

013289 GL0083P

INSTALLATION, OPERATING AND MAINTENANCE
INSTRUCTIONS FOR THE OIL INTERCEPTOR II (ALARM Rx)
OIL LEVEL SENSING AND ALARM SYSTEM



Contact Numbers:

UK:

Service Tel: +44 (0) 845 355 0555

Service Fax: +44 (0) 1264 325245

Ireland:

Service Tel: +44 (0) 28 302 54077

Service Fax: +44 (0) 28 302 60046



This Pack Contains

Sensor Probe * - 1 off	Display Unit - 1 off
Signal Unit *- 1 off	Depth Stand Off - 1 off
Barrier Unit *- 1 off	Fixings Pack- 1 off
Transformer - 1 off	

*Items Marked * Are Supplied Pre-Assembled*

Issue	Description	Date
07	CC1118 & CC1018	May 2013

General

The Oil Interceptor II (Alarm Rx) is a device for monitoring the level of oil accumulating in an Oil Separator tank.

A probe is suspended into the Oil Separator tank and gives an alarm when oil has been detected at the level where the Oil Separator tank is at 90% of total oil storage capacity. Two relay outputs have been provided, which allows the use of an external sounder or beacon and can also be connected to further pollution prevention devices or building management systems via GSM.

The Oil Interceptor II Display is powered by a 9V 100mA transformer, which is plugged into a standard 240V socket.

Oil Separator tanks are classified as Potentially Explosive Areas Ex . The Oil Interceptor II Signal Unit and Probe have been certified to Equipment Category 1G and are therefore suitable for use in Potentially Explosive Atmospheres Zones 0,1 and 2. The Oil Interceptor II Display and Barrier Unit are not suitable for Potentially Explosive Atmospheres, therefore these must be located in a Safe Area.

