DATA SHEET – Process Automation – Conveyor Controls

Subject to change without notice

PTD-BRK/FS-LR

Powered Low Current Sensing Trip Amplifier – Brake Motors

GENERAL DESCRIPTION

The PTD-BRK/FS-LR is a fully isolated dual trip amplifier/alarm module that accepts an AC or DC current input from 0 Amp up to 0.5 Amp from up to a 415V supply line.

The PTD-BRK/FS-LR provides a trip relay output which operates at a very low fixed base current and maximum current setting. It works as a stand-alone alarm unit and operates as a window comparator where the relay de-energises should the monitored signal go below 20mA or above 125mA. The relay has a fixed dead-band of 20%.

FEATURES

- Wide Operating Voltage Range
- Set Point Trip Status LED's
- Trip window factory set with status LED's
- Very small footprint area
- DIN & G rail mounting style
- Low power consumption
- 600V HBC 3.15A Input Protection Fuse

TECHNICAL DATA

Power Supply.

Nominal Supply	22V - 60Vac/dc
VA Rating	Typically 1.2VA
Max Power	Typically 1.3VA with relay energised.

Input (Internally Fuse Protected 3.15A SIBA 189-020)

Amps AC or DC	0 Amp to 250mAmps (Terms 1 & 3) 0 Amp to 500mAmps (Terms 1 & 2)
Operating Current (Window)	20mA to 125mAmps (Terms 1 & 3)
Volts (max)	500Vac/300Vdc on terms 1 & 3
Input Resistance	< 0.1 Ohm

Output (Single relay c/o output)

Set Point	Relay c/o contact Under Current and/or Over Current fixed set points.
For 0 – 250mAmps	0 – 10Vdc (250mAmps = 10V)

GENERAL SPECIFICATION

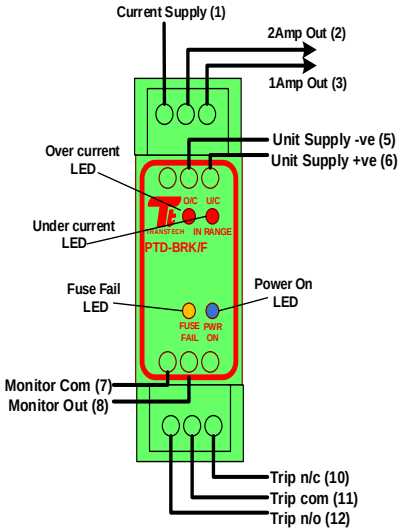
Accuracy	2.5% of span
Linearity	1% of span
Response time	0 to 110% step in 2.8 sec
Drift	0.25% per Deg C
Isolation level	Greater than 500Vrms
Dead Band	Fixed at 20% of relay set.
Trip Settings	Under Current – 18mAmps (Terms 1 & 3) Over Current - 130mAmps (Terms 1 & 3)
Trip Status	2 x Red,
Fuse Status	1 x Yellow LED
Power Status	1 x Blue LED

Output Relay

Contact Configuration	1 Form C (SPDT)
Max Voltage	Up to 220 Vdc or 250 Vac
Max Power Rating	30 Watts or 62.5 VA
Max Cont. Current	2 Amps (non-inductive)
Vibration	20G
Shock	75G
Life Expectancy	Mechanical 10 x 10^6

Mechanical

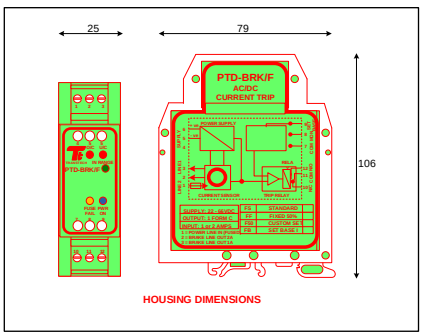
Operating Temp	0 to 60 Deg C
Store Temp	-25 to +75 Deg C
Mounting Style	DIN & G Rail
Terminals	2.5mm² / 12AWG
Housing Material	KRILEN
Dimensions	79 x 106 x 25mm wide
Weight	110 grams



CONNECTION DIAGRAM

RELAY OPERATION

The relay is set to be "normally energised", that is when DC power is applied to the PTD and the signal is above the lower trip point and below upper trip point; the relay is energised. If the power supply goes off or the signal is above or below the set points (fault) the relay will de-energise.



HOUSING DIMENSIONS

DESIGNED & MANUFACTURED by: Transtech Electronic Controls Pty Ltd Perth W.A. ABN: 21 070 629 499
Design changes may occur in the interests of product performance & development **E&OE**

PTD-BRK/FS-LR

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IMPORTANT

1. THERE ARE NO INTERNAL SETTINGS REQUIRED IN THE FIELD.

2. THIS "LR" VERSION HAS BEEN DESIGNED TO ALLOW LOW CURRENT SETTINGS WITHOUT BEING AFFECTED BY NOISE INTERFERENCE.

3. If supply is removed to the PTD-BRK the Fuse Fail LED will be reset.

CALIBRATION & SET-UP INSTRUCTIONS:-

PTD-BRK/FS-LR. (Factory set low current version). From Nov 2017 the low trip is set to below 50mA and the high trip is set to 250mA (for 0.5Amp connection).
The top decade switches are masked off – **DO NOT ADJUST**

Other PTD-BRK/F versions are:

PTD-BRK/FF (Fixed threshold set to +/- 50% of base I)

Turn the fine decade switch to zero (0) and coarse switch to nine (9) Link terminals 7 – 9
With a load connected and the "In Range" Green LED on adjust the coarse decade switch slowly down (anti-clock) until the LED goes off. Now adjust the fine decade switch slowly up (clockwise) until the Green LED comes on – the base current is now set.
NOTE: If the Green LED does not come on when the fine decade switch is at 9, turn the fine decade back to zero and increase the coarse decade switch by one step, then re-adjust using the fine decade switch, to set the base current.
Remove the link between terminals 7 – 9

NOTES:-
1. The sensed current can be measured by connecting a DVM ranged 0 – 10VDC between terminals 7 and 8.
2. The base current is set by a combination of:
   - Input current (either 0-1 or 0-2 amp)
   - Top of panel switches (coarse and fine) where:
   - Coarse = 10% of range | Fine = 1% of range.

For other modes of operation consult factory.