



Product type designation L48M General Characteristics				MALLAN
General characteristics Multifunction ti Description relay, multiscal "unction Multifunction Supply circuit Xated auxiliary supply voltage Us 24240VAC/ Rated auxiliary supply voltage Us 24240VAC/ AC min VAC 24 DC min VDC 24 DC min VDC 24 Max VDC 24 24 DC min VDC 24 Max VDC 240 240 DC min VDC 24 Maximum power consumption / dissipation W 6VA 6VA mmunity time for microbreakings ms 540 50 Time setting range 0.05min10h 9k 4.5 Resetting time 0.05min10h 8 24 Septat accuracy % 4.5 5 Resetting time During timing ms 2100 Elapsed time S 24 24 Quertary % 4.5 5 Res	Product designation			Time relay
Description Multifunction to relay, multiscal and multivolation to relay, multiscal and multivolation supply class 24240VAC/ Rated auxiliary supply voltage Us AC 24240VAC/ Rated auxiliary supply voltage Us AC 100 100 100 100 100 100 100 100 100 10	Product type designation			L48M
Description relay. multisca and multivolag Function Multifunction Supply circuit 24240VAC/ Rated auxiliary supply voltage Us AC min VAC 24 Max VAC 240 DC min VDC 24 Max VDC 240 Max VDC 240 Second 100 Second	General characteristics			
Supply circuit 24240VAC/ Rated auxiliary supply voltage Us 24240VAC/ Rated auxiliary supply voltage Us min VAC 24240VAC/ AC min VAC 24240VAC/ DC Max VAC 240 DC Max VDC 240 Max VDC 240 Max VDC 240 Dc Max VDC 240 Max VDC 240 Rated frequency Hz 50/60 0.851.1 Us Max VDC 240 Dc mmunity time for microbreakings ms ≤40 String circuit String circuit<	Description			Multifunction tim relay, multiscale and multivoltage
Rated auxiliary supply voltage Us 24240VAC/l AC min VAC 24	Function			Multifunction
Rated auxiliary supply voltage Us AC AC Max VAC 24 Max VAC 240 DC min VDC 24 Max VDC 240 Rated frequency Rated frequency Hz 50/60 Deprating voltage range 0.851.1 Us Maximum power consumption / dissipation mmunity time for microbreakings ms ≤40 Trime setting range 0.05min10h Setting accuracy % ±5 Repeat accuracy % ±0.5 fuluence of voltage variation Resetting time During timing ms ≥100 Elapsed time Setting collage variation $Nr. 22 delayed C/CMaximum switching voltageVAC 250C C conventional free air thermal current lth A 5JL/CSA and IEC/EN 60947-5-1 designation Nr. 2Dotact arrangementSetting inclusion Nr. 2During timing ms ≥100Nr. 2Solutat or (nput-output)Sated insulation voltage Ui VAC 250OperationsVAC 250Operating temperatureMin \ ^{C} -10$	Supply circuit			
ACminVAC24 MaxDCminVAC240DCminVDC24MaxVDC240Rated frequencyHz50/60Operating voltage range0.851.1 UsMaximum power consumption / dissipationW6VAmmunity time for microbreakingsms540Triming circuitTime setting range0.05min10hSetting accuracy%±5Repeat accuracy%±0.5Resetting timeDuring timing Elapsed timesNumber of relaysNr.2Contact arrangement2 delayed C/CWaximum switching voltage UiVAC250EC Conventional free air thermal current lthA5JL/CSA and IEC/EN 60947-5-1 designationB300nsulation (input-output)Rated insulation voltage UiV250Power frequency withstand voltagekV2Operating lifecycles30000000Electrical life (with rated load)cycles30000000Arbeint conditionsE30000000Reterinsulal life (with rated load)cycles30000000Arbeint conditionsE30000000Reterinsulal life (with rated load)cycles30000000Arbeint conditionsE30000000Reterinsulal life (with rated load)cycles30000000Arbeint conditionsE30000000Arbeint conditionsE100000Arbeint conditionsE100	Rated auxiliary supply voltage Us			24240VAC/D
$\begin{tabular}{ c c c c } \hline min & VAC & 24 \\ \hline Max & VAC & 240 \\ \hline DC & & & & & & & & & & & & & & & & & & $	Rated auxiliary supply voltage Us			
Max VAC 240 DC min VDC 24 Max VDC 240 Rated frequency Hz 50/60 Operating voltage range 0.851.1 Us Maximum power consumption / dissipation W 6VA mmunity time for microbreakings ms \$40 Timing circuit	AC			
DC min VDC 24 Max VDC 240 Rated frequency Hz 50/60 Operating voltage range 0.851.1 Us Waximum power consumption / dissipation W 6VA mmunity time for microbreakings ms ≤40 Timing circuit ms ≤40 Time setting range 0.05min10h Setting accuracy % ±5 Repeat accuracy % ±5 Resetting time % ±0.5 Influence of voltage variation % ±0.5 Resetting time During timing Elapsed time ms ≥65 Setting accuracy % ±0.5 Relay outputs Nr. 2 2 Contact arrangement 2 delayed C/C Maximum switching voltage VAC 250 Contact arrangement X 2 2 2 2 2 U/CSA and IEC/EN 60947-5-1 designation B300 B300 2 2 2 Source frequency withstand voltage V 2 2 2 2 2 2 2 2 2<		min	VAC	24
$\begin{array}{c c c c c c c } & \mbox{min} & \mbox{VDC} & 24 \\ Max & \mbox{VDC} & 240 \\ 0.05m \\ Max & \mbox{VDC} & 240 \\ 0.05m \\ Max & \mbox{VDC} & 240 \\ 0.05m \\ mmunity time for microbreakings & ms & \mbox{station} & \mbox$		Max	VAC	240
Max VDC 240 Rated frequency Hz 50/60 Operating voltage range 0.851.1 Us Maximum power consumption / dissipation W 6VA mmunity time for microbreakings ms \$40 Timing circuit	DC			