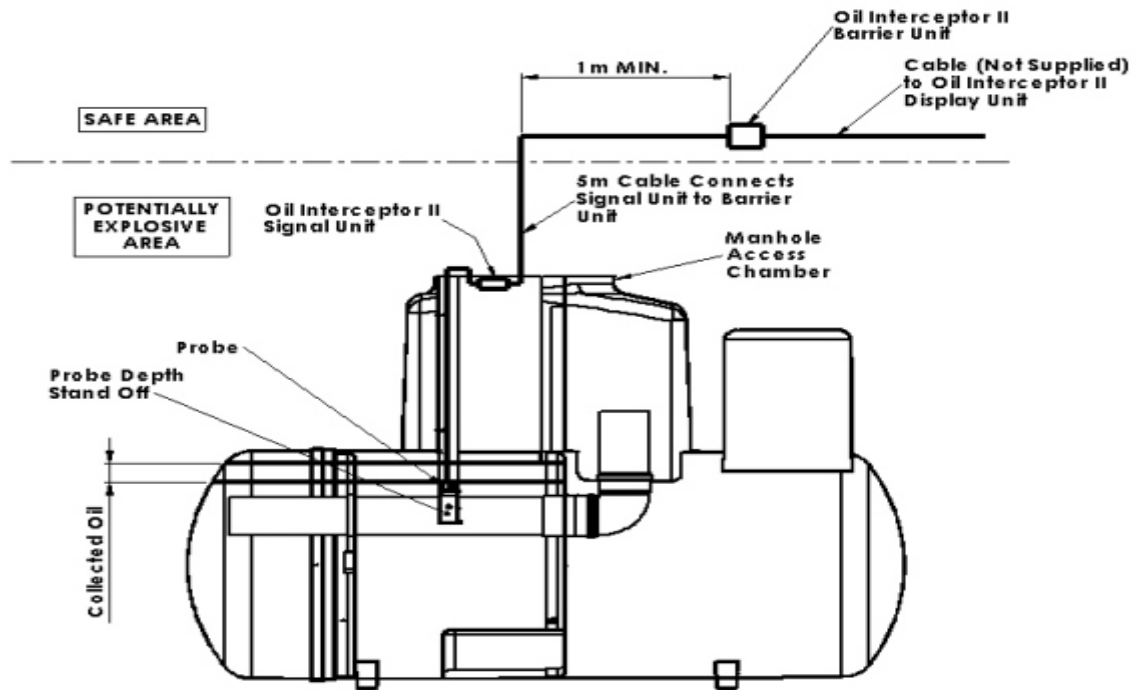


Figure 1 - Oil Separator Tank Arrangement

The Signal Unit to be mounted inside the manhole section of the tank neck. The Barrier Unit must be mounted horizontally away from the Signal Unit position by a minimum distance of 1 metre. After commissioning, use expanding foam to seal duct, preventing fumes accessing the Barrier Unit.

Ex Classification Markings

Signal Unit

Ex II 1 G Ex ia IIB T4 Ga

Barrier Unit

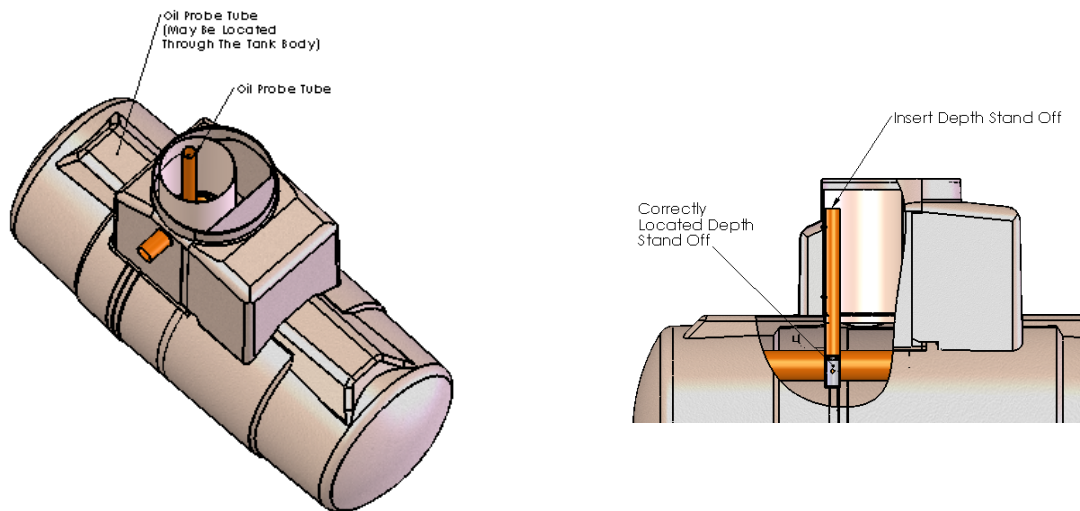
Ex II [1] G [Ex ia Ga] IIB

Installation

Probe

The probe needs to be suspended at the point at which you require the alarm to be activated when sufficient waste oil is present in the Separator and so the probe is no longer surrounded by water. This point is pre-determined by the use of the *Probe Depth Stand Off, (Supplied)*.

Either within the manhole access chamber (or rising from the separator body) is fixed an “Oil Probe Tube”, the oil probe depth stand off must be lowered to the bottom of this tube. Please ensure it is located correctly at the bottom of the tube as this will effect the operation and accuracy of the sensing system. Carefully lower the probe into the oil probe tube, ensuring the probe rests onto the top of the depth stand off.



Provision should be made to allow the cable to be lifted and the probe removed from the Oil Separator tank during the emptying process so that the suction tube from the waste collector does not damage it. Once the waste oil in the Oil Separator tank is removed the cable and probe need to be reinstalled so that the probe is once again under water and at the point at which the alarm condition is to be activated when sufficient waste oil is collected.

Oil Interceptor II Signal Unit

The Oil Interceptor II Signal Unit is to be mounted inside the manhole section of the tank with the wing nut and bolt fitted. Ensure the Oil Interceptor II Signal Unit is mounted in a position where it will not be damaged or exposed to impacts or friction etc. causing sparks which may cause ignition.

