩ).
04 = 0 – 5V (200kΩ).
05 = 0 – 10V (500kΩ).
06 = 0 – 1mA (1kΩ).
07 = 0 – 10mA (100Ω).
#■ 08 = 0 - 20mA, 4 – 20mA (100Ω).
*) 09 = Other (Specify).
10 = Option input see below.
*) 11 = 4 - 20mA. (2-wire +22V on pin10)
12 = 0 – 20mA, 4 – 20mA (externally sourced)
*) 22 = 8 – 60Vdc signal power.
*) 23 = 60 – 160Vdc signal power.
*) 30 = Continuity constant 2mA limit 7V5 SPL0990

Trip Action and Contact Configuration:

1 = CH1 DIR C/O, CH2 DIR N/O
2 = CH1 DIR C/O, CH2 DIR N/C
3 = CH1 REV C/O, CH2 REV N/O
4 = CH1 REV C/O, CH2 REV N/C
5 = CH1 DIR C/O, CH2 REV N/O
▲ 6 = CH1 DIR C/O, CH2 DIR C/O
▲ 7 = CH1 REV C/O, CH2 REV C/O
▲ 8 = CH1 DIR C/O, CH2 REV C/O
A = CH1 DIR N/O, CH2 DIR N/O.
B = CH1 DIR N/O, CH2 DIR N/C.
C = CH1 REV N/C, CH2 REV N/O.
D = CH1 REV N/C, CH2 REV N/C.
G = SPL0686A Latching + RESETS (see drawing PL68610)

DIR = Direct acting relay energised with input above set-point
REV = Reverse acting relay energised with input below set-point
N/O = Normally open contact, open when relay de-energised.
N/C = Normally closed contact, closed when relay de-energised.
C/O = Change-over contact.

Options:

00 = None.
*) 01 = Thermocouple input.
*)■ 02 = RTD input.
*) 03 = Frequency input. Calibration range 0 - 10Hz...0 - 5kHz (Sine, Triangle) Sensitivity: 200mVpp. (70mV rms) min. 22Vpp. max (Square, Pulse).
*)■ 04 = Pulse input from NAMUR proximity sensor or passive device (contact, open collector). Auxiliary supply of 8Vdc at terminal 8, other data as option 03 above.
*) 05 = AC input (current via external shunt).
*) 06 = Bipolar / millivolt input. (±0.5mV to ±2kV bipolar) (1mV to 2kV unipolar).
*) 07 = Resistance input (constant current).
*) 08 = Customised response time.
*) 09 = pH/Electrochemical sensor input
*) 10 = Adder or Subtractor. 2 inputs 4 - 20mA floating.
*) 13 = AC current (internal CT).
*) 14 = Conductivity. (50µS/cm to 100mS/cm [k=1]).
*) 15 = Dissolved oxygen input.
*) 16 = Vibration piezo transducer.
*)■ 17 = Load cell input (use with trip actions A to D).
*)■ 18 = pH/ORP with Pt100 Temp Comp.
*)■ 42 = Potentiometer 3W voltage excited.

Definitions

= Includes 22Vdc/24mA on terminal 8.
▲ = Change over contact outputs are only available for 2-wire inputs.
■ = Cannot order a ■ with a ▲.

*) Price Extra