

Single Trip Alarm v5 STA138

DESCRIPTION

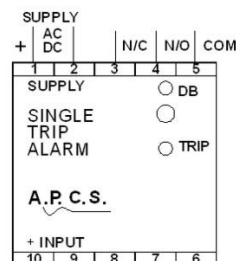
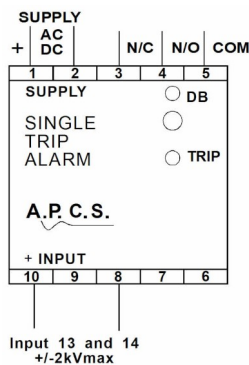
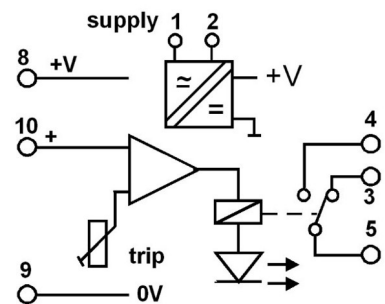
The STA138 is a alarm relay suitable for standard process signals and common sensor types. The alarm directly accepts DC voltage or current input signals (0.1V up to 2kV, 0.1mA up to 2A) while low-level sensor or AC input signals require a factory fitted input-conditioning card. Special requirements for input response time can be accommodated by using the customised response option. The trip circuit is operated from the conditioning input circuit. The trip-point is adjusted by the 15-turn trim potentiometer from the front of the module. Trip status is indicated by a red LED. The action of trip operation, e.g. high or low alarm is internally selectable by a coding plug. The standard output configuration provides a changeover contact output rated at 8A/250Vac. An optional second 8A/250Vac contact is available as change over for all 2-wire inputs and normally open for 3-wire inputs. Dead band is adjustable from 0.5 to 30% via a front accessible trim pot. Various power supply choices are available ranging from 240Vac down to 8Vdc, all contain a dual output for power isolation. Surge protection for power supply and input is standard with all APCS modules.



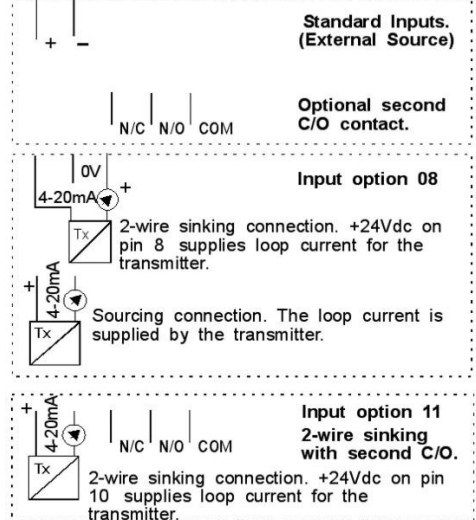
General Specifications

Size:	52W x 70H x 110D (mm).
Housing material:	ABS.
Mounting:	DIN-Rail, gear plate.
Termination:	Screw terminals
Weight:	0.300 kg.
Protection class:	IP40.
Operating temp. range:	-10...+60°C.
Storage temp. range:	-20...+70°C.
Repeatability:	0.1% of range.
Temperature drift of trip-point:	0.01% / °C.
Relay contact:	Change-over 8A/250Vac resistive 3.5A/250Vac inductive.
Contact isolation:	2kV.
Auxiliary supply output:	24Vdc, 25mA max.
Dead band:	0.5% to 30%
Power requirements:	3W.
Electromagnetic compatibility:	AS/NZS 4251.1 (EN 50081.1)

Block Diagram



Connections



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

TYPE NO. DESIGNATION

Power Supply:

- 0 = Signal powered (see inputs).
- 1 = 90-280Vac 50/60Hz (65-280Vdc).
- *) 3 = 16-48Vac 50/60Hz (10-60Vdc)
- *) 4 = 8-60Vdc.
- *) 9 = Other specify.
- *) A = Signal powered + Conformal Coating.
- *) B = 90-280Vac (65-280Vdc) + Conformal Coating.
- *) C = 16-48Vac (10-60Vdc) + Conformal Coating
- *) D = 8-60Vdc + Conformal Coating.

Input:

- 01 = 0 - 0.1V (100k)
- 02 = 0 - 1V (100k).
- 03 = 0 - 2V (100k).
- 04 = 0 - 5V (200k).
- 05 = 0 - 10V (500k).
- 06 = 0 - 1mA (1k).
- 07 = 0 - 10mA (100R).
- # 08 = 0 - 20mA, 4 - 20mA (100R).
- *) 09 = Other signal specify.
- 10 = Optional input, see options below.
- ▶ 11 = 4 - 20mA. (2-wire +24V on pin10).
- ▶ 12 = 4 - 20mA (externally sourced).
- *) 13 = acV input +/-2kV max (use terminals 10 and 8).
- *) 14 = dcV input 2kV max (use terminals 10 and 8).
- 20 = 80 -160Vac signal power.
- 21 = 180 - 260Vac signal power.
- *) 22 = 8 - 60Vdc signal power.
- *) 23 = 60 - 160Vdc signal power.
- *) 29 = Other signal power specify.

Contact Configuration:

- 1 = Dir C/O (8A/250Vac resistive).
- 2 = Rev C/O (8A/250Vac resistive).
- *) ▶ 3 = Dir 2nd contact (8A/250Vac resistive).
- *) ▶ 4 = Rev 2nd contact (8A/250Vac resistive).
- *) 5 = Dir N/O solid state relay (2A/70-260Vac).
- *) 6 = Rev N/O solid state relay (2A/70-260Vac).
- *) 9 = Other specify.
- *) A = Dir Window. Relay will switch ON after on delay when between the CH1/CH2 trip points. Specify delay and switch points (SPL0993).

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 from proximity sensor or passive device. (Specify:- Auxiliary supply (8 to 24Vdc), Calibration range (0-10Hz...0-5kHz), Device (NAMUR, Contact, NPN, PNP).
- *) 05 = AC input (current via external shunt).
- *) 06 = Bipolar / millivolt input. ($\pm 0.5\text{mV}$ to $\pm 1\text{kV}$). (Unipolar 1mV to 1kV may be more cost effective to use an alternate range).
- *) 07 = Resistance input (constant current excitation).
- *) 08 = Customised response time.
- *) 09 = pH/Electrochemical sensor input.
- *) 10 = Adder or Subtractor 2 inputs, 4 - 20mA floating.
- *) 12 = True rms (any wave form).
- *) 13 = AC current (internal CT).
- *) 14 = Conductivity (50 $\mu\text{S}/\text{cm}$ to 100mS/cm [K=1]).
- *) 15 = Dissolved oxygen input.
- *) 16 = Vibration piezo transducer.
- *) 17 = Load cell input.
- *) 18 = pH/ORP with Pt100 Temp Comp.
- *) 19 = Resistivity with ac excitation (100R to 2M specify).
- *) 33 = External APCS current transformer, specify one [SCT007(50A), SCT012(100A), SCT008(200A), SCT009(600A)] and scaling. External CT's are ordered separately.
- *) 42 = Potentiometer 3W voltage excited.
- *) 50 = Time delay (Specify:- Time: 0.5 to 10Sec, Function: ON, OFF or POWER ON).
- *) 99 = Other specify.

NOTE:- Specify type of sensor and calibration details.

- 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
- # = Includes 24Vdc/25mA auxiliary supply on terminal 8.
- ▶ = Order input 11 or 12 when a 20mA input and two change over contacts are required
- ▶ = Second contact is supplied as C/O for 2-wire inputs and N/O for 3-wire inputs.
- *) = Price Extra.

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