

# NIVEAU-SCHALTRELAIS MODULARE AUSFÜHRUNG, ENTLEERFUNK. UND AUT. RÜCKSTELLUNG 220...240VAC

Product designation         Level control relay for emptying function. Single voltage. Modular version           Product type designation         LVM20           Function         Emptying           Auxiliary supply           Single voltage           Rated auxiliary supply voltage Us           AC           Min         VAC         220           Max         VAC         240           Coperating voltage range         Single voltage           Rated frequency         Hz         50/60           Power consumption Max         VA         3.5           Power dissipation Max         W         1.8           Output characteristics         W         1.8           Number of connectable electrodes         Nr.         3           Type of electrode         Power dissipation Max         W         1.8           Type of electrode         Nr.         3         Electrode and electrode           Electrode of connectable electrodes         Nr.         3         Sensitivity         AC         2.550         Sensitivity         AC         2.550         Sensitivity         AC         2.550         Sensitivity         AC         2.550         Sensitivity         Nr.				Al Al II II
Auxiliary supply         Single voltage           Rated auxiliary supply voltage Us         min         VAC         220           Max         VAC         240           Operating voltage range         "0.851.1 Us         8.851.1 Us           Rated frequency         Hz         50/60           Power consumption Max         W         3.5           Power dissipation Max         W         1.8           Output characteristics         W         1.8           Number of connectable electrodes         Nr. 3         1.8           Type of electrode         Electrode and electrode holders: SN1 / SCM / CGL / PS31 / PS33 or similar         SCM / CGL / PS31 / PS35 or similar           Electrode voltage         7.5 VAC         Scm / CGL / PS31 / PS35 or similar           Electrode voltage         2.550         adjustable           Time delay         Tripping time         \$ \$ \$0.6           Resetting time         \$ \$ \$0.6         Scm /				relay for emptying function. Single voltage. Modular version
Simply voltage Type				Emptying
Rated auxiliary supply voltage Us           AC         min         VAC         220           Max         VAC         240           Operating voltage range				
AC         min Max         VAC VAC         220 VAC           Operating voltage range	,			Single voltage
Deperating voltage range         vAC         240           Rated frequency         HZ         50/60           Power consumption Max         VA         3.5           Power dissipation Max         W         1.8           Output characteristics         W         1.8           Number of connectable electrodes         Nr.         3           Type of electrode         Nr.         3           Electrode woltage         T,5 VAC           Sensitivity         kΩ         2.550           Sensitivity         kΩ         2.550           Tripping time         S         ≤0.6           Resetting time         S         ≤0.5           Resetting time         S         ≤0.75           Relay outputs         Nr.         1           Number of relays         Nr.         1           Relay state         Normally de-energised, energised, energises at tripping           Contact arrangement         VAC         250           Rated operational voltage AC (IEC)         VAC         250           Maximum switching voltage         VAC         400           IEC Conventional free air thermal current lith	· ····			
Max	AC		\	000
Operating voltage range         0.851.1 Us           Rated frequency         Hz         50/60           Power consumption Max         VA         3.5           Power dissipation Max         W         1.8           Output characteristics         W         1.8           Number of connectable electrodes         Nr.         3           Electrode         holders: SN1 / SCM / CGL / PS31 / PS3S or similar         SCM / CGL / PS31 / PS3S or similar           Electrode voltage         7.5 VAC         Sensitivity           Sensitivity         KΩ         2.550 adjustable           Trime delay         Trime delay         Tripping time         s         \$0.6           Resetting time         s         \$0.75         Relay outputs           Number of relays         Nr.         1         Normally deenergises at tripping at tripping trip			_	
Rated frequency         Hz         50/60           Power consumption Max         VA         3.5           Power dissipation Max         W         1.8           Output characteristics         Image: Control of the park of the		Max	VAC	
Power consumption Max				
Power dissipation Max         W         1.8           Output characteristics         Nr.         3           Number of connectable electrodes         Nr.         3           Electrode and electrode holders: SN1 / SCM / CGL / PS31 / PS35 or similar           Electrode voltage         7.5 VAC           Sensitivity         kΩ         2.5 50 adjustable           Time delay         2.5 50 adjustable           Tripping time         s ≤ 0.6         ≤ 0.75           Relay outputs         Nr.         1           Number of relays         Nr.         1           Relay state         Normally denergises at tripping           Contact arrangement         1 changeover contact C/O-SPDT           Rated operational voltage AC (IEC)         VAC         250           Maximum switching voltage         VAC         400           IEC Conventional free air thermal current Ith         A         8           UL/CSA and IEC/EN 60947-5-1 designation         B300           Electrical life (with rated load)         cycles         10s				
Output characteristics         Nr.         3           Function of connectable electrodes         Nr.         3           Electrode electrode holders: SN1 / SCM / CGL / PS31 / PS35 or similar         SCM / CGL / PS31 / PS35 or similar           Electrode voltage         7.5 VAC           Sensitivity         kΩ         2.550 adjustable           Time delay         Tripping time         s ≤0.6           Resetting time         s ≤0.75           Relay outputs         Number of relays         Nr.         1           Number of relays         Nr.         1           Relay state         energised, energised, energised, energised, energised, energises at tripping         1 changeover contact C/O-SPDT           Contact arrangement         contact C/O-SPDT           Rated operational voltage AC (IEC)         VAC         250           Maximum switching voltage         VAC         400           IEC Conventional free air thermal current Ith         A         8           UL/CSA and IEC/EN 60947-5-1 designation         B300           Electrical life (with rated load)         cycles         10°	· · · · · · · · · · · · · · · · · · ·			
