



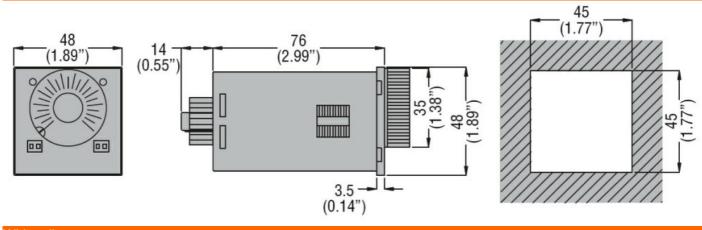
Product type designation L48M General Characteristics   General Characteristics   Description Multifunction tir relay, multiscal and multivoltag  Function Multifunction tir relay, multiscal and multivoltag  Function VCC 24 Max VAC 240 C Max VAC 240 Max VAC 240 DC min VDC 24 Max VAC 240 Max VAC 250 Elapsed time ms ≥100 Elapsed time Ms ≥100 Maximum Strutistand voltage Ms 250 For Contactional free air thermal current tith A 5 DUCSA and IEC/EN 60947-5-1 designation Ms 250 For Contactional free air thermal current tith A 5 DUCSA and IEC/EN 60947-5-1 designation Ms 250 For Contactional free air thermal current tith A 5 DUCSA and IEC/EN 60947-5-1 designation Ms 250 For Contactional free air thermal current tith A 5 DUCSA and IEC/EN 60947-5-1 designation Ms 250 For Contactional free air thermal current tith A 5 DUCSA and IEC/EN 60947-5-1 designation Ms 250 For Contactional free air thermal current tith A 5 DUCSA and IEC/EN 60947-5-1 designation Ms 250 For Contactional free air thermal current tith A 5 DUCSA and IEC/EN 60947-5-1 designation Ms 250 For Contactional fr				Contraction of the second
General characteristics       Multifunction tirrelay, multiscal, and multivotag         Description       Multifunction Signal and multivotag         Function       Multifunction         Supply circuit       Xated auxiliary supply voltage Us         Rated auxiliary supply voltage Us       24240VAC/C         AC       min       VAC       24         DC       min       VDC       24         DC       min       VDC       24         Max       VAC       240       240         DC       min       VDC       24         Max       VDC       240       240         DC       min       VDC       240         Maximum power consumption / dissipation       W       6VA       6VA         mmunity time for microbreakings       ms       s40       700         Time setting range       0.05s10min       6VA       6VA         Setting accuracy       %       45       700       700         Resetting time       During timing       ms<       2100       65         Elapsed time       S       265       265       265         Resetting time       During timing       8300       265       265	Product designation			Time relay
Description Multifunction tir relay, multiscal and multivolage Supply circuit 24240VAC/C Rated auxiliary supply voltage Us 24240VAC/C Rated auxiliary supply voltage Us 24240VAC/C AC 24240VAC/C Max VAC 24240VAC/C Max VDC 24240VAC/C Poperating voltage range 0251.1 Us Maximum power consumption / dissipation w 67100 Fining circuit Time setting range 0251.1 Us Maximum switcher auxings ms ≥10.0 Elapsed time ms ≥100 Elapsed time ms ≥100 Elaps	Product type designation			L48M
Description relay, multiscale and multivolage function supply circuit auxiliary supply voltage Us 24240VAC/C Rated auxiliary supply voltage Us AC min VAC 24 Max VAC 240 DC min VDC 24 Max VAC 240 DC min VDC 24 Max VDC 240 Max	General characteristics			
Function Multifunction Supply circuit Reted auxiliary supply voltage Us AC 24240VAC/C Rated auxiliary supply voltage Us AC min VAC 24 Max VAC 240 DC min VAC 24 Max VAC 240 DC Min VDC 24 Max VDC 240 Rated frequency OL 4 Hz 50/60 Dperating voltage range 0.8510 Is Maximum power consumption / dissipation W 6VA mmunity time for microbreakings ms \$40 Timing circuit Time setting range 0.05s10min 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 VAC 250 CC 24 Max VDC 240 CC 240 Max VDC 240 CC 240 Max VDC 24 Max VDC 240 Max VDC 250 Resetting time Ms 2100 Elapsed time ms 265 Relay outputs VAC 250 Maximum switching voltage VAC 250 Relay outputs VAC 250 Maximum switching voltage U VAC 250 Maximum switching voltage VAC 250 Maximum switching voltage U VAC 250 Maximum switching voltage VAC 250	Description			Multifunction tim relay, multiscale and multivoltage
