

ELECTRONIC TIMER SERIES : MICON-175™

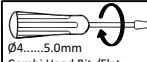
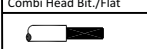
Cat. No.:
11ODT4 (R8)
12ODT4 (R8)
12ODTA (R1)
15ODT4 (R8)
11BDT4 (R8)
12BDT4 (R8)
15BDT4 (R8)
12SDT0
11SDT0



Features:

1. Wide Input Supply Range.
2. Wide Timing Range - 300ms to 30hr.
3. Compact Size & Easy to install.
4. Suitable for Din-Rail & Base Mounting.
5. High Precision & Accuracy.

Terminal Details:

	0.5 N.m (4.4lb.in) to 0.7N.m (6.2lb.in)
	2 x 2.5 mm ² Solid / Standard Wire
AWG	20 to 12

AWG	CURRENT (A)
12	4.38
14	3.75
16	3.13
18	2.50
20	1.88

NOTE: Use Cu Wire of 75 Dec. C Only..

Model

- On Delay Timer
- Star Delta Timer
- One Shot Timer

Installation:

DIN - Rail Mounting : The Timer should be mounted on 35 mm symmetrical DIN - Rail.

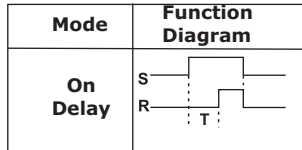
On Delay Timer

Cat. No.: 11ODT4 (R8), 12ODT4 (R8), 12ODTA (R1), 15ODT4 (R8)

Mode Description:

Timing starts as soon as the supply is applied and Green LED Blinks. During the last 1 minute of the remaining time the Green LED blinks with higher rate. The Output Relay turns On after the set time and is indicated by the Red LED and Green LED steady ON.

Timing Diagram:



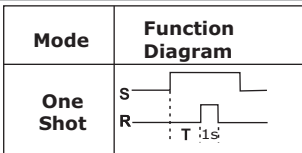
One Shot Timer

Cat No.: 11BDT4 (R8), 12BDT4 (R8), 15BDT4 (R8)

Mode Description:

The timing starts as soon as the supply is applied and Green LED Blinks. During the last 1 minute of the remaining time the Green LED blinks with higher rate. The Output Relay turns On for 1 sec. after the set time has elapsed and is indicated by the Red LED and Green LED steady ON.

Timing Diagram:



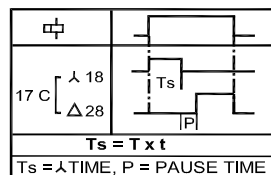
STAR - DELTA Timer

Cat No.: 11SDT0, 12SDT0

Mode Description:

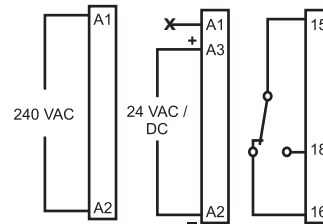
When the supply is applied, Output Star Relay turns ON. After completion of set Star ON time, Star Relay turns OFF and Delta Relay turns ON after 60 ms (Pause Time) and remains ON till the Supply is present. "Star ON" is indicated by Red LED 1. "Delta ON" is indicated by Red LED 2.

Timing Diagram:

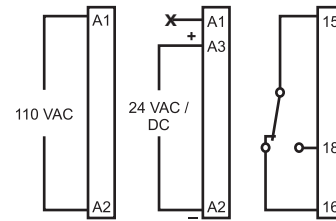


Connection Diagrams:

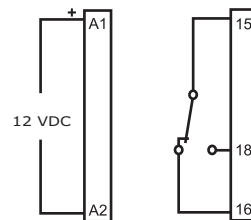
12ODTA (R1)/12ODT4 (R8)/12BDT4 (R8):



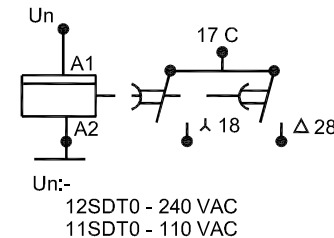
11ODT4 (R8)/11BDT4 (R8):



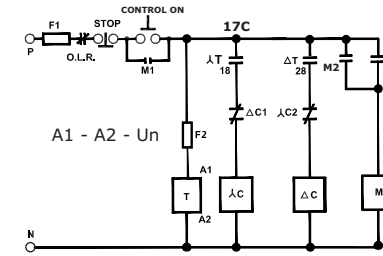
15ODT4 (R8)/15BDT4 (R8):