Rated frequency Hz 50/60 Operating voltage range 0.851.1 Us Maximum power consumption / dissipation W 6VA mmunity time for microbreakings ms ≤40 Timing circuit 0.05min10h Setting range 0.05min10h Setting accuracy % ±5 Repeat accuracy % ±0.5 nfluence of voltage variation % ±0.5 Resetting time During timing Elapsed time ms ≥65 Relay outputs Nr. 2 2 Vantee of relays Nr. 2 2 Contact arrangement 2 delayed C/C 45 Maximum switching voltage VAC 250 EC Conventional free air thermal current lth A 5 JL/CSA and IEC/EN 60947-5-1 designation B300 8300 nsulation voltage Ui V 250 Power frequency withstand voltage kV 2 Operating life (with rated load) cycles 3000000 Clectrical life (with rated load) cycles 100000 Ambient conditions Femperature 0 200000		min	VDC	24
Operating voltage range 0.851.1 Us Maximum power consumption / dissipation W 6VA mmunity time for microbreakings ms ≤40 Timing circuit 0.05min10h Enting accuracy % ±5 Repeat accuracy % ±0.5 nfluence of voltage variation % ±0.5 Resetting time During timing Elapsed time During timing ms<		Max	VDC	240
Maximum power consumption / dissipation W 6VA mmunity time for microbreakings ms ≤40 Triming circuit Time setting range 0.05min10h Setting accuracy % ±5 Repeat accuracy % ±0.5 Influence of voltage variation % ±0.5 Resetting time Uuring timing ms ≥100 Elapsed time ms ≥65 Relay outputs Number of relays Nr. 2 Contact arrangement 2 delayed C/C Maximum switching voltage VAC 250 EC Conventional free air thermal current lth A 5 JL/CSA and IEC/EN 60947-5-1 designation B300 nsulation (input-output) Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 Operations Mechanical life (with rated load) cycles 3000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature Operating temperature	Rated frequency		Hz	50/60
mmunity time for microbreakings ms ≤40 Timing circuit Time setting range 0.05min10h Setting accuracy % ±5 Repeat accuracy % ±0.5 Influence of voltage variation % ±0.5 Resetting time During timing ms ≥100 Elapsed time ms ≥65 Relay outputs Nr. 2 Contact arrangement 2 delayed C/C Maximum switching voltage VAC 250 EC Conventional free air thermal current lth A 5 JL/CSA and IEC/EN 60947-5-1 designation B300 nsulation (input-output) Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 Derations Mechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Femperature Derating temperature	Operating voltage range			0.851.1 Us
Timing circuit 0.05min10h Setting accuracy % ±5 Repeat accuracy % ±0.5 nfluence of voltage variation % ±0.5 Resetting time During timing Elapsed time ms ≥100 Resetting time During timing Elapsed time ms ≥100 Number of relays Nr. 2 2 Contact arrangement 2 delayed C/C 250 EC Conventional free air thermal current lth A 5 JL/CSA and IEC/EN 60947-5-1 designation B300 s300 nsulation (input-output) V 250 Power frequency withstand voltage V 2 Power frequency withstand voltage kV 2 Operations Wechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature Operating temperature min< °C	Maximum power consumption / dissipation		W	6VA
Time setting range 0.05min10h Setting accuracy % ±5 Repeat accuracy % ±0.5 Influence of voltage variation % ±0.5 Resetting time During timing ms ≥100 Elapsed time ms ≥100 2 Number of relays Nr. 2 2 Contact arrangement 2 delayed C/C 2 Maximum switching voltage VAC 250 EC Conventional free air thermal current lth A 5 JL/CSA and IEC/EN 60947-5-1 designation B300 300 nsulation (input-output) Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 2 Operations Wechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature Operating temperature min< °C	Immunity time for microbreakings		ms	≤40
Time setting range 0.05min10h Setting accuracy % ±5 Repeat accuracy % ±0.5 Influence of voltage variation % ±0.5 Resetting time During timing ms ≥100 Elapsed time ms ≥100 2 Number of relays Nr. 2 2 Contact arrangement 2 delayed C/C 2 Maximum switching voltage VAC 250 EC Conventional free air thermal current lth A 5 JL/CSA and IEC/EN 60947-5-1 designation B300 300 nsulation (input-output) Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 2 Operations Wechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature Operating temperature min< °C	Timing circuit			
Setting accuracy% ± 5 Repeat accuracy% ± 0.5 nfluence of voltage variation% ± 0.5 Resetting timeDuring timing Elapsed time $\approx \ge 100$ Elapsed timeNumber of relaysNr.2Contact arrangement2 delayed C/CMaximum switching voltageVAC250EC Conventional free air thermal current lthA5JL/CSA and IEC/EN 60947-5-1 designationB300B300nsulation (input-output)V250Power frequency withstand voltageV2OperationsV250Ectorical lifecycles30000000Electrical life (with rated load)cycles100000Ambient conditionsFemperatureV-10				0.05min10h
Repeat accuracy % ±0.5 Influence of voltage variation % ±0.5 Resetting time During timing ms ≥100 ≥100 Elapsed time ms ≥65 Relay outputs Nr. 2 Contact arrangement 2 delayed C/O Maximum switching voltage VAC 250 EC Conventional free air thermal current lth A JL/CSA and IEC/EN 60947-5-1 designation B300 nsulation (input-output) Rated insulation voltage Ui Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 Operations Wechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Emperature Operating temperature Operating temperature min °C -10 -10			%	±5