Rated auxiliary supply voltage Us       24240VAC/L         AC       min       VAC       24240VAC/L         AC       min       VAC       24240VAC/L         DC       Max       VAC       24240VAC/L         DC       Max       VAC       24240VAC/L         Max       VAC       24240VAC/L       24240VAC/L         DC       min       VAC       24240VAC/L         Max       VAC       24240VAC/L       24240VAC/L         DC       min       VAC       24240VAC/L         Max       VDC       24240VAC/L       24240VAC/L         Timine Setting incluser consumption / dissipation       W       6510min         Setting accuracy       %       ±0.5       510min         Setting accuracy	Function			
Rated auxiliary supply voltage Us       24240VAC/L         AC       min       VAC       24240VAC/L         AC       min       VAC       24240VAC/L         DC       Max       VAC       24240VAC/L         DC       Max       VAC       24240VAC/L         Max       VAC       24240VAC/L       24240VAC/L         DC       min       VAC       24240VAC/L         Max       VAC       24240VAC/L       24240VAC/L         DC       min       VAC       24240VAC/L         Max       VDC       24240VAC/L       24240VAC/L         Timine Setting incluser consumption / dissipation       W       6510min         Setting accuracy       %       ±0.5       510min         Setting accuracy	Supply circuit			
AC min VAC 24 Max VAC 240 DC Max VAC 240 Max VDC 240 Rated frequency Hz 50/60 Operating voltage range 0.851.1 Us Maximum power consumption / dissipation W 6VA Immunity time for microbreakings ms <40 Timing circuit Time setting range 0.05s10min Setting accuracy % ±5 Repeat accuracy % ±0.5 Influence of voltage variation % ±0.5 Resetting time Setting time ms ≥100 Elapsed time ms ≥65 Relay outputs Nr. 2 Contact arrangement 2 delayed C/O Maximum switching voltage U A 5 Elec Conventional free lair thermal current lth A 5 UU/CSA and IEC/EN 60947-5-1 designation B300 Insulation (input-output) Reset ing field C 250 Power frequency withstand voltage M V 2 20 Power frequency Withstand V V 2 20 Power frequency W V 2 20 Power frequency W V 2 20 Power frequency W V 2 20	Rated auxiliary supply voltage Us			24240VAC/D
$\begin{tabular}{ c c c c } \hline min & VAC & 24 \\ Max & VAC & 240 \\ \hline DC & & & & & & & & & & & & & & & & & & $	Rated auxiliary supply voltage Us			
$\begin{tabular}{ c c c } \hline Max & VAC & 240 \\ \hline DC & & & & & & \\ \hline Max & VDC & 24 \\ \hline Max & VDC & 240 \\ \hline Max & VDC & 250 \\ \hline Max & VDC & 250 \\ \hline Max & VDC & 250 \\ \hline Max & VAC & 250 \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max & Max & Max & Max \\ \hline Max &$	AC			
DCminVDC24 MaxMaxVDC240Rated frequencyHz50/60Operating voltage range0.851.1 UsMaximum power consumption / dissipationW6VAImmunity time for microbreakingsms\$40Timing circuit0.05s10 minSetting accuracy% $\pm 5$ Repeat accuracy% $\pm 5$ Repeat accuracy% $\pm 0.5$ Influence of voltage variation% $\pm 0.5$ Resetting timeDuring timing ms $\geq 100$ Resetting timeDuring timing ms $\geq 65$ Relay outputsNr.2Number of relaysNr.2Contact arrangement2 delayed C/OMaximum switching voltageVAC250IEC Conventional free air thermal current lthA5U/CSA and IEC/EN 60947-5-1 designationB300 <b>nsulation (input-output)</b> V250Power frequency withstand voltageV250Power frequency withstand voltageV250<		min	VAC	24
$\begin{array}{c c c c c } & \mbox{min} & \mbox{VDC} & 24 \\ & \mbox{VDC} & 240 \\ & \mbox{VDC} & 0.8511 \mbox{US} & & \mbox{VS} & & \mbox{VDC} & \mbox{VD} & \mb$		Max	VAC	240
MaxVDC240Rated frequencyHz50/60Operating voltage range0.8511 UsMaximum power consumption / dissipationW6VAImmunity time for microbreakingsms≤40Timing circutTime setting range0.05s10minSetting accuracy%±5Repeat accuracy%±0.5Influence of voltage variation%±0.5Resetting timeDuring timing Elapsed timemsSetting timeNr.2Contact arrangement2delayed C/OMaximum switching voltageVAC250IEC Conventional free air thermal current lthA5U/CSA and IEC/EN 60947-5-1 designationB300Nr.Insulation voltage UiV250Power frequency withstand voltageV2OperationsV2OperationsV2Recharical lifecycles3000000ElemperatureV2Operating temperatureV2	DC			
Rated frequency     Hz     50/60       Operating voltage range     0.851.1 Us       Maximum power consumption / dissipation     W     6VA       Immunity time for microbreakings     ms     ≤40       Timing circuit     0.05s10min     Setting range     0.05s10min       Setting accuracy     %     ±5       Repeat accuracy     %     ±0.5       Influence of voltage variation     %     ±0.5       Resetting time     During timing lapsed time     s<		min	VDC	24
