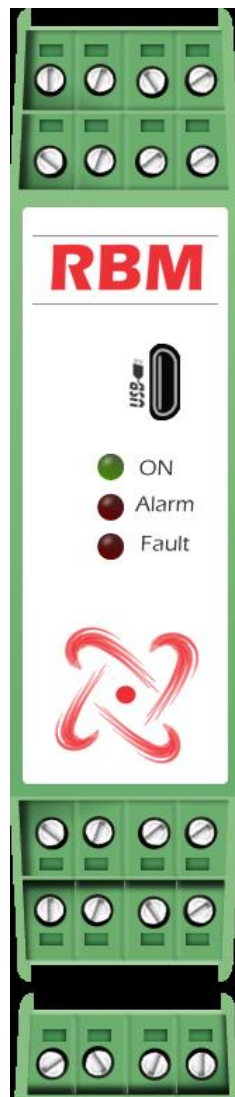


CATALOG
BAG AND MEMBRANE RELAY



SUMMARY

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INTRODUCTION

The Bag and Membrane Relay – BMR, was developed to supervise the presence of liquids (Oil, Water...) on power transformers purses and/or sealer membrane spots in order to monitor their integrity continuously, to prevent insulation oil contamination in cases of sealing rupture. It can also detect leakage and liquid presence on containment tanks. The liquid temperature can reach a range of -40°C up to 125°C.

The Relay module circuit is activated by a microprocessor, totally isolated and protected against electrical surges and electrical inductions. It was built obeying strict quality patterns and it uses last generation electronic components (SMD), its hardware was designed to stand to severe work conditions. It can be installed directly on Reactors and Power Transformers, on panels of substations courtyards, maritime platforms and chemical plants. It attends to requirement levels, supportability and reliability according with the standards IEC, DIN, IEEE and ABNT.

Besides monitoring the liquid detection locally through a frontal indicative LED, the BMR have a reversible relay that can commute until 6 and with programmable logic operation. It has a RS-485 Serial port with protocol selection option between MODBUS RTU and DNP 3 Level 1, that allows remote access to the instrument and to online monitoring through the supervisory system (SCADA)

MAIN CHARACTERISTICS

- Universal Power Supply with 48 up to 265 Vdc/Vac Range;
- Micro Processed Relay Module and with High Speed operation;
- Compact enclosure with 22,5x100x113,5mm (8,85x39,37x44,68 inches) on ABS to 13,77 DIN rails;
- Stainless steel Sensor AISI-304, Dimensions; 14x70 / M16x70mm;
- A 6A Relay with NOC contacts and with programmable logic;
- A 6A NC Contact Relay for instrument failure indication or on Watchdog Sensor;
- Exclusive Connectors with Pluggable System;
- RS-485 digital output with Modbus RTU and DNP3 L1;
- Auto Baud Rate with automatic detection and automatic selection between a 2.400 up to 57.600 bps range;
- USB 2.0 frontal para parametrização através do software UseEasy™;
- Frontal Micro USB for UseEasy™ Software Setting;
- Easy Application and Installation;
- 2 Years Warranty;

TECHNICAL DATA - RBM

BAG AND MEMBRANE RELAY	
Power Supply	48 to 265 Vdc/Vac 50/60 Hz
Sensor Input	SLE
Switch Temperature operation	-40 to +85°C
Switch maximum capacity	70W/250VA
Maximum electrical current conduction	6.0 Amperes
Output Contact	1 NAF and 1NF
Serial Communication Port	RS-485
Communication Protocol	MODBUS-RTU and DNP3.0 Lv.1
Auto Baud Rate Range (Automatic detection and selection)	2.400 to 57.600 bps
Fixation	DIN Rail
Enclosure	25,5 x 100 x 113,5 mm

TECHNICAL DATA - SLE

Liquid Sensor – SLE	
Sensor Type	Photo Transistor
Dimension	Dia. 14x70mm / M16x70mm
Material	Stainless Steel AISI-304
Sensor Operation Temperature	-40 to +125°C
Protection Level	IP67
Response time	50 µSec
Working Pressure	0 to 5bar
Fixation	With Thread or Smooth Body
Cable	3x18 AWG with grounding shield

