G002280

Conventional Intrinsically Safe Optical Smoke Detector

Salwico EVC-PY-IS

Part no. N1144

System: All Salwico fire alarm systems

General description

Salwico EVC-PY-IS is an intrinsically safe Evolution conventional optical smoke detector.

The detector is equipped with an optical sensor with improved sensitivity to black smoke.

The detector is designed for use in areas with high explosion risk. It is connected to the fire alarm system via an intrinsically safe interface.

To avoid the possible risk of electrostatic charge, the unit must not be cleaned with solvents or charged by rubbing.

Data

Nominal voltage	24 VDC
Working voltage	10–32 VDC
Working current	< 50 µA
Alarm current	50 mA
Ingress protection	Depending on base
Relative humidity	≤ 95% RH Non-condensing
Temperature range	-20°C to +50°C
Classification	EN54-7:2000
Certification	IECEx ITS 12.0074X ITS09ATEX26418X
Certified according to	2531/yyyy yyyy = year of production
Cover material	ABS
Colour	White
Weight	120 g ± 5%

For information about suitable base plates, see separate document "Base Matrix".

NOTE!
Do not remove the dust cover from the detector until all polluting (dusty) activities are finished and the area has been cleaned.

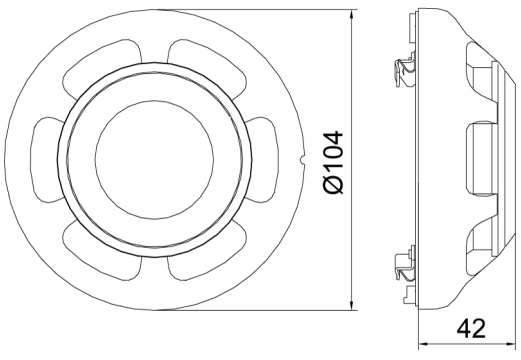
Safety data

Max input voltage (U_i)	28 V
Max input current (I_i)	93.3 mA
Max input power (P_i)	0.66 W
Max internal capacitance (C_i)	1 nF
Max internal inductance (L_i)	Negligible
Ex class	II 1 G Ex ia IIC T4 Ga -20°C ≤ T_a ≤ +50°C

WARNING!
Potential electrostatic charging hazard

- Do NOT clean with solvents.
- Do NOT charge by rubbing.
- Clean ONLY with a damp cloth.

Dimensions (mm)



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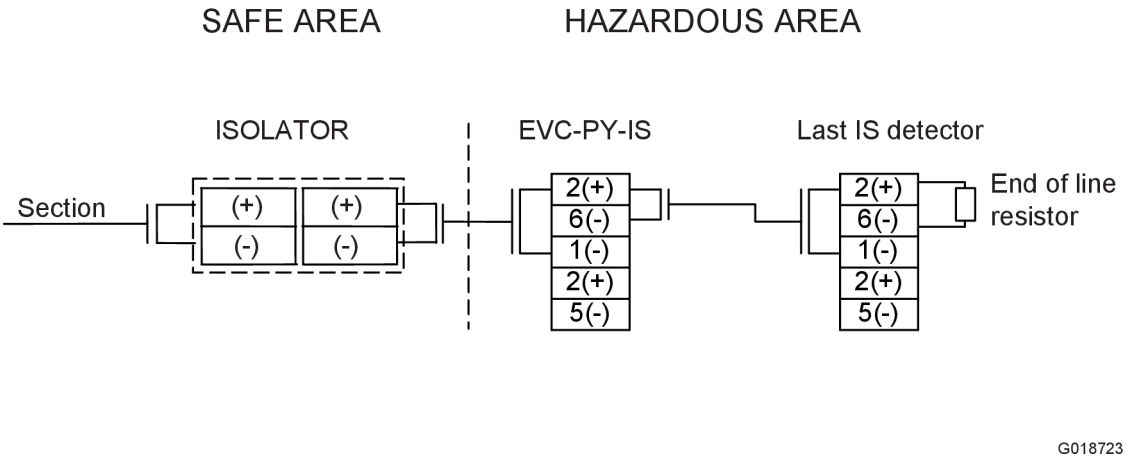
Connection