12SDT0/11SDT0:



Recommended Star - Delta Control Circuit:



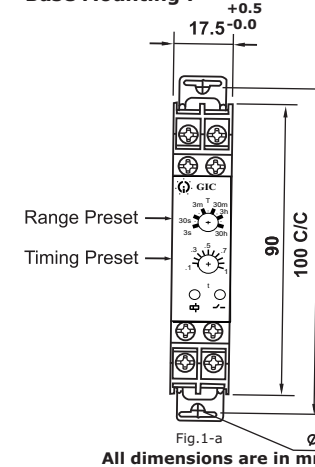
- 1) F1 - Mains Protection Fuse
- 2) F2 - Timer Protection Fuse
- 3) O.L.R - Over Load Relay
- 4) M1 - First 'NO' Contact of Main Contactor
- 5) M2 - Second 'NO' Contact of Main Contactor
- 6) M - Main Contactor for driving Motor
- 7) λ C - Star Contactor
- 8) λ C1 - 'NO' Contact of Star Contactor
- 9) λ C2 - 'NC' Contact of Star Contactor
- 10) Δ C - Delta Contactor
- 11) Δ C1 - 'NC' Contact of Delta Contactor
- 12) λ T - Star Contact of Timer (λ - Δ)
- 13) Δ T - Delta Contact of Timer (λ - Δ)
- 14) T - Star Delta Timer (λ - Δ)

Caution:

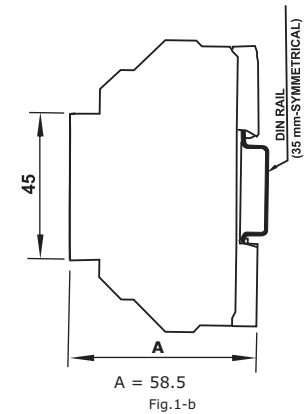
1. Always follow instructions stated in this product leaflet.
2. Before installation, check that the specifications agree with the intended application.
3. Installation to be done by skilled electrician.
4. Changing Range and Timing Presets in power ON condition when the On Delay period has already started, will have no effect. It has to be set before powering ON the timer.
5. If user wants to reset timer one way to do this is to switch off the timer & then set timing & range preset to required position. In this case, Timer will reset & will take new set time.
6. Setting of all the potentiometers should be in clockwise direction only.
7. Use 250 mA slow blow fuse (F2) in series with the above mentioned products.
8. The timers shall be placed in an enclosure that is minimum 200% of the size of the timer in the end use application. Use Cu wire of 75°C for connections.
9. The technical information provided in this document is correct at the time of going to the press. Product innovation being a continuous process, we reserve the right to make any alteration without prior notice.

Overall Dimension:

Base Mounting :



Din Rail Mounting :



