ENGINEERING
TOMORROW

Data sheet

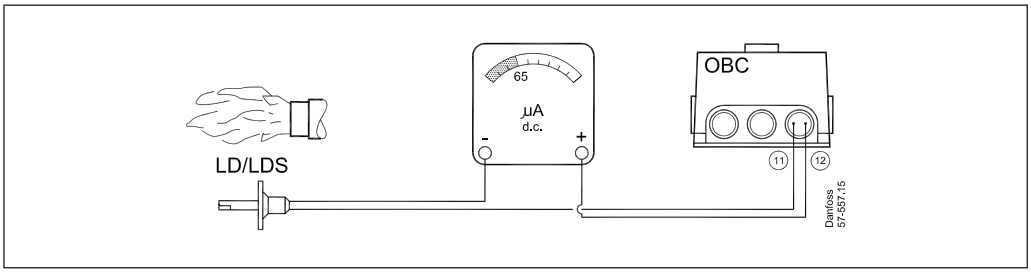
Flame sensors LD/LDS

Description

Danfoss LD/LDS sensors are used to detect the flame in yellow flame oil burners. They are designed for use with Danfoss units of the OBC 80 and BHO 70 series.
LD/LDS sensors meet the requirements of the EN 298:2012 standard, as well as those of the RoHS and WEEE Directives.

Function

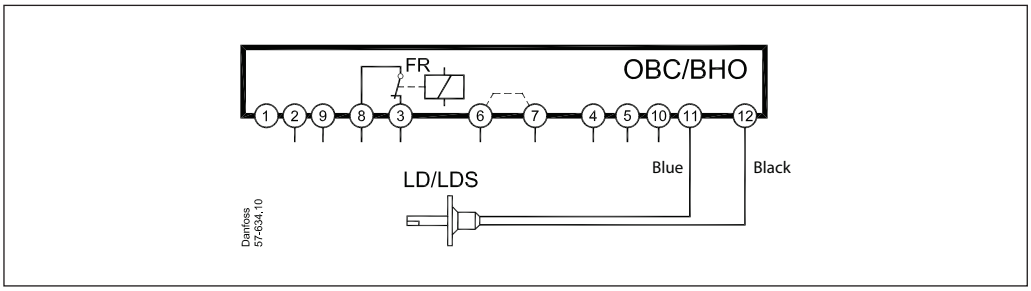
The LD/LDS sensors are based on the photo transistor principle in connection with an amplifier and convert light from the flame into a current. The flame's characteristics and the location of the sensor influence the size of the photo current created in LD/LDS. For this reason, LD/LDS is available in two sensitivity levels.
If a strong enough signal is not produced with the selected sensor, select a sensor with a higher sensitivity level. If the flame cannot be detected at the highest level of sensitivity, use the Danfoss UV sensor.
To determine the signal's quality, use the gauge set-up below.
For no flame/darkness, the value must be ≤ 5 µA; for flame/light the value must be ≥65 µA.



Electrical connection

The LD/LDS sensors connect to Danfoss units of the OBC 80 and BHO 70 series as shown in the diagram.

Please note that the blue wire must be connected to terminal 11, and may not be connected to the common 0 terminal (2) or the appertaining auxiliary terminal in the base section.



Installation

The LD/LDS sensors can be installed using a flange and clamping ring; alternatively, use a rubber sleeve (delivered mounted on LD/LDS).

The sensors are available in two standard lengths, with a longer piece featuring built-in extension tubes.

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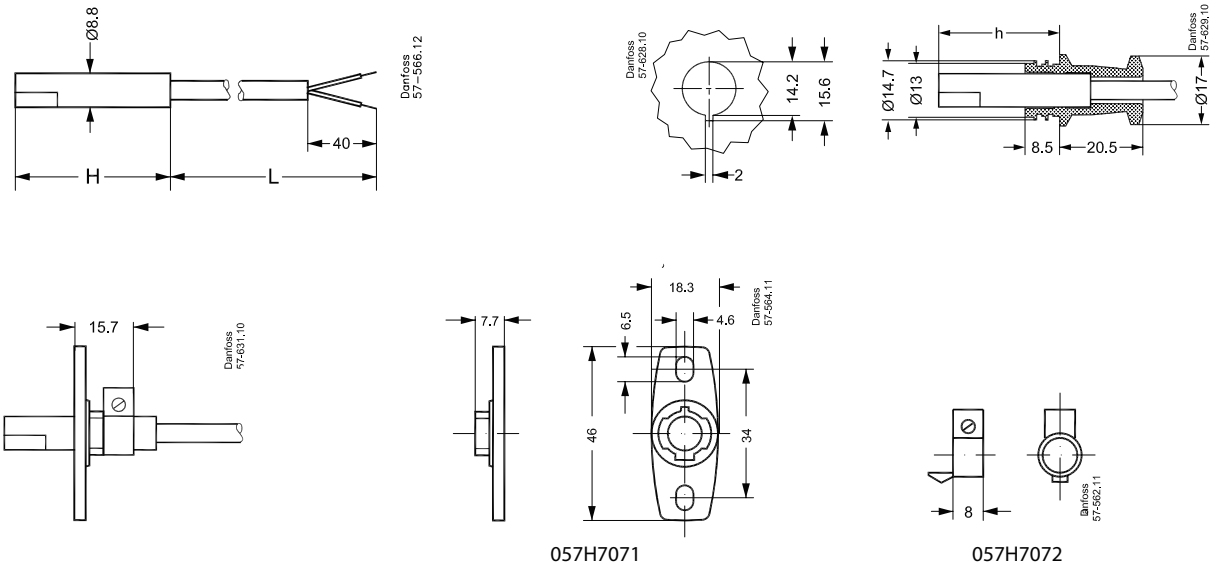
Technical Data

Characteristics		Data
Rated voltage		230V ac
Operating range		195-253 V ac
Frequency		50-60 Hz
Enclosure		IP 40
Installation		Any position
Flame sensor measuring condition		12V dc +/- 2% with Ri=100 Kohm +/- 2%
Signal output		Max. 85 µA
Recomended signal output (light)		≥ 65 µA
Flame signal for no light (dark)		≤ 5 µA
Ambient temperature operation		-20 to + 70°C
Ambient temperature transport		-30 to + 70°C
Weight		See table
Wiring OBC 80/ BHO 70	Blue wire, neutral	Terminal 11
	Black wire, signal	Terminal 12

Ordering
Standard program

Type	Cable length L (mm)	House length H (mm)	Sensitivity	Colour of house	Weight (g)	Code no.
LD	2000	65.5	Normal	Black	94	**057H7105**
LD	800	65.5	Normal	Black	41	**057H7106**
LD	500	50.0	Normal	Black	26	**057H7107**
LDS	500	50.0	High	Blue	26	**057H7108**
LDS	600	65.5	High	Blue	32	**057H7109**
LDS	350	105.0	High	Blue	22	**057H7110**
LDS	800	65.5	High	Blue	41	**057H7111**
Flange	-	-	-	-	3	**057H7071**
Clamping ring	-	-	-	-	1	**057H7072**

Dimensions



057H7071 057H7072

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