



Level control  
relay for  
emptying  
function. Single  
voltage. Modular  
version  
LVM20  
Emptying

Product designation

Product type designation

Function

#### Auxiliary supply

|                     |                |
|---------------------|----------------|
| Supply voltage Type | Single voltage |
|---------------------|----------------|

|                                            |  |
|--------------------------------------------|--|
| Rated auxiliary supply voltage $U_s$<br>AC |  |
|--------------------------------------------|--|

|                         |     |     |                  |
|-------------------------|-----|-----|------------------|
|                         | min | VAC | 24               |
| Operating voltage range |     |     | 0.85...1.1 $U_s$ |
| Rated frequency         |     | Hz  | 50/60            |
| Power consumption Max   |     | VA  | 3.5              |
| Power dissipation Max   |     | W   | 1.8              |

#### Output characteristics

|                                  |     |   |
|----------------------------------|-----|---|
| Number of connectable electrodes | Nr. | 3 |
|----------------------------------|-----|---|

Type of electrode

|  |  |                                                                                          |
|--|--|------------------------------------------------------------------------------------------|
|  |  | Electrode and<br>electrode<br>holders: SN1 /<br>SCM / CGL /<br>PS31 / PS3S or<br>similar |
|--|--|------------------------------------------------------------------------------------------|

|                   |  |         |
|-------------------|--|---------|
| Electrode voltage |  | 7.5 VAC |
|-------------------|--|---------|

|             |            |                        |
|-------------|------------|------------------------|
| Sensitivity | k $\Omega$ | 2.5...50<br>adjustable |
|-------------|------------|------------------------|

#### Time delay

|               |   |            |
|---------------|---|------------|
| Tripping time | s | $\leq 0.6$ |
|---------------|---|------------|

|                |   |             |
|----------------|---|-------------|
| Resetting time | s | $\leq 0.75$ |
|----------------|---|-------------|

#### Relay outputs

|                  |     |   |
|------------------|-----|---|
| Number of relays | Nr. | 1 |
|------------------|-----|---|

Relay state

|  |  |                                                        |
|--|--|--------------------------------------------------------|
|  |  | Normally de-<br>energised,<br>energises at<br>tripping |
|--|--|--------------------------------------------------------|

Contact arrangement

|  |  |                                      |
|--|--|--------------------------------------|
|  |  | 1 changeover<br>contact C/O-<br>SPDT |
|--|--|--------------------------------------|

|                                    |     |     |
|------------------------------------|-----|-----|
| Rated operational voltage AC (IEC) | VAC | 250 |
|------------------------------------|-----|-----|

|                           |     |     |
|---------------------------|-----|-----|
| Maximum switching voltage | VAC | 400 |
|---------------------------|-----|-----|

|                                                    |   |   |
|----------------------------------------------------|---|---|
| IEC Conventional free air thermal current $I_{th}$ | A | 8 |
|----------------------------------------------------|---|---|

|                                         |  |      |
|-----------------------------------------|--|------|
| UL/CSA and IEC/EN 60947-5-1 designation |  | B300 |
|-----------------------------------------|--|------|

|                                   |        |        |
|-----------------------------------|--------|--------|
| Electrical life (with rated load) | cycles | $10^5$ |
|-----------------------------------|--------|--------|

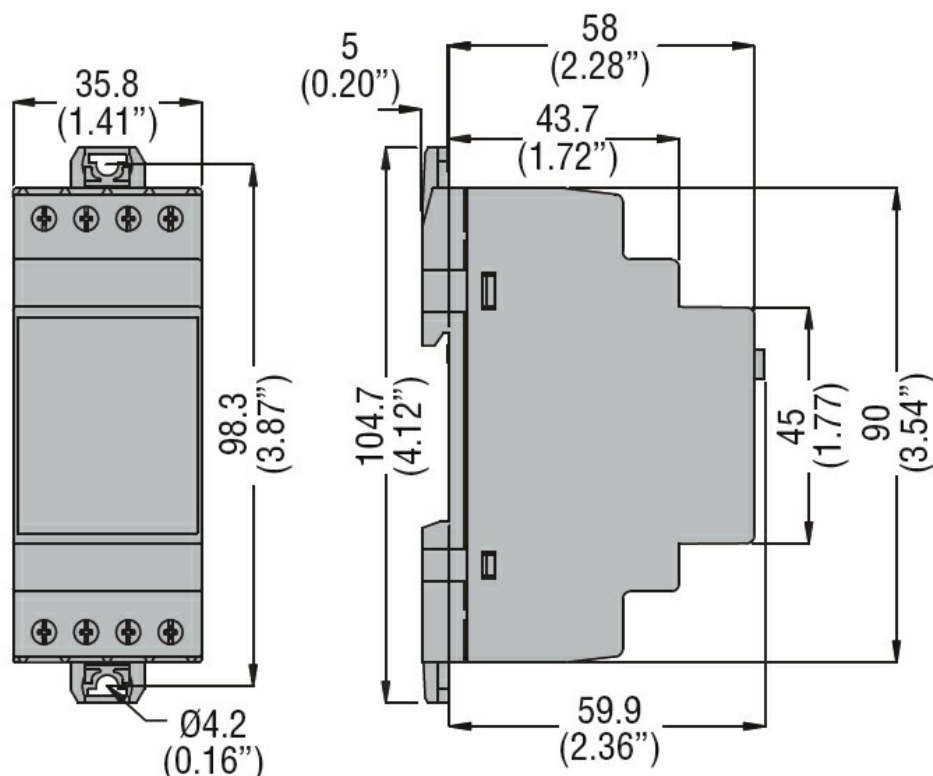
|                 |        |                  |
|-----------------|--------|------------------|
| Mechanical life | cycles | $30 \times 10^6$ |
|-----------------|--------|------------------|

