TECHNICAL SPECIFICATIONS

CAT.No.	12ODT8	12ODT4	11ODT8	11ODT4	15ODT4	12BDT4	11BDT4	15BDT4	17ODTA	12SDT0
SUPPLY CHARACTERISTICS										
Nominal Supply (Ur)	240 VAC/ 24 VAC/ DC, 50/60Hz		110 VAC/ 24 VAC/ DC, 50/60Hz		12VDC	240 VAC/ 24 VAC/ DC, 50/60Hz	110 VAC/ 24 VAC/ DC, 50/60Hz	12VDC	240 VAC 50/60 Hz	240VAC,50/60Hz 24VDC
Limits	-20% to 10% of Ur									
Power Consumption (Max.)	15 VA									10 VA
RELAY OUTPUT CHARACTERISTICS										
Contact Arrangement	1 C/O									1 NO + 1 NO
Contact Rating	240 VAC / 28 VDC @ 5A (resistive)									
Contact Material	Ag Alloy / AgSnO2									AgNi
Mechanical Life Expectancy	5×10^6 operations (At no load & max. Switching frequency)									
Electrical Life Expectancy	1. 240 VAC. PF = 1.0, rated max load current. 1×10^5 operations 2. 240 VAC. PF = 0.4, rated max load current. 4×10^4 operations 3. 30 VDC. L/R = 7 ms 6×10^4 operations									1×10^5 operations (5 A at 250 VAC), 2×10^5 operations (3 A at 30 VDC)
Switching Frequency (Max.)	1000 opr. / hr.									1200 opr. / hr.
Status Indication on front panel	Red LED: Relay ON									Star - Green LED Delta - Red LED
FEATURE CHARACTERISTICS										
Modes Available	On Delay with Retentive	On Delay	On Delay with Retentive	On Delay		One shot			On Delay	Star - Delta
Timing Ranges 6 Ranges	3s - 30s, 3m - 30m, 3hr - 30hr								10 s	3 s to 120 s
Pause Time	N.A									60 ms (fixed)
Setting Accuracy	+/- 5% of full scale									
Repeat Accuracy	+/-1%									
Variation in timing due to voltage change	+/-2%									
Variation in timing due to temperature change	+/-5%									
Reset Time	100 msec. (Max.)									100 - 200 ms
Supply Indication on front panel	Green LED - Power ON									
Mounting	Base / Din - Rail (35mm Sym.)									
Dimensions	$17.5^{+0.5}_{-0.0}$ (W) x 65.0 (H) x 90.0 (D) mm									
Weight (Unpacked)	75 gms. (Approx).									65 gms.
Operating Temperature	-10°C to + 55°C									
Pollution Degree	2									
Degree of Protection	IP - 20 for Terminals; IP - 40 for Enclosure									
Enclosure	Flame Retardant UL-94V0									

ELECTRONIC TIMER SERIES MICON™ - 175

CE RoHS

Cat Nos.:

12ODT4

11ODT4

12BDT4

11BDT4

15ODT4

12ODT8

11ODT8

15BDT4

17ODTA

12SDT0

Note :

1. It is not recommended to change Timing preset during Power ON condition as it will reset elapsed time.

2. Changing Range Preset in power ON condition will have no effect. It has to be set before Power ON the timer.

3. 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. If user modifies timing in power ON condition, then elapsed time will be discarded & new set time will start from zero.

4. After set time, i.e. after relay is on, variation in timing preset will have no effect on relay condition.

5. 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.

ELECTRONIC TIMER SERIES MICON™ - 175 is manufactured to a high precision and accuracy.