Oil Interceptor II Barrier Unit

The Barrier Unit is pre-connected to the Signal Unit with a 5m length of Belden 9966 two core screened cable.

This Barrier Unit must be located in a Safe Area.

The Barrier Unit must be connected to the Oil Interceptor II Display unit on site, with CAT 5 cable. The Barrier Unit has a 4-way terminal block and the Oil Interceptor II Display unit has a 4-way terminal block.

Feed the CAT 5 cable through the cable gland on the Barrier Unit and connect it to the terminal block as shown in Figure 2. Ensure there are 2 strands of wire connected to each terminal. Each of the 4 white wires, has a colour on it, these must be paired to the relevant coloured wire. Ensure cable gland is tightened after cable has been connected.



Terminal	+	-	MD	RX
Wire	Orange	Green	Brown	Blue

Figure 2: Oil Interceptor II Barrier Unit Terminal Block

Oil Interceptor II Display

Choose a position for the Oil Interceptor II display where it can easily be seen, the reset button can be accessed and there is a convenient power source. Loosen the four screws on the front of the display, which secure the cover onto the display and remove the cover.

Feed the CAT 5 cable through the cable gland on the display unit and connect it to the terminal block as shown in Figure 3. Ensure there are 2 strands of wire connected to each terminal. Each of the 4 white wires has a colour on it, these must be paired to the relevant coloured wire.

Holding the display against the intended mounting surface in the correct position, mark the position of the four mounting points on the surface, through the apertures provided. Where the surface requires it, drill and insert rawl plugs where the surface is suitable for screwing to i.e. wood or similar, then suitable self-taping screws can be used. Use screws and rawl plugs provided.

Re-attach front of display. Ensure cable gland is tightened after cable has been connected.

Note: Only plug the transformers power cable into the socket provided in the base of the display and the transformer in to the power socket once the CAT 5 cable has been connected to the Oil Interceptor II Barrier Unit and the cover has been replaced.

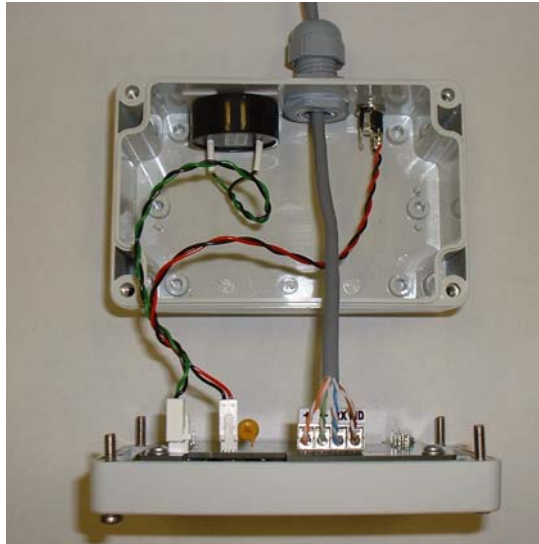
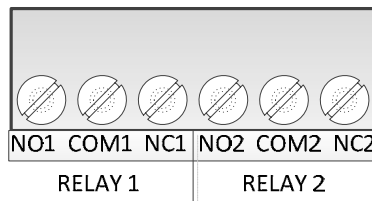


Figure 3: Oil Interceptor II Display Hard Wire Terminal Block

All lights should illuminate on the display, until it receives a signal. Once a good signal is received from the Oil Interceptor II Signal Unit, the power light and H.W. Link light will remain illuminated.

Relay outputs



Max. switching voltage – 250VAC, 220VDC

Max. switching current – 500mA

Operation

During normal operation the probe monitors the interceptor's contents every 6 seconds. Should there be a change in the condition – i.e. an Alarm or back to normal then this will be relayed to the display. Once an Alarm signal is received the Alarm light and the Sounder will sound. The operator should press the reset button to register the fact that the Alarm has been noted. The Alarm light will remain on until a new signal is received with the sensor back in the water.