Influence of voltage variation % ±0.5 Resetting time During timing ms ≥100 Elapsed time ms ≥65 Relay outputs Nr. 2 Number of relays Nr. 2 Contact arrangement 2 delayed C/Q Maximum switching voltage VAC 250 EC Conventional free air thermal current lth A 5 JL/CSA and IEC/EN 60947-5-1 designation B300 nsulation (input-output) Rated insulation voltage Ui Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 Operations Mechanical life cycles 3000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature Operating temperature min °C -10 -10	· · · · · · · · · · · · · · · · · · ·		%	±0.5
Resetting time During timing ms ≥100 Elapsed time ms ≥65 Relay outputs Nr. 2 Number of relays Nr. 2 Contact arrangement 2 delayed C/C Maximum switching voltage VAC 250 EC Conventional free air thermal current lth A 5 JL/CSA and IEC/EN 60947-5-1 designation B300 nsulation (input-output) Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 Operations Uith rated load) cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature Monoto Conditions Temperature	· · ·			
During timing Elapsed time ms ≥100 Relay outputs Nr. 2 Number of relays Nr. 2 Contact arrangement 2 delayed C/C Maximum switching voltage VAC 250 EC Conventional free air thermal current lth A 5 JL/CSA and IEC/EN 60947-5-1 designation B300 nsulation (input-output) NV 250 Power frequency withstand voltage V 250 Power frequency withstand voltage kV 2 Operations V 250 Mechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature V -10				
Elapsed timems≥65Relay outputsNr.2Number of relaysNr.2Contact arrangement2 delayed C/CMaximum switching voltageVAC250EC Conventional free air thermal current lthA5JL/CSA and IEC/EN 60947-5-1 designationB300nsulation (input-output)V250Rated insulation voltage UiV250Power frequency withstand voltagekV2OperationsU2Mechanical lifecycles3000000Electrical life (with rated load)cycles100000Ambient conditionsTemperatureV-10	5	Durina timina	ms	≥100
Relay outputs Nr. 2 Number of relays Nr. 2 Contact arrangement 2 delayed C/C Maximum switching voltage VAC 250 EC Conventional free air thermal current lth A 5 JL/CSA and IEC/EN 60947-5-1 designation B300 B300 nsulation (input-output) Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 Operations V 250 Mechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature V -10				
Number of relaysNr.2Contact arrangement2 delayed C/CMaximum switching voltageVAC250EC Conventional free air thermal current lthA5JL/CSA and IEC/EN 60947-5-1 designationB300nsulation (input-output)V250Rated insulation voltage UiV250Power frequency withstand voltagekV2OperationsU250Mechanical lifecycles3000000Electrical life (with rated load)cycles100000Ambient conditionsUUVTemperatureOperating temperaturemin °C-10	Relay outputs			
Contact arrangement2 delayed C/CMaximum switching voltageVAC250EC Conventional free air thermal current lthA5JL/CSA and IEC/EN 60947-5-1 designationB300nsulation (input-output)B300Rated insulation voltage UiV250Power frequency withstand voltagekV2OperationsUite cycles30000000Electrical lifecycles30000000Electrical life (with rated load)cycles100000Ambient conditionsCycles100000TemperatureOperating temperaturemin °C -10			Nr.	2
Maximum switching voltage VAC 250 EC Conventional free air thermal current lth A 5 JL/CSA and IEC/EN 60947-5-1 designation B300 nsulation (input-output) Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 Operations V 250 Mechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Femperature V -10	Contact arrangement			2 delayed C/O
EC Conventional free air thermal current Ith A 5 JL/CSA and IEC/EN 60947-5-1 designation B300 nsulation (input-output) V 250 Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 Operations cycles 3000000 Electrical life (with rated load) cycles 100000 Ambient conditions Femperature min °C -10			VAC	
JL/CSA and IEC/EN 60947-5-1 designation B300 nsulation (input-output) Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 Operations V 2 Mechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature min °C -10				
nsulation (input-output) V 250 Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 Operations V 2 Mechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature V -10				
V 250 Power frequency withstand voltage kV 2 Operations V 2 Mechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions remperature min °C min °C -10				
Power frequency withstand voltage kV 2 Operations Mechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature Operating temperature min °C -10			V	250
Operations cycles 3000000 Mechanical life cycles 3000000 Electrical life (with rated load) cycles 100000 Ambient conditions remperature 0 Operating temperature min °C -10				
Mechanical life cycles 3000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature Operating temperature min °C -10				_
Electrical life (with rated load) cycles 100000 Ambient conditions Temperature Operating temperature min °C -10			cvcles	30000000
Ambient conditions Temperature Operating temperature min °C -10			-	
Temperature Operating temperature min °C -10			-,	
Operating temperature min °C -10				
min °C -10				
		min	°C	-10
		max	°C	+60