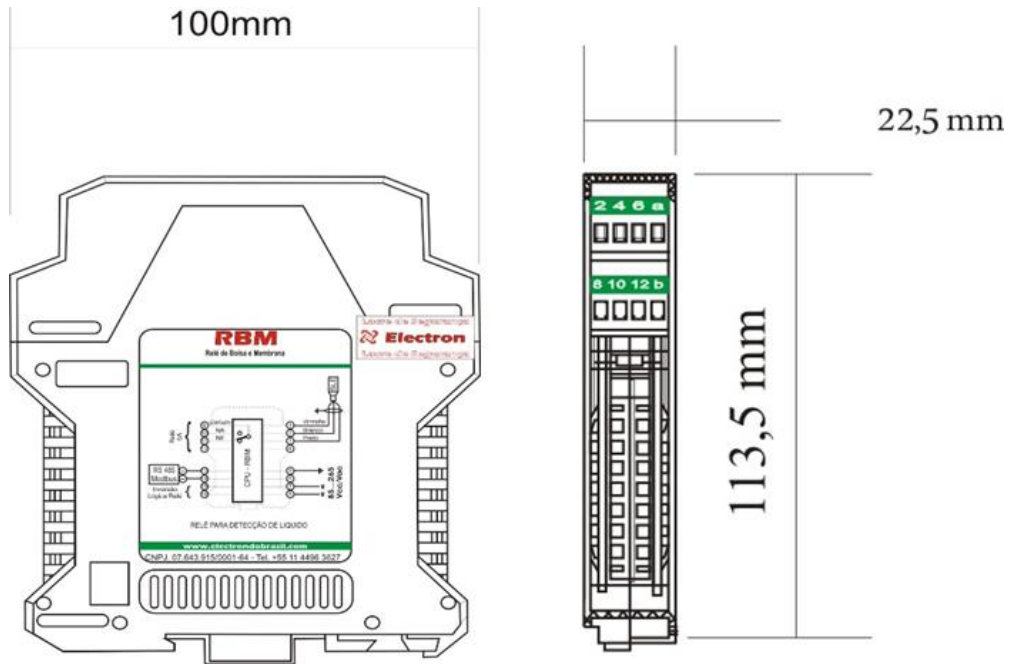
TECHNICAL DATA - CPC

Liquid Sensor – CPC	
Material	Injected Aluminum
Protection Level	IP 65
Connection head	4 wires

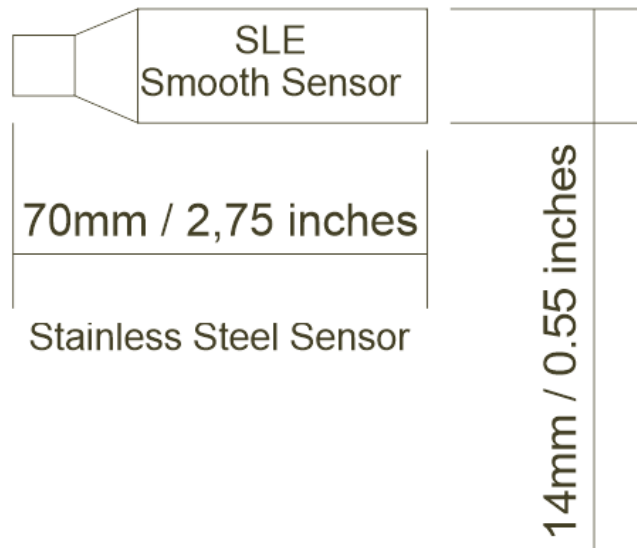
TYPE TEST MEASURED

- Applied Voltage (IEC 60255-5): 2KV / 60Hz / 1 min. (Against Earth);
- Voltage Impulse (IEC 60255-5): 1,2/50 µseg. / 3 neg. e 3 pos. / 5 segs. Intervalo;
- Immunity to Electrical Transitory (IEC 60255-4) (IEC 60255-6): 2,5 KV / 1,1 MHz / 2 sec, 400 outbreaks/seg. – Cycles;