Models :

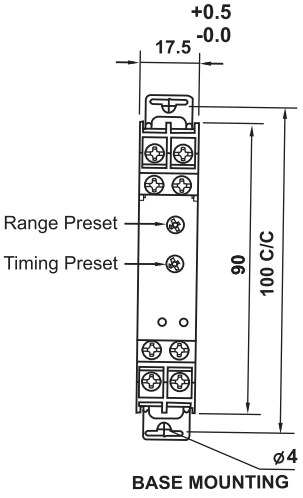
- On Delay Timer
- One Shot Timer
- Retentive On Delay Timer. (No Volt)

- Operating supply voltages
  110 VAC / 24 VAC / DC
  240 VAC / 24 VAC / DC
  12VDC

Installation :

a) Base Mounting : The Timer should be mounted on a plain surface, using two M4 screws, by pulling outward two existing din-vail clip.

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



BASE MOUNTING

Fig. 1-a

Modes available :

- **On Delay :** The timing starts as soon as the Supply is applied. The Output Relay turns ON after the set time has elapsed and remains ON till the Supply is removed.

- **One Shot :** The timing starts as soon as supply is applied the output relay turns ON after the set time has elapsed and remains ON for 1 second and turns off.

- **Retentive ON Delay Timer (No Volt) :** Ensures program and process value retention in case of power failure. This feature is particularly useful for applications like battery charging, mixing or any application where aggregate timing has to be kept constant even under power interruption.

Note : To cancel the no-volt (retentive) feature, power off the device make the new settings and power on the device.

MODE	FUNCTION DIAGRAM
ON DELAY	S, R, T
ONE SHOT	S, R, T, 1 SEC
NO VOLT (Retentive) ON Delay	SUPPLY, RELAY, t1, t2, t3, tp1, tp2 T = SET TIME T = t1 + t2 + t3 tp1, tp2 = Power down region

Terminal Details:

Ø3.5.....5.0mm	1.1 N.m (10 lb.in) Terminal screw-M3.5
	2 x 0.2...2.5 mm^2 solid wire
AWG	1 x 24 to 10

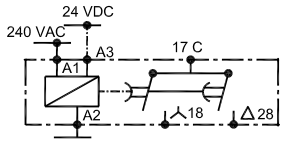
The timers shall be placed in an enclosure that is minimum 200% of the size of the timer in the end use application. Use Cu wire of 75°C only.

STAR - DELTA :

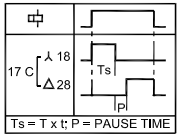
Cat No. : 12SDT0

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.

Connection Diagram :

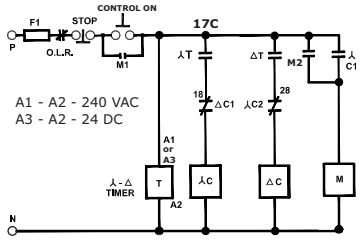


Timing Diagram :

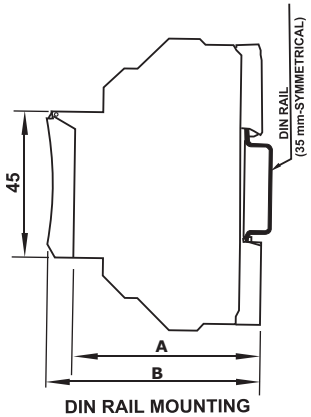


Recommended Star - Delta Control Circuit :

(Below circuit is for STAR - DELTA Timer)



1) F1 - Mains Protection Fuse
2) O.L.R - Over Load Relay
3) M1 - First 'NO' Contact of Main Contactor
4) M2 - Second 'NO' Contact of Main Contactor
5) M - Main Contact of driving Motor
6) C - 'NO' Contactor
7) C1 - 'NO' Contact of Star Contactor
8) C2 - 'NO' Contact of Star Contactor
9) ΔC - Delta Contactor
10) ΔC1 - 'NC' Contact of Delta Contactor
11) T - Star Contact of Timer (Y - Δ)
12) ΔT - Delta Contact of Timer (Y - Δ)