Number of connectable electrodes         Nr. 3           Type of electrode         Electrode and electrode holders: SM1 / SCM / CGL / PS31 / PS33 or similar           Electrode voltage         7.5 VAC           Sensitivity         kΩ 2.550 adjustable           Time delay         Tripping time           Tripping time         \$ ≤ 0.6           Resetting time         \$ ≤ 0.75           Relay outputs         Nr. 1           Number of relays         Nr. 1           Relay state         energised, energised, energised, energised, energises at tripping           Contact arrangement         contact C/O-SPDT           Rated operational voltage AC (IEC)         VAC 250           Maximum switching voltage         VAC 400           IEC Conventional free air thermal current Ith         A 8           UL/CSA and IEC/EN 60947-5-1 designation         B300           Electrical life (with rated load)         cycles	·		W	1.8
Type of electrode         Electrode and electrode holders: SN1 / SCM / CGL / PS31 / PS3S or similar           Electrode voltage         7.5 VAC           Sensitivity         kΩ 2.550 adjustable           Time delay         Tripping time           Tripping time         \$ ≤0.6           Resetting time         \$ ≤0.75           Relay outputs         Nr. 1           Number of relays         Nr. 1           Relay state         normally deenergised, energises at tripping           Contact arrangement         1 changeover contact C/O-SPDT           Rated operational voltage AC (IEC)         VAC         250           Maximum switching voltage         VAC         400           IEC Conventional free air thermal current lth         A 8           UL/CSA and IEC/EN 60947-5-1 designation         B300           Electrical life (with rated load)         cycles         10°	·			_
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Sensitivity         kΩ         2.550 adjustable           Time delay         Tripping time         s         ≤0.6           Resetting time         s         ≤0.75           Relay outputs         Nr.         1           Number of relays         Nr.         1           Relay state         Normally deenergised, energised, energised, energises at tripping         1 changeover contact C/O-SPDT           Contact arrangement         vac         250           Maximum switching voltage         VAC         400           IEC Conventional free air thermal current lth         A         8           UL/CSA and IEC/EN 60947-5-1 designation         B300           Electrical life (with rated load)         cycles         10⁵	Type of electrode			electrode holders: SN1 / SCM / CGL / PS31 / PS3S or
Sensitivity         kΩ         2.550 adjustable           Time delay         Tripping time         \$ ≤0.6           Resetting time         \$ ≤0.75           Relay outputs         Nr. 1           Number of relays         Nr. 1           Relay state         Normally deenergised, energised, energised, energised at tripping           Contact arrangement         1 changeover contact C/O-SPDT           Rated operational voltage AC (IEC)         VAC         250           Maximum switching voltage         VAC         400           IEC Conventional free air thermal current lth         A         8           UL/CSA and IEC/EN 60947-5-1 designation         B300           Electrical life (with rated load)         cycles         10⁵	Electrode voltage			7.5 VAC
Time delay           Tripping time         s ≤0.6           Resetting time         s ≤0.75           Relay outputs         Number of relays           Number of relays         Nr. 1           Relay state         Normally deenergised, energised, energises at tripping           1 changeover contact C/O-SPDT           Rated operational voltage AC (IEC)         VAC 250           Maximum switching voltage         VAC 400           IEC Conventional free air thermal current Ith         A 8           UL/CSA and IEC/EN 60947-5-1 designation         B300           Electrical life (with rated load)         cycles 10 <sup>5</sup>			kΩ	2.550
Tripping time         s         ≤0.6           Resetting time         s         ≤0.75           Relay outputs         Number of relays         Nr.         1           Relay state         Normally deenergised, energised, energises at tripping           Contact arrangement         1 changeover contact C/O-SPDT           Rated operational voltage AC (IEC)         VAC         250           Maximum switching voltage         VAC         400           IEC Conventional free air thermal current Ith         A         8           UL/CSA and IEC/EN 60947-5-1 designation         B300           Electrical life (with rated load)         cycles         10⁵	Time delay			adjustable
Resetting time       s       ≤0.75         Relay outputs       Nr.       1         Number of relays       Nr.       1         Relay state       Normally deenergised, energises at tripping         Contact arrangement       1 changeover contact C/O-SPDT         Rated operational voltage AC (IEC)       VAC       250         Maximum switching voltage       VAC       400         IEC Conventional free air thermal current Ith       A       8         UL/CSA and IEC/EN 60947-5-1 designation       B300         Electrical life (with rated load)       cycles       10 <sup>5</sup>	·		c	<0.6
Relay outputsNr.1Number of relaysNr.1Relay stateenergised, energises at trippingContact arrangement1 changeover contact C/O-SPDTRated operational voltage AC (IEC)VAC250Maximum switching voltageVAC400IEC Conventional free air thermal current IthA8UL/CSA and IEC/EN 60947-5-1 designationB300Electrical life (with rated load)cycles105				
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Relay state  Relay state  Contact arrangement  Contact arrangement  Rated operational voltage AC (IEC)  Maximum switching voltage  VAC 250  Maximum switching voltage  VAC 400  IEC Conventional free air thermal current Ith  A 8  UL/CSA and IEC/EN 60947-5-1 designation  Electrical life (with rated load)  Normally de-energised, energised, energised visually energises at tripping  1 changeover contact C/O-SPDT  VAC 250  A 8  UL/CSA and IEC/EN 60947-5-1 designation  B 300  Electrical life (with rated load)  Cycles 105			Nlr	1
Contact arrangementcontact C/O-SPDTRated operational voltage AC (IEC)VAC 250Maximum switching voltageVAC 400IEC Conventional free air thermal current IthA 8UL/CSA and IEC/EN 60947-5-1 designationB300Electrical life (with rated load)cycles 10⁵	,		111.	Normally de- energised, energises at
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Maximum switching voltageVAC400IEC Conventional free air thermal current IthA8UL/CSA and IEC/EN 60947-5-1 designationB300Electrical life (with rated load)cycles10⁵	Rated operational voltage AC (IEC)		VAC	
IEC Conventional free air thermal current Ith  UL/CSA and IEC/EN 60947-5-1 designation  Electrical life (with rated load)  A 8  B300  cycles 10 <sup>5</sup>			VAC	
UL/CSA and IEC/EN 60947-5-1 designation  Electrical life (with rated load)  B300  cycles 10 <sup>5</sup>			Α	8
Electrical life (with rated load) cycles 10 <sup>5</sup>				
			cycles	
	Mechanical life		cycles	30x10 <sup>6</sup>