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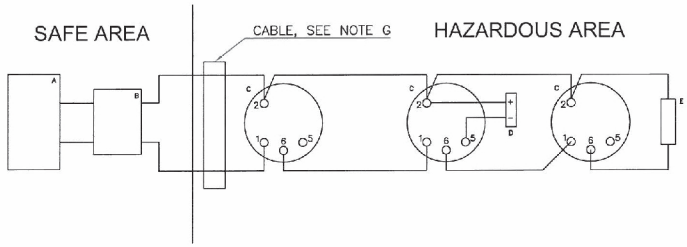
UB-4-IS & EV-SPB-IS BASE INSTALLATION INSTRUCTION SHEET



A) Apparatus which is unspecified except that it must not be supplied from nor contain in normal or abnormal conditions a source of potential with respect to earth in excess of 250 volts d.c.

B) Any single channel shunt zener diode safety barrier or single channel of a dual shunt zener safety certified by any EEC Approved Certification Board to (EEx ia) IIC having the following or lower output parameters:-

Uo = 28V Ui = 28V Ei = 93.3mA
Io – 93.3mA Pi – 0.6W Li = negligable
Po = 0.66W Ci = 1nf

In any saftey barrier used the output current must be limited by a resistor 'R' such that
Io = Uz/R
or
One of the following isolators:-
1) MTL5061 DC Isolator (BAS01ATEX7160)
2) MTL4061 Two channel Fire & Smoke detector interface (BAS01ATEX7176)
3) KFD0-CS-Exl.54 Isolator (BAS00ATEX7087X)
4) KFD0-CS-Ex2.54 Isolator (BAS00ATEX7087X)
5) KFD0-CS-Ex1.51P Isolator (BAS98ATEX7343)
6) KFD0-CS-Ex2.52P Isolator (BAS98ATEX7343)

C) Up to 20 Type EVC-PY-IS optical smoke detectors and type UB-4-IS or EV-SPB-IS Bases (Certificate No: ITS09ATEX26418X).

D) An optional RIL circuit, comprising an LED, two diodes and a resistor, may be connected to terminals 2 and 5 of a smoke detector and mounting base. The surface area of the RIL circuit components must be greater than 20mm. The RIL circuit may be considered to have a temperature class of T4 in a maximum ambient temperature of 50 Deg. C. The RIL circuit and its terminations must be afforded a degree of protection of at least IP20 and must be segregated from other circuits and conductors as defined in clause 6 of EN50020:2002.

E) An end of line resistor meeting the same requirements as for the RIL circuit mentioned above may be connected to the base terminals 2 and 6.

F) The installation must comply with the European Harmonised Standard EN60079 Part 14: 2008.

G) The capacitance and inductance or inductance to resistance (L/R) ratio of the hazardous area cable must not exceed the values in the table below:-

GROUP	CAPACITANCE IN µF	INDUCTANCE IN mH	OR	L/R RATIO IN µH/Ohm
IIC	0.083	3.05		46
IIB	0.650	9.15		200
IIA	2.15	24.4		360

H) A durable label as shown below, to be affixed at the interface of the IS and non-IS circuits.

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Ex ia IIC T4, Ta = 50°C
⟨Ex⟩

I) The electrical circuit in the hazardous area must be capable of withstanding an a.c. test voltage of 500V rms to earth or frame of the apparatus.

⟨Ex⟩ CE

Certified product
No modifications permitted without reference to notified body

MATERIAL SPEC	DRAWING. A. Clark	TOLERANCES UNLESS OTHERWISE STATED	SCALE	PART No. 102251	CURRENT ISSUE 1	04/03/10	1	N/A
	APPRVD. M.N. Schofield	DECIMALS ±0.1		DRG. NO. 102251	SHEET OF	REMOVE ALL BURRS	DATE	ISSUE	D.C.N.
	FILE REF: 102251	ANGLES ±0.5°		TITLE EVC–PY–IS SYSTEM CONNECTION DIAGRAM		DIMMS IN MM	NITTAN (UK) LTD.		

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