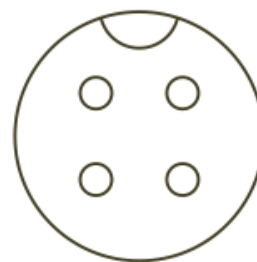
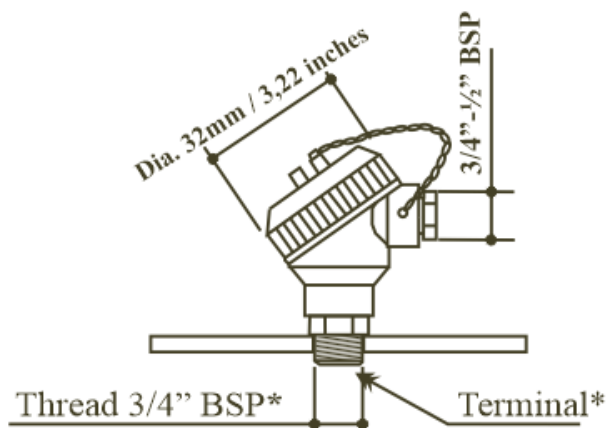
DIMENSIONS RBM



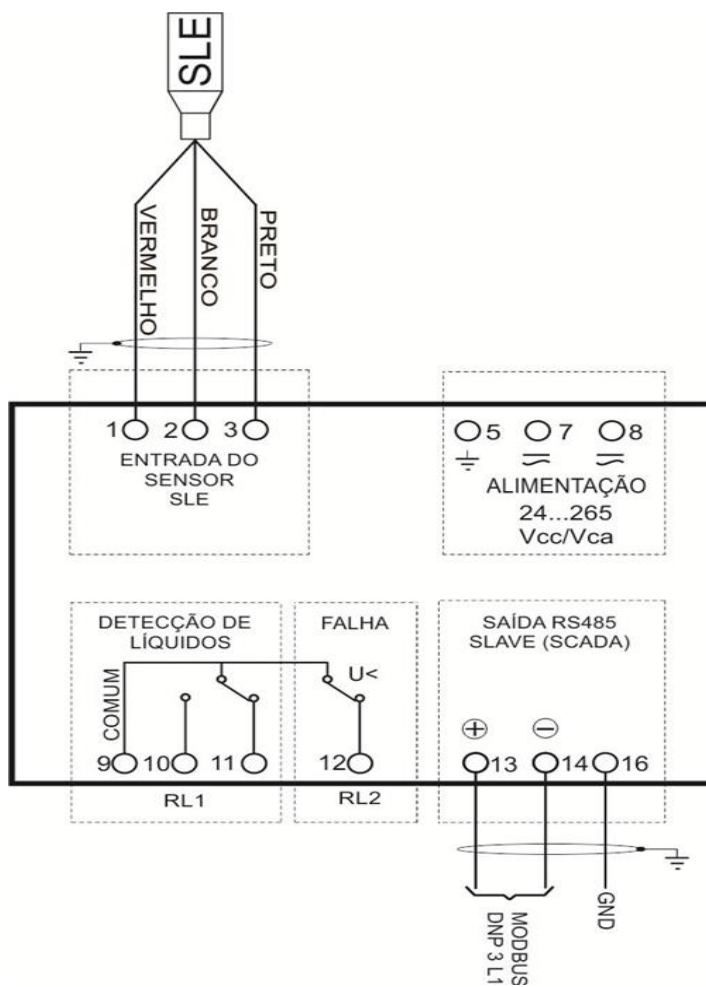
DIMENSIONS SLE



DIMENSIONS CPC



CONNECTION DIAGRAM



JUNCTION BOX HEAD TYPE CONNECTION DIAGRAM



ORDER SPECIFICATION

MBR - MOD.

Input Sensor	
0	No Sensor
1	Sensor with connector
2	Sensor without connector
3	Special Sensor

Junction Box	
0	Without Junction Box
1	With Junction Box

Sensor Cable Length (Meters)
XX