

Data Sheet

Movement sensor **Accessory**

Type **RPI 01**

Expand the capabilities by tracking customer's motion around your equipment.



RPI Motion sensor from Danfoss provides a way to improve performance and operation.

Store owners will notice improved value, increased safety and significant reductions in energy consumption and maintenance costs.

RPI 01 is a versatile passive infrared (PIR) motion sensor that can be used in refrigeration applications. This sensor provides the capability to manage the ECO and Early Wake Up mode based on customer's presence in the store.

A passive infrared motion detector located on the bottom front center of the merchandisers, detects the presence of approaching individuals and trigger signals to the controller to control the illumination and temperature of the equipment in the most energy efficient way.

Features:

- Low power consumption
- Wide detection range
- Increased energy savings
- IP65 frontal protection
- High fireproof level
- Designed for harsh environment

Product specification

Overview of the product

A Passive Infrared (PIR) motion detector, located, preferably, on the bottom front center of the refrigerator detects the presence of approaching individuals and trigger signals to the controller to manage the operation and status of the controller (ECO mode) to allow flexible operation of some settings like light and temperature control. The field of motion detection of the PIR value fans out to 45 degrees vertically and 80 degrees horizontally.

Figure 1: Vertical direction

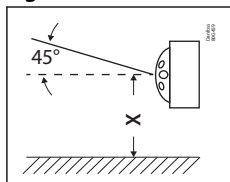


Figure 2: Horizontal direction

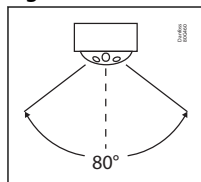
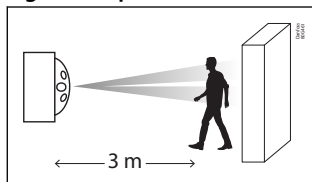


Figure 3: Operational distance



General features

Table 1: General features

Features	Description
Power supply	DC 5 – 12 V
Current Draw	Max. 20 mA
Action output	PORT (NPN)
Detection Method	Passive infrared
Stabilization time when the power supply working	Max. 45 s
Detection speed	0.3 – 1.5 m/s
Detection angle	Horizontal: 80° Vertical: 45°
Detection distance	3 m
Operating temperature	-10 – 55 °C
Storage temperature	-40 – 70 °C
Environment humidity	95% Max
Connector type	Double insulation connector
Optic system	Resistant UV lens
Protection grade	Front: IP65 Rear: IP32
Resin	Flame resistant UL94 - 5 V A

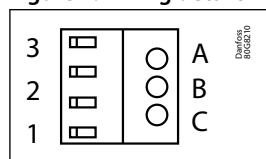
Connection

Table 2: Connection

Sensor	Port
ERC 112 supports RPI 01 sensor	"S3" port "di" port
ERC 113 supports RPI 01	"S3" port always "di" port when ERC 113 is not connected to RDI 107

Wiring details

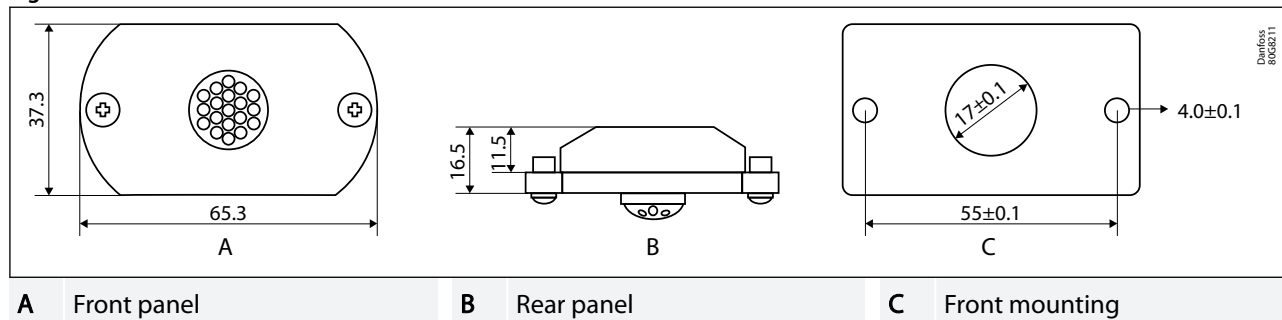
Figure 4: Wiring details



A	Black: ground
B	Red: 5 – 12 V
C	White: signal

Dimensions

Figure 5: Dimensions



Mounting and Unmounting

Table 3: Mounting and Unmounting

Mounting		Unmounting	
	Insert the PIR Value into the cabinet frame		Remove both the M3.5 screw from the screw hole using a Phillips head screwdriver
	Place the M3.5 screw in the screw hole and fasten the screw using a Phillips head screwdriver		Remove the PIR Value from the cabinet frame
⚠ WARNING: Do not connect mains power until the controller is correctly mounted.		⚠ WARNING: Disconnect the power supply before unmounting	

Ordering

Product part numbers

Table 4: Product part numbers

Description	Code No.
RPI 01, 3000 mm cable length	080G3392

Certificates, declarations, and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

Some approvals may change over time. You can check the most current status at danfoss.com or contact your local Danfoss representative if you have any questions.

Table 5: Certificates, declarations, and approvals

Regulatory and Compliance	Directive	Standards	Country
Electrical Safety (Polymeric Material)	-	UL 746C (Referenced by UL 60730-1)	US / Canada
RoHS	RoHS Directive: 2011/65/EU & 2015/863/EU	EN 50581:2012, EN IEC 63000 : 2018	Europe
Enclosure material flammable class	-	UL 746C, Flammability - 5V (500 W)	US / Canada
Certification and Manufacturer Declarations on Conformity CE, C-UL-US, CQC, ENEC & RoHS			

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