DIN RAIL MOUNTING

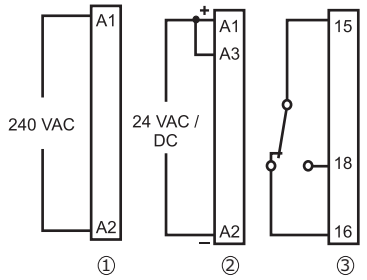
ALL DIMENSIONS ARE IN mm

Fig. 1-b

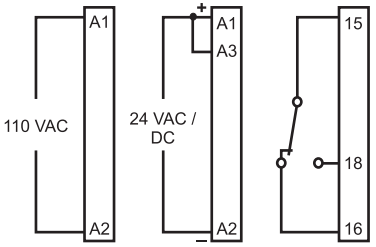
A = 58.5 (without Dust Cover)
B = 65 (with Dust Cover)

AWG	CURRENT (A)
10	5.00
12	4.38
14	3.75
16	3.13
18	2.50
20	1.88
22	1.25
24	0.63

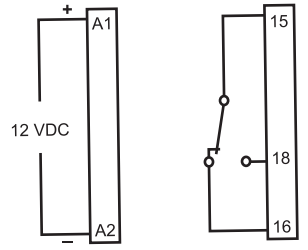
Connection Diagram
12ODT4,12BDT4, 12ODT8: Diag. ① ② ③
17ODTA : Diag. ① & ③



Connection Diagram
11ODT4 , 11BDT4 & 11ODT8



Connection Diagram
15ODT4 / 15BDT4



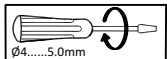
1LL006_09

TECHNICAL SPECIFICATIONS

Cat. No.:	11RDT4	12RDT4	15DDT4
Function	SIGNAL OFF Delay Timer		
Supply Characteristics :			
Supply Voltage(⇳)	110VAC /24VAC/DC	240VAC /24VAC/DC	12VDC
Supply Variation	-15 % to +10 % of ⇳		+/- 20 %
Supply Frequency	47 Hz to 63 Hz		–
Power Consumption	0.75W@24VDC/3.50 VA@110VAC	0.75W@24VDC/7VA@240VAC	0.8W@12VDC
Signal Characteristics :			
Signal Sensing time	Guaranteed signal present 50 msec		
Signal Impedance (Approx.)	175K@110VAC; 95K@24VAC/DC	120K@240VAC;95K@24VAC/DC	51K@12VDC
Signal stabilization Delay at Power ON	150 msec (Initiate time + Signal sensing time)		
Feature Characteristics :			
Setting Accuracy	+/-5 % of full scale		
Repeat Accuracy	+/-1%		
Initiate Time	100 msec. (Max.)		
Reset Time	100 msec. (Max.)		
Timing Ranges (T)	3s, 30s, 3m, 30m, 3hr and 30hr		
Timing Adjustment Ranges (t)	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9 and 1		
Timing adjustment knobs	Flush		
Storage Temperature	-20° C to+ 80° C		-20° C to+ 70° C
Operating Temperature	-15° C to+ 60° C		
Relative Humidity	95% (Rh)		
Housing	Flame Retardant UL 94-V0		
Dimensions in mm (W X H X L)	$17.5^{(+0.5/-0.0)}$ X 65 X 90		
Weight (Packed)	85 g (Approx).		79 g (Approx).
Mounting	DIN Rail (35 mm Sym.)		
Status Indication on front panel	Relay ON : Red LED ON, Power ON : Green LED ON		
Green LED Fast Blinking (50ms ON/OFF)	=<1 minute off delay time remaining		
Green LED Slow Blinking (1sec ON/OFF)	>1 minute off delay time remaining		
Relay O/P Characteristics :			
Contact Rating	5A (Res.) @ 240 VAC / 28 VDC		
Contact Material	AgSno2		
Mechanical Life	1 X 10^7 operations		
Electrical Life	1 X 10^5 operations		
Contact Arrangement	1 C/O		
Certification :	CE, RoHS		
Product Reference Standard	IEC 61812-1 Ed. 2.0 (2011-5)		
EMI/EMC :			
Harmonic Current Emissions	IEC 61000-3-2 Class A		IEC61000-3-2 Class A
ESD	IEC 61000-4-2 Level II		IEC61000-4-2 Level 2
Radiated Susceptibility	IEC 61000-4-3 Level III		IEC61000-4-3 Level 3
Electrical Fast Transient	IEC 61000-4-4 Level IV		IEC61000-4-4 Level 3
Surge Test between supply Terminals	*IEC 61000-4-5 Level IV 110/240VAC and Level III 24VAC/DC		IEC61000-4-5 Level I
Conducted Susceptibility	IEC 61000-4-6 Level III		IEC61000-4-6 Level 3
Voltage Dips & Interruptions (AC)	IEC 61000-4-11 All Levels		NA
Voltage Dips & Interruptions (DC)	IEC 61000-4-29 All Levels		IEC 61000-4-29 All Levels
Conducted Emission	CISPR 14-1 Class A		CISPR-11 Class A
Radiated Emission	CISPR 14-1 Class A		CISPR-11 Class A
Safety :			
Test Voltage Between I/P & O/P	2 kV		
Test Voltage Between all terminal & Enclosure	2.5 kV		
Impulse Voltage Between I/P & O/P	IEC 6092004 47-5-1 2 kV		
Single Fault	IEC 61010-1		
Insulation Resistance	UL 508 > 50KΩ		
Leakage Current	UL 508 (1999-01) < 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 10-55 Hz		
Repetitive Shock	IEC 60068-2-27 40 g, 6 ms		
Non-repetitive Shock	IEC 60068-2-27 30 g, 15 ms		