31L48MH240



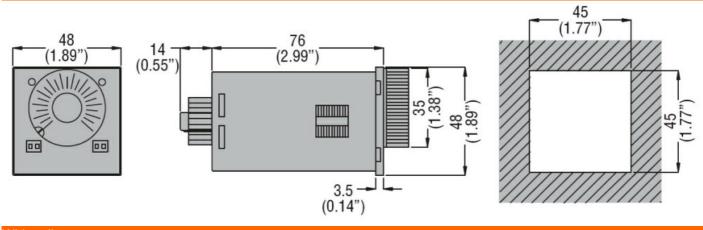
TIME RELAY, MULTIFUNCTION, MULTIVOLTAGE AND MULTISCALE, PLUG-IN AND FLUSH-

MOUNT VERSION 48X48MM, 24...240VAC/DC

31L48MH240

Storage temperature			
	min	°C	-30
	max	°C	+80
Housing			
Material			Self-extinguishing polyamide
Mounting			Plug-in housing with 11-pin socket
Degree of protection			IP40 on front, IP20 terminals
Dimensions (W x H x D)		mm	48 x 48 x 90
Weight		g	135
Discussion			

Dimensions



Wiring diagrams

24-240VAC/DC 2 1 11 M MEMORY O 5 R RESET O 6 X 7

T (preset time) = T1+T2 • Contacts "M" and "R" are to be volt free (dry).

Certifications and cor	mpliance	
Compliance		
	CSA C22.2 n°14	
	IEC/EN 61812-1	
	UL508	
Certificates		
	cURus	
	EAC	
ETIM classification		
ETIM 8.0		EC001439 - Timer relay

31L48MH240