Operating voltage range       0.8511 Us         Maximum power consumption / dissipation       W       6VA         Immunity time for microbreakings       ms       ≤40         Timing circuit       0.05510min         Time setting range       0.05510min         Setting accuracy       %       ±5         Repeat accuracy       %       ±0.5         Influence of voltage variation       %       ±0.5         Resetting time       During timing ms       ≥100         Bayed time       During timing ms       ≥65         Relay outputs       Nr.       2         Number of relays       Nr.       2         Contact arrangement       2 delayed C/O         Maximum switching voltage       VAC       250         EC Conventional free air thermal current lth       A       5         UL/CSA and IEC/EN 60947-5-1 designation       B300       B300         Insulation (input-output)       We chanical life       cycles       3000000         Reted insulation voltage Ui       V       250       250         Power frequency withstand voltage       kV       2       20         Operations       Cycles       30000000       200         Reted insulation v		Max	VDC	240
Maximum power consumption / dissipation       W       6VA         Immunity time for microbreakings       ms       ≤40         Timing circuit       0.05s10min         Setting range       0.05s10min         Setting accuracy       %       ±5         Repeat accuracy       %       ±0.5         Influence of voltage variation       %       ±0.5         Resetting time       During timing Elapsed time       ms       ≥100         Number of relays       Nr.       2         Contact arrangement       2 delayed C/O         Maximum switching voltage       VAC       250         EC Conventional free air thermal current lth       A       5         JU/CSA and IEC/EN 60947-5-1 designation       B300       Insulation voltage Ui         Nexther and voltage Ui       V       250         Power frequency withstand voltage       kV       2         Operations       VV       250         Power frequency withstand voltage       kV       2         Operations       VV       250         Power frequency withstand voltage       kV       2         Operations       VV       250         Rechanical life (with rated load)       cycles       3000000 <td>Rated frequency</td> <td></td> <td>Hz</td> <td>50/60</td>	Rated frequency		Hz	50/60
Immunity time for microbreakings ms ≤40 Timing circuit Time setting range 0.05s10min Setting accuracy % ±5 Repeat accuracy % ±0.5 Influence of voltage variation % ±0.5 Resetting time ms ≥100 Elapsed time ms ≥65 Relay outputs Number of relays Nr. 2 Contact arrangement 2 delayed C/O Maximum switching voltage VAC 250 IEC Conventional free air thermal current Ith A 5 UL/CSA and IEC/EN 60947-5-1 designation B300 Insulation (input-output) Rated insulation voltage Ui V 250 Power frequency withstand voltage kV 2 Operations Mechanical life cycles 30000000 Electrical life (with rated load) cycles 100000 Ambient conditions Temperature Operating temperature	Operating voltage range			0.851.1 Us
Timing circuit       0.05s10min         Setting accuracy       %       ±5         Repeat accuracy       %       ±0.5         Influence of voltage variation       %       ±0.5         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/O         Maximum switching voltage       VAC       250         IEC Conventional free air thermal current lth       A       5         UJ/CSA and IEC/EN 60947-5-1 designation       B300       B300         Insulation (input-output)       V       250         Power frequency withstand voltage       kV       2         Operations       V       250         Power frequency withstand voltage       kV       2         Operations       V       250         Power frequency withstand voltage       kV       2         Operations       V       2         Mechanical life (with rated load)       cycles       30000000         Ambient conditions	Maximum power consumption / dissipation		W	6VA
