



Operating instructions

1. Specification

1.1 Intended use

The rotary blade level indicator IRP observes the filling level as a limit switch. It can be used as indicator for dusty and powdery, granulated and grainy bulk goods like dust, flour, grain, sand, plastic, etc. with a grain size up to 20 mm, bulk density up to 1 t/m³ and a height of product up to 5 meters.

Higher densities and higher height of products to be consulted.

1.2 Function

The rotating measuring blade, projecting into the silo or container, is driven by a gearmotor. If the bulk material reaches the measuring blade, the rotation will be hindered and it will be stopped. The return torque turns the pivoted motor from its end position and actuates the signal switch. A second switch turns the motor off.

If the filling level of the bulk material sinks, the blade becomes freely again and a spring will turn the motor back into its original end position. Thereby the motor will be turned on again and the signal switch will be switched back.

1.3 Technical data

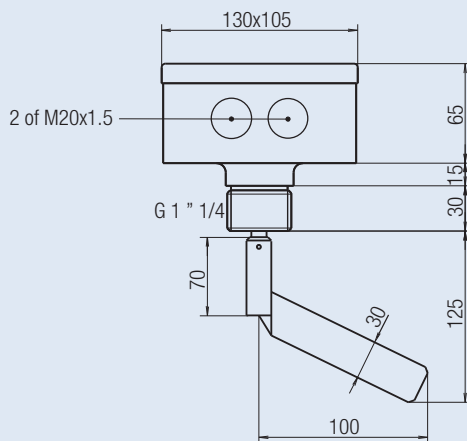
Manufacturer	Talleres Filsa, S.A.U.
Address	Bernat Metge, 33 08100 Mollet del Vallès (Barcelona) SPAIN
Name	Rotary blade indicator
Type	IRP ref: 2110-... IRP-R ref: 2111-...
Measuring blade speed	5 rpm
Switching voltage	Standard 230 V AC (50 ... 60 Hz) (Under request 115 V AC, 48 V AC, 24 V AC, 24 V DC due to a converter)
Power consumption	3 VA to AC; 3 W to DC
Density of the product	0.01 t/m ³ ... 1 t/m ³
Maximum pressure	-0.5 bar ... +0.5 bar (Under request up to +1 bar with sealing ring of Stainless Steel-PTFE-Viton)
Cably entry	2 of M20x1.5
Maximum voltage of contact	250 V AC
Switching function	1 NO + 1 NC
Capacity of the contact	2 A / 250 V AC (for resistive loads)
	For inductive or capacitive loads reduce at 50%
Ambient temperature	-20 °C ... +60 °C
Protection	IP65 according DIN EN60529
Weight	0.8 kg depending on the model
1.4 Materials	
Housing and cap	Glass reinforced ABS
Flange connection and Nut (Under request)	Aluminium or Stainless Steel Zincated Steel or Stainless Steel
Measuring blade	S.S. 1.4301, shaft 1.4305 (Under request special models of S.S. 1.4401 or Plastic)

Sealing ring

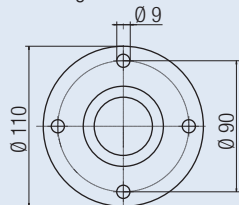
IRP	NBR
IRP-R	Stainless Steel-PTFE-Viton
Rod shaft	Stainless Steel
Protection tube shaft	Zincated Steel
(Under request Stainless Steel)	

1.5 Dimensiones

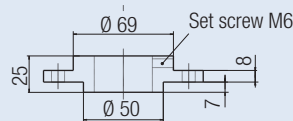
Approximate measures are given in mm.


Flange connection

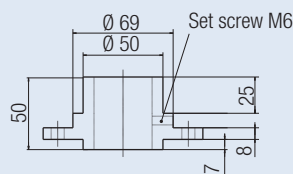
Under request. Threaded flange in all models G 1 " 1/4 female.



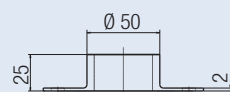
IRP-001

A-25-110


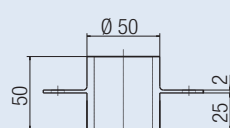
IRP-002

A-50-110


IRP-003

I-25-110


IRP-004

I-50-110


IRP-005

2. Installation
2.1 Preparing for use

- Read the Safety instructions and the Operating instructions before using the controller.
- Verify if you got all the parts, the controller, blade with pin and shaft extension if it was requested.

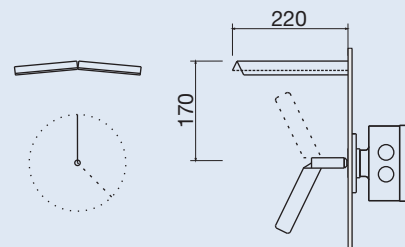
2.2 Mechanical connection

There are models that can be mounted horizontally or vertically into the silo.

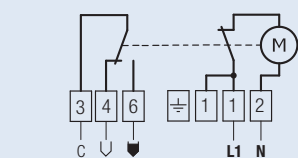
The standard form is mounting the device with a flange, drilling holes on the silo to allow the mounting of the controller using screws, rods, fasteners or nuts. If the flange was not requested, the thread is 1 " 1/4 male, depending on the model and can be fixed using 1 or 2 nuts or introducing it into a threaded socket with a maximum of 25 mm length. If it is larger, the bulk goods have the possibility to deposit in the thread socket. This could provoke that the device becomes useless.

Protection roof

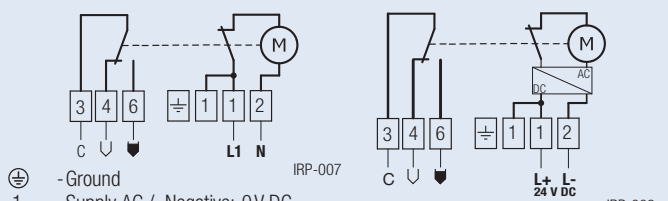
The blade must not be hit by the filling stream. To avoid this, deflect the filling stream or install a deflection screen or a protection roof. It is also recommended to install a protection roof when the controllers are used as empty-indicator or medium-indicator in silos where vaults could be formed or where high loads above it could exist.



IRP-006

2.3 Electrical connection
Connection diagram AC


IRP-007

Connection diagram DC


IRP-008

- ⊕
- 1 - Supply AC / - Negative: 0V DC
- 2 - Supply AC / - Positive: 24V DC
- 3 - Common
- 4 - Normally closed
- 6 - Normally open

Cable gland

- Fasten the cable gland after making the electrical connection.
- Fix and fasten the screw nut of the cable gland to make sure of the water-tightness.