*Note: If supply is looped with relay pole, then surge level III will be applicable (For 11RDT4 & 12RDT4).

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	24 to 10

AWG	CURRENT (A)
10	5.00
12	4.38
14	3.75
16	3.13
18	2.50
20	1.88
22	1.25
24	0.63

NOTE: Use Cu Wire of 75°C Only.

Installation :

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

Screw Mounting: For screw mounting, pull out the DIN Rail clips half way. Use 2 no's of M4 screws to mount the product directly on back.

Overall Dimension :

Base Mounting :

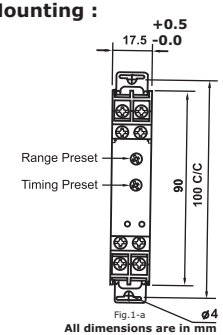
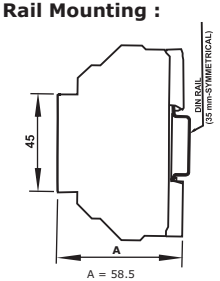


Fig.1-a

All dimensions are in mm

Din Rail Mounting :



A = 58.5

Fig.1-b

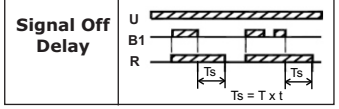
Signal Off Delay Timer

Cat. No.: 11RDT4, 12RDT4 , 15DDT4

Mode Description :

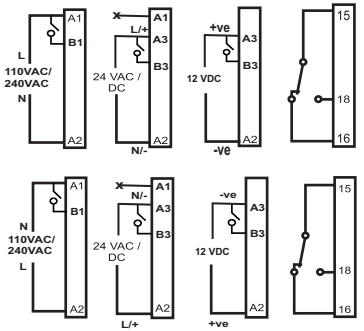
When the supply voltage is applied & the B1 input is energized the output relay energizes. When B1 is de-energized time 'Ts' commences. At the end of 'Ts' the output relay De-energizes. If B1 is energized again before the end of Ts, Ts resets to zero so that when B1 is de-energized the full set time of 'Ts' operates.

