Liquid Level - Motor Winding Temperature Monitors
CM-ENS UP/DOWN / CM-MSS
SPDT (c/o) Relay Output

- Monitoring and control of conductive liquids
- Selectable function “fill” or “drain”
- Adjustable sensitivity 5 - 100 KΩ
- 1 SPDT (c/o)
- 2 LED‘s for status indication

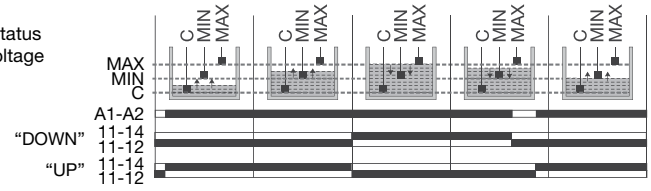
Complete Product Details:
http://www.ssac.com/pp1.htm

The CM-ENS UP/DOWN monitors levels of conductive liquids, and is used for liquid level control in pump systems.

The CM-ENS senses the difference in the resistance of the liquid and air, to determine the liquid level. The output relay’s function fill (UP) or drain (DOWN) is switch selectable. If the “UP” function is selected, the output relay is energized until the liquid touches the upper probe. If the “DOWN” function is selected, the output relay energizes until the liquid level falls below the Min probe.

1 Function Selector Switch:
UP - Fill
DOWN - Drain
2 Adjustable Sensitivity from 5 to 100K ohms
3 R: Yellow LED - Relay Status
4 U: Green LED - Input Voltage
5 Compact Package

Function

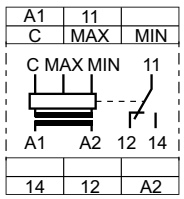


When using a metal tank the C electrode is not required. In this case the cable can be connected directly to the metal surface of the tank.

Technical Data

Output	
Rating - AC12 (resistive) 230 V	4 A
Rating - AC15 (inductive) 230 V	3 A
Mechanical	
Dimensions	3.94x3.07x0.89 in (100x78x22.5mm)
Degree of Protection	Enclosure IP50 / Terminals IP20

Connection



A1 - A2 Input voltage
C Ground reference electrode
MAX Maximum level
MIN Minimum level
11-12/14 Output contacts

Ordering Table

Part Number	Series	Input Voltage
1SVR 430 851 R0200	CM-ENS UP/DOWN	110-130 V AC

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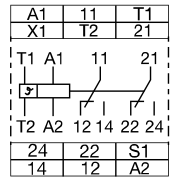
- 1 PTC Circuit
- Automatic or Manual Reset
- Broken Wire Detection
- Remote Reset Terminals
- 2 SPDT (2 c/o) Contacts
- 2 LED’s for Status Indication
- 22.5 mm wide enclosure,
- 35mm DIN Rail Mounting

CM-MSS (2) Thermistor Motor Protection Relay - 1 PTC Sensor Circuit

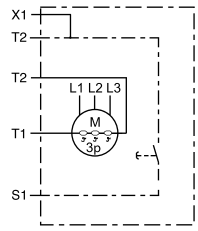
The CM-MSS (2) is designed to protect motor windings from overheating and failure by sensing the temperature with an embedded PTC thermistor. Selection of the protection relay is independent of motor size, Hp rating, insulation class and starting method. The three or more PTC winding sensors are connected in series with terminals T1 and T2. When the total resistance exceeds 1.5 K ohms the output de-energizes and latches (non-volatile). The unit is reset with the onboard or an accessory external reset switch. Automatic reset is selected by adding a jumper from X1 to T1.

1 Manual Reset Button
2 F: Red LED - Fault Tripped
3 U: Green LED - Input Voltage Applied
4. 2 SPDT (2 c/o) Output Contacts
5. Compact package

Connection



A1 - A2 Input Voltage
T1 - T2 Sensor Circuit
S1 - T2 Remote Reset
X1 - T2 Jumper = Automatic Reset
11 -12/14 Output Contacts
21 - 22/24 Normally Engergized



M Motor

Technical Data

Output	
Rating	Res. 4 A / Ind. 3 A
Mechanical	
Dimensions	3.94 x 3.07 x 0.89 in. (100 x 78 x 22.5 mm)
Degree of Protection	Enclosure IP50 / Terminals IP20

Ordering Table

Part Number	Series	Input Voltage
1SVR 430 811 R9300	CM-MSS	24 V AC
1SVR 430 811 R0300		110 130 V AC