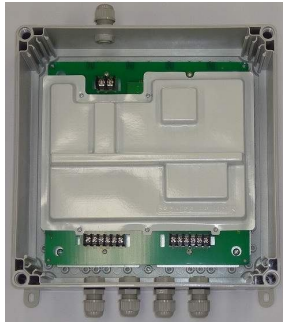


Fire alarm systems Units for Hazardous (Ex) areas

2840, 2841 & 2842



- Intrinsically Safe barrier unit & detectors - in compliance with Directive 94/9/EC

General

In hazardous (Ex) areas, **Intrinsically Safe (IS)** and approved products can be used, such as the **IS barrier 2842** to which the **IS detectors 2840** and **2841** can be connected.

IS barrier unit 2842

The IS barrier unit is connected to a c.i.e. via a COM loop. It has one IS COM line, to which up to 20 IS detectors 2840 and 2841 can be connected. No technical address (COM loop address) is required for the IS barrier unit. Ext. power supply 24 V DC (50 mA) is required. The IS barrier unit housing is a water-proof box (IP66/67). Five cable glands for cable entries are supplied. The IS barrier unit shall be mounted outside the hazardous (Ex) area.

IS analog photoelectric smoke detector 2840

The IS analog photoelectric (optical) smoke detector function is similar to the Analog photoelectric smoke detector 4301, i.e. scattered light (reflection of infrared light) is used to detect smoke. The detector has one built-in LED to indicate that the detector has generated fire alarm.

IS analog heat detector 2841

The IS analog heat detector function is similar to the Analog heat detector 3308/3309, i.e. the temperature is measured via a thermistor. The detector has one built-in LED to indicate that the detector has generated fire alarm.

Alarm algorithms

The same advanced alarm algorithms as for 4301 and 3308/3309 are used in the c.i.e. for fire alarm decision, etc.

Six smoke algorithms (L-15, N-15, H-15, L-35, N-35 & H-35) and three heat algorithms (class A1, A2S & BS) are available for the detector type respectively, see the EBL fire alarm system respectively. The alarm algorithm is programmed for each detector individually via Win128/512/G3.

Address / Detector mode

The address setting tool 3314 is used to set the address and the detector mode.

NORMAL mode shall be used for both types of detectors.

IS back-box 2843

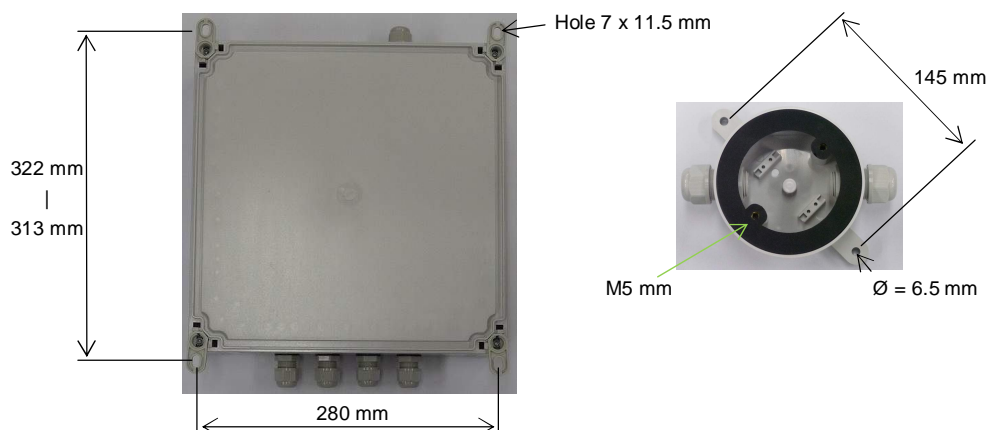
The water-proof IS back-box can be used with the detectors 2840 and 2841 for higher IP rating. Two cable glands for cable entries are supplied.

Product applications

The IS units can be used in the systems EBL128, EBL512 and EBL512 G3 for protection in hazardous (Ex) areas.

Connections, etc. according to connection drawings for the system respectively.

Type numbers	
2840	IS analog photoelectric smoke detector
2841	IS analog heat detector
2842	IS barrier unit (incl. waterproof box & five cable glands)
2843	IS back-box, for detectors 2840 and 2841. (Incl. two cable glands.)



Left: The waterproof box (backside view) has to be mounted outside the hazardous (Ex) area with screws. Mounting holes are 7 x 11.5 mm. The cable gland close to the IS COM line connector has to be used for the IS COM line cable.

Right: The IS back-box 2843 with cable glands and rubber gasket.

The detectors' mounting holes are $\varnothing = 5.5$ mm for M5 screws, c/c = 70.5 mm.

Fast connectors for 0.08 to 2.5 mm² wires (AWG 28-12).

The detectors can be mounted with or without the water-proof IS back-box 2843.

Technical data			
	2840 (IS smoke detector)	2841 (IS heat detector)	2842 (IS barrier unit)
Voltage (V DC) allowed normal	(IS COM line) 15-17.3 16	(IS COM line) 15-17.3 16	(Ext. power supply) 12-30 24
Current consumpt. at nom. volt. quiescent active	(from the IS COM line) $\leq 300 \mu\text{A}$ $\leq 1.5 \text{ mA}$	(from the IS COM line) $\leq 300 \mu\text{A}$ $\leq 1.5 \text{ mA}$	(from the COM loop) $\leq 10 \text{ mA}$ (fr. ext. power supply) $\leq 50 \text{ mA}$
Ambient temperature (°C) operating storage	-10 to +55 -25 to +70	-10 to +XX ¹ -25 to +70	-10 to +55 -25 to +70
Ambient humidity (% RH)	max. 95 non cond.	max. 95 non cond.	max. 95 non cond.
Ingress Protection rating NOTE! <small>These IP ratings are outside of the scope of the LPCB certification. Verified in Panasonic test laboratory only.</small>	IP20 (detector only) IP44 (with IS back-box)	IP20 (detector only) IP66/67 (with IS back-box)	IP66/67
Size (excl. cable glands)	$\varnothing=102$ (detector) $\varnothing=110$ (IS back-box)	$\varnothing=102$ (detector) $\varnothing=110$ (IS back-box)	300 x 300
h (mm)	62 (detector) 58 (IS back-box)	65 (detector) 58 (IS back-box)	132
Weight (g)	300 (detector) 260 (IS back-box)	325 (detector) 260 (IS back-box)	3100
Construction / Colour	PC & ABS / grey (N8 Munsell c.c.)	PC & ABS / grey (N8 Munsell c.c.)	ABS / Grey
Approvals / DEKRA	CE 10 EC Certificate no. 0832-CPD-1526; EN54-7 Ex II 1 G Ex ia IIC T5 Ga	CE 10 EC Certificate no. 0832-CPD-1527; EN54-5 Ex II 1 G Ex ia IIC T5 Ga	CE 10 EC Certificate no. 0832-CPD-1528; EN54-18 Ex II (1) G [Ex ia Ga] IIC
Zone classification (Zone)	0 / 1 / 2	0 / 1 / 2	n/a

¹ Depending on algorithm (A1, A2S & BS): XX = +50, +50 & +55°C. Typical room temp.: +25, +25 & +40°C.

All technical features and data are subject to changes without notice, resulting from continuous development and improvement.

Product Leaflet	Date of issue	Revision / Date of revision
MEW01286	2010-10-22	5 / 2012-11-30