

P7/I.S.

Intrinsically Safe Conductive Level Control System

- Cat 1G/0 approved.
- Adjustable sensitivity.
- Ignores electrode fouling and foam.
- Suitable for conducting liquids.
- Galvanically isolated.
- Wide selection of electrodes and mounting accessories available.

Principle of operation

P7/I.S. relies on the conducting properties of liquids to complete an electrical circuit between an active electrode and an earth electrode. Level sensing electrodes are normally mounted vertically and the controller switching action occurs as the liquid touches or leaves the electrode. Pressure tight electrodes are available if required. A low voltage A.C. signal is used on the electrodes to prevent electrolysis.

Switching differential

Better than 5% of set sensitivity i.e. 50ohms at 1000ohms .This is necessary to avoid relay hold-on at the lower electrode caused by material clinging to the probe, electrode wetting, and viscous liquids as sludge. The close switching differential allows high level electrodes to ignore foam layers.

Fail to safe feature

Two versions of the controller are available. The fail to safe HIGH for filling applications and high alarms and the fail to safe LOW for emptying applications and low alarms LED status indication is provided.

Sensitivity

The input switching point is adjustable between 300 and 20,000ohms which suit most applications.

Mounting details

The controller is DIN mounted with wiring to the front of the module.

Technical Specification

Mounting:	DIN rail
Supply:	230V A.C, 110V A.C, 24V A.C 50Hz ±10%
Consumption:	5VA
Installation cat:	Over voltage Cat II
Electrode voltage:	8.0V A.C max (open circuit)
Electrode current:	8mA short circuit
Sensitivity:	300 ohms to 20,000 ohms approx
Fail to safe:	'Low' or 'High' state with order
Operating temp:	-20° to 40°C
Relay contact rating:	Volt free contact S.P.C.O rated 240V A.C. @ 5A max, resistive. For intrinsically safe model-load must not exceed 100VA, current must not exceed 5 amps, voltage must not exceed 250V.
L.E.D.:	RED L.E.D. 'ON' when relay energised
Enclosure material:	Polycarbonate
Weight:	325g

Certified Electrode Holders Available

Category 1G/0 (Zones 0, 1 & 2)

Ex stock

Heavy Duty Signal

1G/0HPE8, 1G/0HPE8/P, 1G/0HPE12, 1G/0HPE12/P
Ex II (1) G

Light Duty Single

1G/0HPE7, 1G/0HPE7/P, 1G/0HPE7/PA, 1G/0HPE7/F,
1G/0HPE14

Heavy duty Multi

1G/0HPE13, 1G/0HPE13/P

Borehole

1G/0HPE5

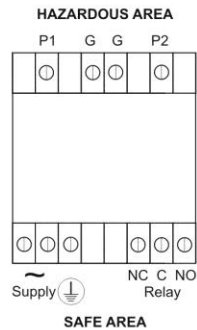
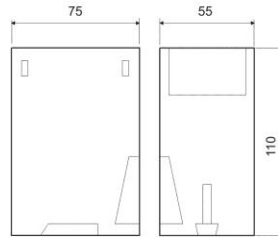
By special order

Medium Duty Single

1G/0HPE22, 1G/0HPE22/P, 1G/HPE22/PA

1G/0HPExxxx/IS Electrode Holders are suitable for use in zone 0, 1, and 2 applications. When installing equipment please check the category for installation as certain zones have restrictions. Please read the installation manual for full details

Enclosure Connection



Certification Details

P7/IS Controller

Sira 03 ATEX 2160X
[EEExia] IIC

Cat 1 Holders

Sira 03 ATEX 2159X
EEExia IIC T4
EEExia IIC T6 (1G/0 HPE5 only)
Ex II 1G

Ordering Information

P7/IS/X/Y

X = Fail Safe High 'H'
Fail Safe Low 'L'

Y = Voltage V A.C. 230
110
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