Timing Diagram :

Mode	Function Diagram
Signal Off Delay	

Wiring Diagrams :

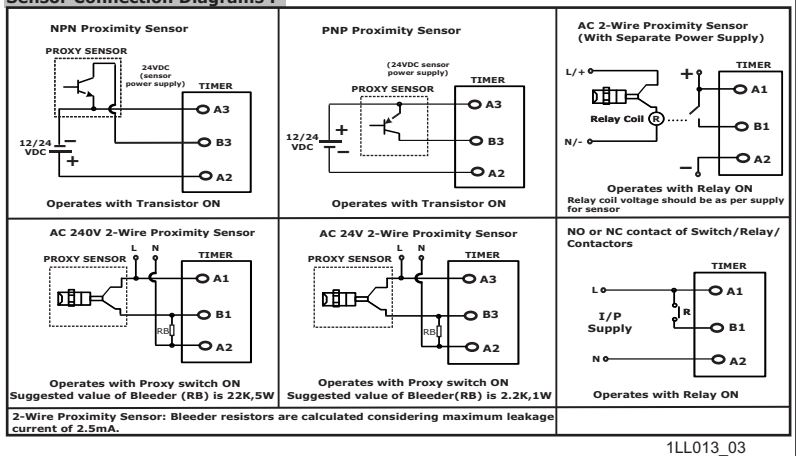
11RDT4/12RDT4/15DDT4:



Do not apply more than 27VAC/DC to A3 terminal of 11RDT4 & 12RDT4.

Do not apply more than 14.4VDC to A3 terminal of 15DDT4.

Sensor Connection Diagrams :



ELECTRONIC TIMER SERIES : MICON-175 ™

Cat. No. : 11RDT4
12RDT4
15DDT4

CE RoHS ☑

Features :

1. Wide Input Supply and Signal Range.
2. Wide Timing Range-300ms to 30hr.
3. Suitable for Din-Rail & Base Mounting.
4. Compact Size & Easy to install.
5. High Precision & Accuracy.
6. Sensor compatibility: PNP, NPN & 2-Wire 24VAC/240VAC proximity Sensors .

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. 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.
5. Setting of all the potentiometers should be in clockwise direction only.
6. Use 250 mA slow blow fuse in series with the above mentioned products.
7. 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.
8. Product innovation being a continuous process, we reserve the right to make any alteration without prior notice.

TECHNICAL SPECIFICATIONS

Cat. No.:	11WDTC	12WDTC
Function	ON-Delay and Interval	
Supply Characteristics :		
Supply Voltage(⏚)	110VAC /24VAC/DC	240VAC /24VAC/DC
Supply Variation	-20 % to +10 % of ⏚	
Supply Frequency	47 Hz to 63 Hz	
Power Consumption	0.5W@24VDC/1 VA@24VAC/5VA@110VAC, 50 Hz	0.5W@24VDC/1VA@24VAC/6VA@240VC, 50 Hz
Timing and Accuracy :		
Setting Accuracy	+/-5 % of full scale	
Repeat Accuracy	+/-1%	
Initiate Time	100 msec. (Max.)	
Reset Time	100 msec. (Max.)	
Timing Ranges (T)	1s, 10s, 1m, 10m, 1hr, 10 hr and 100hr	
Timing Adjustment Ranges (t)	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9 and 1	
Range of Timing Operation	100 msec to 100 hr	
Timing adjustment knobs	Flush	
Mode selection knobs	On Delay or Interval	
Switching Frequency (max)	1000 operations/ hr	
Status Indication on front panel	Relay ON : Red LED ON, Power ON : Green LED ON	
Storage Temperature	-20° C to+ 70° C	
Operating Temperature	-15° C to+ 60° C	
Relative Humidity	95% (Rh)	
Housing	Flame Retardant UL 94-V0	
Dimensions in mm (W X H X L)	18 x 65 x 85 (in mm)	
Weight (Packed)	85 g (Approx).	
Mounting	DIN Rail (35 mm Sym.)	
Green LED Fast Blinking (50ms ON/OFF)	=<1 minute set time remaining	
Green LED Slow Blinking (1sec ON/OFF)	>1 minute set time remaining	
Relay O/P Characteristics :		
Contact Rating	5A (Res.) @ 240 VAC / 28 VDC	
Contact Material	$AgSnO_2$	
Mechanical Life	1 X 10^7 operations	
Electrical Life	1 X 10^5 operations (NO, 8A at 250 VAC) 5 X 10^4 operations (NO, 10A at 250 VAC)	
Contact Arrangement	1 C/O	
Certification :	CE, RoHS	
Product Reference Standard	IEC 61812-1	
EMI/EMC :		
Harmonic Current Emissions	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 Test between supply Terminals	IEC 61000-4-5 Level IV 110/240VAC and Level III 24VAC/DC	
Conducted Susceptibility	IEC 61000-4-6 Level III	
Voltage Dips & Interruptions (AC)	IEC 61000-4-11 All Levels (Note: For 24 VAC, Performance Criteria B)	
Voltage Dips & Interruptions (DC)	IEC 61000-4-29 All Levels (Note: For 24 VDC, Performance Criteria B)	
Conducted Emission	CISPR 11 Class A	
Radiated Emission	CISPR 11 Class A	
Safety :		
Test Voltage Between I/P & O/P	IEC60947-5-1/UL508 2 kV	
Test Voltage Between all terminal & Enclosure	IEC60947-5-1/UL508 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 10-55 Hz	
Repetitive Shock	IEC 60068-2-27 40 g, 6 ms	
Non-repetitive Shock	IEC 60068-2-27 30 g, 15 ms	