TECHNICAL SPECIFICATIONS

Cat. No.:	11ODT4 (R8)	12ODT4 (R8)	12ODTA (R1)	11BDT4 (R8)	12BDT4 (R8)	15BDT4 (R8)	15ODT4 (R8)	12SDT0	11SDT0	
Functions	On Delay Timer	On Delay Timer	On Delay Timer	One Shot Timer	One Shot Timer	One Shot Timer	On Delay Timer	Star Delta Timer	Star Delta Timer	
Supply Characteristics :										
Supply Voltage (⚡)	110 VAC / 24VAC/DC	240 VAC / 24 VAC/DC		110 VAC / 24VAC/DC	240 VAC / 24 VAC/DC	12 VDC		240 VAC	110 VAC	
Supply Variation	-20 % to +10 % (of ⚡)									
Supply Frequency	50/60 Hz +/-3 %					Not Applicable		-20 % to +10 % (of ⚡)	-20 % to +10 % (of ⚡)	
Power Consumption (Max.)	5 VA for 110 VAC, 8 VA for 240 VAC, 0.5 W for 24 VDC/12 VDC							8 VA for 240 VAC	5 VA for 110 VAC	
Timing and Accuracy :										
Setting Accuracy	+/-5 % of full scale									
Repeat Accuracy	1%									
Initiate Time	100 msec. (Max.)									
Reset Time	100 msec. (Max.)									
Timing Ranges	3s, 30s, 3m, 30m, 3hr, 30hr		1 s to 10 s	3s, 30s, 3m, 30m, 3hr, 30hr			≈ 150 ms @ 240 VAC		3 s to 120 s	
Pause Time	Not Applicable								60 ms (fixed)	
Switching Frequency (max.)	1000 operations / hr.								1200 operations / hr.	
Status Indication on front panel	Relay ON : Red LED, Power ON : Green LED							Star Δ - Red LED	Delta Δ - Red LED	
Range of timing Operation	300 msec to 30hr		1 s to 10 s	300 msec to 30hr						
One Shot Pulse Duration	Not Applicable			1 s		Not Applicable				
Operating Temperature	-10° C to+ 55° C									
Housing	Flame Retardant UL 94-V0									
Dimensions in mm (W X H X L)	17.5 ^(+0.5/-0.0) X 58.5 X 90							17.5 ^(+0.5/-0.0) X 58.5 X 90		
Weight (Unpacked)	65 g (Approx).							65 g (Approx).		
Mounting	DIN Rail (35 mm Sym.)								DIN Rail (35 mm Sym.)	
Relay O/P Characteristics :										
Contact Rating	5A (Res.) @ 240 VAC / 28 VDC							5A (Res.) @ 240 VAC / 3A (Res.) @ 30 VDC		
Utilization Category	AC-15 and DC -13 (3A @ 240 VAC at power factor 0.6)							AC-15 : 250 VAC, 5A, General purpose, 0.4 pf, 85°C, 50000 op.		
Contact Material	Ag Alloy									
Mechanical Life	5 X 10 ⁶ operations (At no load & max. Switching frequency)									
Electrical Life	1. 240 VAC. PF = 1.0 rated max load current. 1 x 10 ⁵ operations 2. 240 VAC. PF = 0.4 rated max load current. 4 x 10 ⁴ operations 3. 30 VAC.L / R = 7 ms. 6 x 10 ⁴ operations							1 x 10 ⁵ operations (5 A at 250 VAC), 2 x 10 ⁵ operations (3 A at 30 VDC)		
Contact Arrangement	1 C/O								1 NO + 1 NO	
Certification :										
	CE, RoHS									
Product Reference Standard	IEC 61010-1									
EMI/EMC :										
Harmonic Current Emissions	IEC 61000-3-2 Class A					Not Applicable		IEC 61000-3-2 Class A		
ESD	IEC 61000-4-2 Level II									
Radiated Susceptibility	IEC 61000-4-3 Level III									
Electrical Fast Transient	IEC 61000-4-4 Level IV									
Surge	IEC 61000-4-5 Level IV					IEC 61000-4-5 Level I		IEC 61000-4-5 Level IV		IEC 61000-4-5 Level III
Conducted Susceptibility	IEC 61000-4-6 Level III									
Voltage Dips & Interruptions (AC)	IEC 61000-4-11 (Note: For 24 VAC, Performance Criteria B)					Not Applicable		IEC 61000-4-11 (Note: For 24 VAC, Performance Criteria B)		
Voltage Dips & Interruptions (DC)	IEC 61000-4-29 (Note: For 24 VDC, Performance Criteria B)					IEC 61000-4-29 (50% Un for 50ms)		IEC 61000-4-29 (Note: For 24 VDC, Performance Criteria B)		
Conducted Emission	CISPR 14-1 Class A									
Radiated Emission	CISPR 14-1 Class A									
Safety :										
Test Voltage Between I/P & O/P	1.5 kV							2 kV		
Test Voltage Between all terminal & Enclosure	2.5 kV									
Impulse Voltage Between I/P & O/P	IEC 60947-5-1 2 kV									
Single Fault	IEC 61010-1									
Insulation Resistance	UL 508 > 50KΩ									
Leakage Current	UL 508 < 3.5 mA									
Degree of Protection	IP - 20 for Terminal; IP - 40 for Housing									
Pollution Degree	II									
Type of Insulation	Reinforced									
Environmental :										
Cold Heat	IEC 60068-2-1									
Dry Heat	IEC 60068-2-2									
Vibration	IEC 60068-2-6 5 g									
Repetitive Shock	IEC 60068-2-27 40 g, 6 ms									
Non-repetitive Shock	IEC 60068-2-27 30 g, 15 ms									