#### Indications

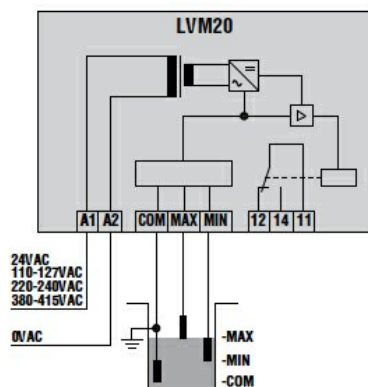
|                                                                |                                                    |      |      |  |
|----------------------------------------------------------------|----------------------------------------------------|------|------|--|
| Indication                                                     | 1 green LED for power on 1 red LED for relay state |      |      |  |
| Functions                                                      |                                                    |      |      |  |
| 3 detecting electrodes (MIN, MAX and COM)                      | Yes                                                |      |      |  |
| 5 detecting electrodes (MIN1, MAX1, MIN2, MAX2 and COM)        | No                                                 |      |      |  |
| Sensitivity adjustment 2.5...50k Ω                             | Yes                                                |      |      |  |
| Sensitivity adjustment 2.5...100k Ω                            | No                                                 |      |      |  |
| Sensitivity adjustment 2.5...200k Ω                            | No                                                 |      |      |  |
| Adjustable sensitivity full-scale value 25-50-100-200 k Ω      | No                                                 |      |      |  |
| Separate sensitivity adjustment for MAX probe (foam detection) | No                                                 |      |      |  |
| Emptying function                                              | Yes                                                |      |      |  |
| Filling function                                               | No                                                 |      |      |  |
| Emptying function with MIN and/or MAX alarm                    | No                                                 |      |      |  |
| Filling function with MIN and/or MAX alarm                     | No                                                 |      |      |  |
| Emptying function with pump priority change                    | No                                                 |      |      |  |
| Filling function with pump priority change                     | No                                                 |      |      |  |
| Tank filling, well drawing and alarm                           | No                                                 |      |      |  |
| Filling-emptying adjustment selector                           | No                                                 |      |      |  |
| Programming selector for 5 different                           | No                                                 |      |      |  |
| Motor start-up priority change                                 | No                                                 |      |      |  |
| Connections                                                    |                                                    |      |      |  |
| Terminals type                                                 | Screw                                              |      |      |  |
| Tightening torque for terminals                                | max                                                | Nm   | 0.8  |  |
|                                                                | max                                                | lbin | 7    |  |
| Conductor cross section                                        |                                                    |      |      |  |
| AWG/Kcmil                                                      | min                                                | AWG  | 24   |  |
|                                                                | Max                                                | AWG  | 12   |  |
| IEC                                                            | min                                                | mm²  | 0.2  |  |
|                                                                | Max                                                | mm²  | 4    |  |
| Insulations                                                    |                                                    |      |      |  |
| Rated insulation voltage Ui                                    |                                                    | V    | 415  |  |
| Rated impulse withstand voltage Uimp                           |                                                    | kV   | 6    |  |
| Operating frequency withstand voltage                          |                                                    | kV   | 4    |  |
| Double insulation Supply / relay / electrode                   |                                                    | VAC  | ≤250 |  |
| Ambient conditions                                             |                                                    |      |      |  |
| Temperature                                                    |                                                    |      |      |  |
| Operating temperature                                          | min                                                | °C   | -20  |  |
|                                                                | max                                                | °C   | +60  |  |
| Storage temperature                                            | min                                                | °C   | -30  |  |
|                                                                | max                                                | °C   | +80  |  |
| Housing                                                        |                                                    |      |      |  |
| Execution                                                      | Modular DIN rail mounting                          |      |      |  |
| N° of modules                                                  | 2                                                  |      |      |  |
| Material                                                       | Self-extinguishing polyamide                       |      |      |  |

|                          |                                                                               |
|--------------------------|-------------------------------------------------------------------------------|
| Mounting                 | 35mm DIN rail<br>(IEC/EN 60715)<br>or by screws<br>using extractable<br>clips |
| IEC degree of protection | IP40 on front /<br>IP20 on terminals                                          |
| Dimensions (W x H x D)   | mm 35.8 x 104.7 x<br>64.9                                                     |
| Weight                   | g 215                                                                         |

#### Dimensions



#### Wiring diagrams



#### Certifications and compliance

##### Compliance

CSA C22.2 n° 14.

IEC/EN 60255-5

IEC/EN 61000-6-2

IEC/EN 61000-6-3

UL508

##### Certificates

cULus

EAC

ETIM classification

ETIM 8.0

EC001447 - (Fill)  
level monitoring  
relay