Time setting range0.05s10minSetting accuracy% $\pm 5$ Repeat accuracy% $\pm 0.5$ Influence of voltage variation% $\pm 0.5$ Resetting time% $\pm 0.5$ Resetting timeDuring timing ms $\approx 2100$ Elapsed timeRelay outputsms $\geq 100$ Elapsed timeNumber of relaysNr.2Contact arrangement2 delayed C/OMaximum switching voltageVAC250IEC Conventional free air thermal current lthA5UL/CSA and IEC/EN 60947-5-1 designationB300Insulation (input-output)HRated insulation voltage UiV250Power frequency withstand voltagekV2OperationsU2Sectional lifecycles30000000Electrical life (with rated load)cycles30000000Ambient conditionsFemperatureV2Operating temperaturemin°C-10	Immunity time for microbreakings		ms	≤40
Time setting range0.05s10minSetting accuracy% $\pm 5$ Repeat accuracy% $\pm 0.5$ Influence of voltage variation% $\pm 0.5$ Resetting time% $\pm 0.5$ Resetting timeDuring timing ms $\approx 2100$ Elapsed timeRelay outputsms $\geq 100$ Elapsed timeNumber of relaysNr.2Contact arrangement2 delayed C/OMaximum switching voltageVAC250IEC Conventional free air thermal current lthA5UL/CSA and IEC/EN 60947-5-1 designationB300Insulation (input-output)HRated insulation voltage UiV250Power frequency withstand voltagekV2OperationsU2Sectional lifecycles30000000Electrical life (with rated load)cycles30000000Ambient conditionsFemperatureV2Operating temperaturemin°C-10	Timing circuit			
Setting accuracy% $\pm 5$ Repeat accuracy% $\pm 0.5$ influence of voltage variation% $\pm 0.5$ Resetting timeDuring timing Elapsed timems $\geq 100$ Bayes of relaysNr. $\geq 100$ Contact arrangement2 delayed C/OMaximum switching voltageVAC250IEC Conventional free air thermal current lthA5UL/CSA and IEC/EN 60947-5-1 designationB300Insulation (input-output)V250Power frequency withstand voltageV2OperationsV2Mechanical lifecycles30000000Electrical life (with rated load)cycles100000Ambient conditionsFemperatureTemperatureMere noticeCycles100000				0.05s…10min
Repeat accuracy       %       ±0.5         influence of voltage variation       %       ±0.5         Resetting time       During timing Elapsed time       ms       ≥100         Build Stress       Nr.       2       2         Contact arrangement       2       2       2         Contact arrangement       2       2       2         Maximum switching voltage       VAC       250         IEC Conventional free air thermal current Ith       A       5         UL/CSA and IEC/EN 60947-5-1 designation       B300       B300         Insulation (input-output)       Rated insulation voltage Ui       V       250         Power frequency withstand voltage       kV       2       2         Operations       Wechanical life       cycles       3000000         Electrical life (with rated load)       cycles       3000000       100000         Ambient conditions       Temperature       Operating temperature       min       °C       -10			%	±5
Influence of voltage variation% $\pm 0.5$ Resetting timeDuring timing Elapsed timems≥100 Elapsed timeNumber of relaysNr.2Contact arrangement2 delayed C/OMaximum switching voltageVAC250IEC Conventional free air thermal current lthA5UL/CSA and IEC/EN 60947-5-1 designationB300Insulation (input-output)Nr.2Rated insulation voltage UiV250Power frequency withstand voltageV2OperationsWechanical lifecycles30000000Electrical life (with rated load)cycles100000Ambient conditionsTemperatureV2	• •		%	±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/O         Maximum switching voltage       VAC 250         IEC Conventional free air thermal current lth       A 5         UL/CSA and IEC/EN 60947-5-1 designation       B300         Insulation (input-output)       Rated insulation voltage Ui       V 250         Power frequency withstand voltage       kV 2       Operations         Mechanical life       cycles       30000000         Electrical life (with rated load)       cycles       100000         Ambient conditions       Temperature       Operating temperature         Mere output       Maximum substand voltage       V         Maximum substand voltage       Cycles       100000				