Terminal Details :

Ø3.5....4.0mm	0.6 N.m (6 Lb.in)
	1 x 4.0mm² Solid/Stranded Wire
AWG	1 x 20 to 10

AWG	CURRENT (A)
12	5.00
14	3.33
16	1.67

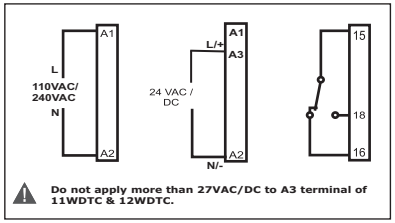
NOTE: Use Cu Wire of 75°C Only.

Installation :

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

Wiring Diagrams :

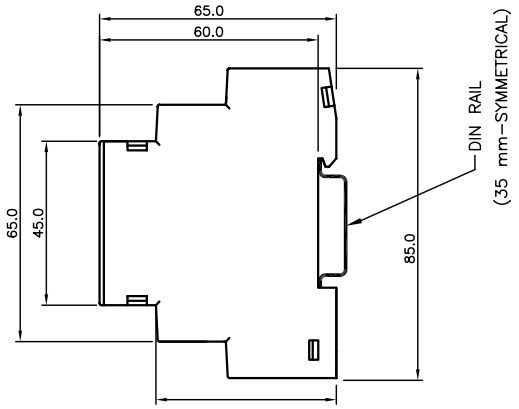
11WDTC/12WDTC:



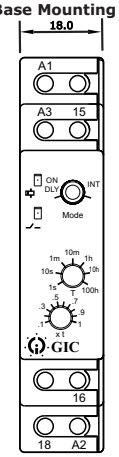
⚠ **Do not apply more than 27VAC/DC to A3 terminal of 11WDTC & 12WDTC.**

Overall dimension :

DIN Rail Mounting :



Base Mounting :



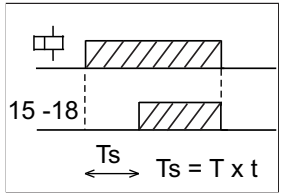
ON-Delay and Interval Timer

Cat. No.: 11WDTC, 12WDTC

Function Diagram :

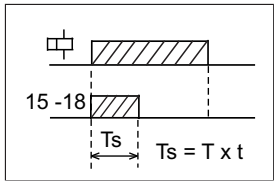
1. ON Delay :

When the supply voltage is applied, timing starts. After the set timing 'Ts' has elapsed, output relay turns ON and remains ON till the supply is removed.



2. Interval :

When the supply voltage is applied, output relay turns ON and timing starts. Output relay turns off after the set timing 'Ts' has elapsed and remains off until next power on.