# NIVEAU-SCHALTRELAIS MODULARE AUSFÜHRUNG, ENTLEERFUNK. UND AUT. RÜCKSTELLUNG 220...240VAC

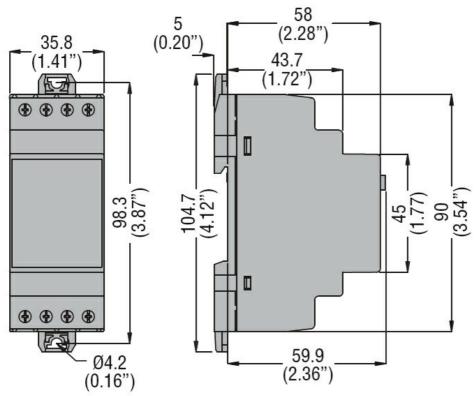
to the second			
Indications			1.55.4
			1 green LED for
Indication			power on 1 red LED for relay
			state
Functions			State
3 detecting electrodes (MIN, MAX and COM)			Yes
5 detecting electrodes (MIN1, MAX and COM)  5 detecting electrodes (MIN1, MAX1, MIN2, MAX2 and COM)			No
Sensitivity adjustment 2.550k $\Omega$			Yes
Sensitivity adjustment 2.5100k Ω			No
Sensitivity adjustment 2.5200k 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			
21 2 2 3 4 7 2 2 2	min	°C	-20
	max	°C	+60
Storage temperature			
ago tomposataro	min	°C	-30
	max	°C	+80
Housing	ax		
			Modular DIN rail
Execution			mounting
N° of modules			2
			_

**ENERGY AND AUTOMATION** 

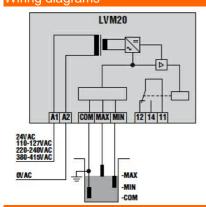
#### NIVEAU-SCHALTRELAIS MODULARE AUSFÜHRUNG, ENTLEERFUNK. UND AUT. RÜCKSTELLUNG 220...240VAC

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

#### **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



# LVM20A240

# NIVEAU-SCHALTRELAIS MODULARE AUSFÜHRUNG, ENTLEERFUNK. UND AUT. RÜCKSTELLUNG 220...240VAC

	UL508	
Certificates		
	cULus	
	EAC	
ETIM classification		
ETIM 8.0		EC001447 - (Fill) level monitoring relay