During timing Elapsed timems≥100 ≥65Relay outputsNumber of relaysNr.2Contact arrangement2 delayed C/OMaximum switching voltageVAC250IEC Conventional free air thermal current lthA5UL/CSA and IEC/EN 60947-5-1 designationB300Insulation (input-output)H250Rated insulation voltage UiV250Power frequency withstand voltagekV2OperationsUL/CSA100000Electrical lifecycles30000000Electrical life (with rated load)cycles100000Ambient conditionsTemperatureV-10				
Elapsed timems≥65Relay outputsNr.2Number of relaysNr.2Contact arrangement2 delayed C/OMaximum switching voltageVAC250IEC Conventional free air thermal current lthA5UL/CSA and IEC/EN 60947-5-1 designationB300Insulation (input-output)V250Rated insulation voltage UiV250Power frequency withstand voltagekV2OperationsU250Electrical life (with rated load)cycles3000000Ambient conditionsCycles100000TemperatureOperating temperaturemin °C -10	5	Durina timina	ms	≥100
Relay outputsNr.2Number of relaysNr.2Contact arrangement2delayed C/OMaximum switching voltageVAC250IEC Conventional free air thermal current IthA5UL/CSA and IEC/EN 60947-5-1 designationB300Insulation (input-output)Rated insulation voltage UiVRated insulation voltage UiV250Power frequency withstand voltagekV2OperationsU250Mechanical lifecycles3000000Electrical life (with rated load)cycles100000Ambient conditionsTemperatureU-10				
Number of relaysNr.2Contact arrangement2 delayed C/OMaximum switching voltageVAC250IEC Conventional free air thermal current lthA5UL/CSA and IEC/EN 60947-5-1 designationB300Insulation (input-output)B300Rated insulation voltage UiV250Power frequency withstand voltagekV2OperationsV250Mechanical lifecycles30000000Electrical life (with rated load)cycles3000000Ambient conditionsTTTemperatureOperating temperaturemin °C-10-10-10	Relay outputs			
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Maximum switching voltage       VAC       250         IEC Conventional free air thermal current lth       A       5         UL/CSA and IEC/EN 60947-5-1 designation       B300         Insulation (input-output)       B300         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       Min       °C         Operating temperature       min       °C       -10				2 delayed C/O
EC Conventional free air thermal current Ith       A       5         UL/CSA and IEC/EN 60947-5-1 designation       B300         Insulation (input-output)       V       250         Rated insulation voltage Ui       V       250         Power frequency withstand voltage       kV       2         Operations       cycles       30000000         Electrical life (with rated load)       cycles       100000         Ambient conditions       Temperature       min °C       -10	-		VAC	
UL/CSA and IEC/EN 60947-5-1 designation B300 Insulation (input-output) Rated insulation voltage Ui V 250 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				
Insulation (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       V         Operating temperature       min       °C       -10				
V       250         Power frequency withstand voltage       kV       2         Operations       Cycles       30000000         Mechanical life       cycles       3000000         Electrical life (with rated load)       cycles       100000         Ambient conditions       Temperature       min       °C       -10				
Power frequency withstand voltage       kV       2         Operations			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       remperature       remperature         Operating temperature       min °C -10				-
Electrical life (with rated load) cycles 100000 Ambient conditions Temperature Operating temperature min °C -10			cycles	30000000
Ambient conditions Temperature Operating temperature min °C -10			-	
Temperature Operating temperature min °C -10			0,000	
Operating temperature min °C -10				
min °C -10	-			
		min	°C	-10
		max	°C	+60



## 31L48MM240 ZAMAN RÖLESI, ÇOKLU FONKSIYON, ÇOKLU SKALA, ÇOKLU BESLEME, EKLENTI VE GÖMME MONTAJ VERSIYONU, 48X48MM, 24...240VAC/DC

	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,
Degree of protection				IP20 terminals
Dimensions (W x H x	0)		mm	48 x 48 x 90
Weight			g	135
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 com	ipliance	
Compliance		
	CSA C22.2 n°14	
	IEC/EN 61812-1	
	UL508	
Certificates		
	cURus	
	EAC	
ETIM classification		
ETIM 8.0		EC001439 - Timer relay

31L48MM240