Pilot Cable Monitor v3 □yPCM177

DESCRIPTION

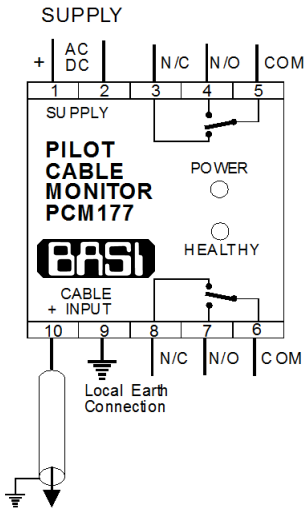
The □g□O□f□5pilot cable monitor is an earth continuity relay. It provides earth continuity□ protection in accordance with AS/NZS 2081 ensuring the earth connection through a□ trailing/reeling cable is maintained. The pilot cable is connected to terminal 10 on the□ □g□O□f□5□A diode is installed at the furthermost point of the pilot cable with its cathode□ connected to earth at the remote earth connection point. The □g□O□f□5detects open and□ short circuits between the pilot and earth conductors of the trailing cables. The unit has□ filtering to remove unwanted inductively or capacitive coupled ac signals. The LEDs□ indicate power to the unit and the status of the pilot cable ('HEALTHY' LED). There are two□ changeover contacts rated at 8A/250V which are fail-safe. Output contacts de-energise□ (un-HEALTHY) on conditions of:

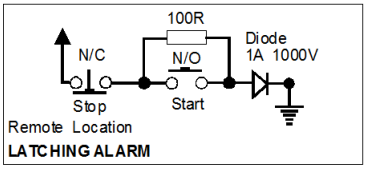
- Loss of power
- Open circuit of pilot cable
- Loop resistance exceeds set value.
- Pilot cable shorted to earth.
- Leakage resistance to earth is less than 600Ω

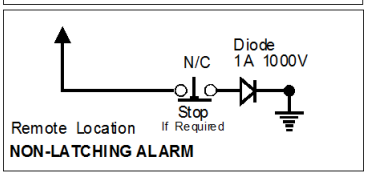
There are two basic operating models;

□r□**Local or automatic reset** models go into a HEALTHY condition when no fail□ conditions exist. A stop button can be wired in series with the pilot cable to□ de-energise relay if necessary.
In local mode, the □gPCM177 will automatically reset after the fault has been□ecleared.

□s□**Remote start or latching models** have a remote 100Ω series resistor□e connected across a remotely mounted normally open start button. When□estar is pressed the □gPCM177 checks loop resistance before switching to a□e HEALTHY condition. The □gPCM177 will go into an unHEALTHY state if the□e start button is held or stuck for longer than 15 seconds.
In latching mode, a manual reset (press start button) is needed after the fault□ has been cleared.







General Specifications

Supply voltage variation:	75% to 120% of the nominated supply voltage.
Supply drop out immunity:	Normal operation at 50% of supply for 60 seconds.
Pilot to earth resistance:	15, 25, 35, 45Ω
Remote start version:	16, 30, 45, 60Ω (plus 100Ω across start button)
Fail Operating Time:	< 500ms from HEALTHY to an un-HEALTHY state.
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:	0 - 60°C.
Storage temperature:	-20...+70°C.
Repeatability:	0.1% of range.
Change-over relay contacts:	8A/250Vac resistive, 3.5A/250Vac inductive.
Contact isolation:	2kV.
Power requirements:	3W.
Electromagnetic compatibility:	Complies with AS/NZS 4251.1 (EN 50081.1)

Cable bundle may be screened.

Buttons may be local or remote.

The diode MUST be remote.

□g□8□k□Hdoes supply the cable or□e dropping resistor.

Please ensure the cabling is accordance with regulations for the□e insulation.

□g□8□k□hhas recommended any particular cabling.

Type No .. BPCM177 - X X 0 0 0

Power Supply:

1 = 240Vac 50/60Hz (240Vdc)
2 = 110Vac 50/60Hz (110Vdc)
3 = 24Vac 50/60Hz (24Vdc).
4 = 48Vac 50/60Hz (48Vdc).

Operating Mode:

Automatic reset	Start Button Required
1 = Local 15Ω pilot	A = Remote 16Ω pilot (+100Ω)
2 = Local 25Ω pilot	B = Remote 30Ω pilot (+100Ω)
3 = Local 35Ω pilot	C = Remote 45Ω pilot (+100Ω)
4 = Local 45Ω pilot	D = Remote 60Ω pilot (+100Ω)

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