Displays



Power This light indicates that power is being received by the display – this must be illuminated for the system to be operating satisfactorily.

H.W. Link This light indicates that the Oil Interceptor II is in hard wired mode. If this light is not illuminated, it indicates there is a connection fault between the signal unit and the display.

Alarm	This light means that the Oil Interceptor II probe has changed to no longer being surrounded by water. This can be because sufficient waste oil has been collected in the interceptor requiring it to be emptied or that the probe has not been correctly positioned in the water in the interceptor. Where accompanied by the No Signal or Connection fault then this indicates the cause of the alarm.
No Signal	The Display has not received a signal from the tank signal unit. During normal operation a signal is received once every hour. If no signal has been received in 24 hours the No Signal and Alarm lights will illuminate.
Connection fault	The Display has received a signal indicating that there is a connection fault between the probe and the tank signal unit.

Technical Specification

Oil Interceptor II Display Unit	
Dimensions	120mm (w) x 80mm (h) x 55mm (d)
Material	Polycarbonate
Ambient temperature	-25°C to +70°C
Supply Voltage (Class II mains adaptor)	9V dc, 100mA
Cable (to Barrier Unit)	CAT5E (Not Supplied)
Signal Unit Interface	RS232
Signal Unit Supply	8V dc, 30mA, voltage and current limited
Monitor Interface	RS232
Relay outputs	DPCO, 250VAC, 220VDC, 1A

Oil Interceptor II Barrier Unit, Signal Unit and Probe	
Dimensions: Barrier Unit Signal Unit Probe	82mm (w) x 80mm (h) x 55mm (d) 112mm (w) x 62mm (h) x 31mm (d) 50mm (l) x 24mm (dia.)
Material: Barrier Unit Signal Unit Probe	Polycarbonate Diecast Aluminium alloy (<6% magnesium) finished in grey hammertone High Density Polyethylene
Ambient Temperature	-25°C to +70°C
Electrical Parameters	Um = 253V ac
Cable (From Signal Unit, prefabricated)	PVC, 2 core screened, Type B EN60079-14 3m length between Signal Unit and Probe (maximum length permitted). 5m length between Signal Unit and Barrier Unit (maximum cable length permitted).
Insulation Level	500VAC
Ex Classification: Barrier Unit	 II [1] G [Ex ia Ga] IIB Baseefa02ATEX0043/12X & IECEx BAS05.0016X Issue 6
Ex Classification: Signal Unit & Probe	 II 1 G Ex ia IIB T4 Ga Baseefa02ATEX0043/12X & IECEx BAS05.0016X Issue 6



EC - Declaration of Conformity

In accordance with Directive 94/9/EC

Manufacturer:

Kingspan Environmental Ltd.
180 Gilford Road, Portadown, Co. Armagh,
N. Ireland. BT63 5LF

We, Kingspan Environmental Ltd, declare that the following tank level monitoring equipment complies with Directive 94/9/EC (ATEX):

Oil Interceptor II

And have been tested and certified by:

SGS Baseefa Ltd (Notified Body Number 1180)
Rockhead Business Park
Staden Lane
Buxton
Derbyshire
SK17 9RZ

And issued with the following certificates:

EC-Type Examination Certificate - Baseefa02ATEX0043 – latest supplement
Baseefa02ATEX0043/12X Issued 1st March 2013

IECEX Certificate of Conformity – IECEX BAS 05.0016X Issue 6 Issued 5th March 2013

Equipment Markings:

Transmitter Unit  II 1 G Ex ia IIB T4 Ga

Barrier Unit  II [1] G [Ex ia Ga] IIB

Harmonised Standards applied:

- EN 60079-0: 2012 Explosive atmospheres. Equipment. General requirements
- EN 60079-11: 2012 Explosive atmospheres. Equipment protection by intrinsic safety 'i'

Signature of Authorised Person

Name: Mark McCauley
Position: Systems Co-ordinator
Date: 8th March 2013