ELECTRONIC TIMER SERIES : MICON™175

Cat. No. : 11WDTC
12WDTC

CE RoHS ☑

Features :

1. Wide Timing Range-100ms to 100hr.
2. Suitable for DIN-Rail & Base Mounting.
3. Compact Size & Easy to install.
4. High Precision & Accuracy.

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. 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.
5. Setting of all the potentiometers should be in clockwise direction only.
6. Use 250 mA slow blow fuse in series with the above mentioned products.
7. 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.
8. Product innovation being a continuous process, we reserve the right to make any alteration without prior notice.

TECHNICAL SPECIFICATIONS:		
Cat. No.:	1CMDT0	1CMDTB
SUPPLY CHARACTERISTIC:		
Supply Voltage ⏚	12 - 240 VAC / DC	
Supply Variation	-15 % to +10 % of ⏚	
Frequency	50 to 60 Hz, (± 3 Hz)	
Power Consumption (Max.)	2 VA	
SIGNAL CHARACTERISTICS:		
Signal sensing time	> = 40 ms (For Un > = 110 VAC / DC) and > = 60 ms (for Un < 110 VAC / DC)	
Signal impedance	>6K@10VAC/DC; >70K@110VAC/DC; >150K@240VAC/DC	
Signal switch current requirement	Switching capacity of the switch or contact should be>10mA	
RELAY O/P CHARACTERISTICS:		
Contact Arrangement	1 C/O Potential free contacts	
Contact Rating (Resistive Load)	8A (Res.) @ 240 V AC, 5A at 24 VDC	
Contact Material	AgNi	
Electrical Life	50000 Operations min.	
Mechanical Life	10000000 Operations min.	
FEATURE CHARACTERISTICS:		
Set Time (Ts)	0.1 seconds to 100 hrs	
Setting Accuracy	+/- 5% of full scale	
Repeat Accuracy	+/- 1%	
Mode Adjustment	Refer "Timing diagrams of Functions"	
Supply Indication on front panel	Green LED for power Yellow LED for Relay.	
Mounting	Din-Rail	
Dimensions (W X H X D)	18 x 60 x 85 (in mm)	
Weight (Unpacked)	72 gms.	
Humidity	95% Rh Non Condensing	
Operating Temperature	-10° C to + 60° C	
Storage Temperature	-15° C to + 70° C	
Housing Color	Dark Gray	Light Gray
Max. Operating Altitude	2000 m	
Housing	Flame retardant (UL 94-V0)	
Degree & Protection	IP - 20 for Terminal, IP - 40 for Housing.	
Pollution Degree	II	
Isolation (I/P and O/P)	2 kV	
Isolation (Terminal and Casing)	4 kV	
Type of Insulation	Reinforced	
Certifications	CE, RoHS	
Initiate Time	Max. 100 ms	
Reset Time	Max. 200 ms	
EMI / EMC:		
Harmonic Current Emissions	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 III	
Conducted Susceptibility	IEC 61000-4-6 Level III	
Voltage Dips & Interruptions (AC)	IEC 61000-4-11 For < 24 VAC/DC, Performance Criteria B	
Conducted Emission	CISPR 14-1 Class B	
Radiated Emission	CISPR 14-1 Class A	

ELECTRONIC TIMER - SERIES MICON™175

MULTI-FUNCTION

Cat. No.: 1CMDT0
1CMDTB

CE

RoHS ✓

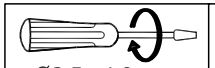
CAUTION:

1. Always follow instructions stated in this product leaflet.
2. Before installation, check to ensure that the specifications agree with the intended application.
3. Installation to be done by skilled electrician.
4. Automation & Control devices must be properly installed so that they are protected against any risk of involuntary actuations.
5. Suitable dampers should be provided in case of excessive vibrations.
6. Use of 250 mA fuse in series with product supply is recommended.
7. The timers shall be placed in an enclosure that is minimum 200% of the size of the timer in the end use application.
8. Setting of all potentiometers must be in clockwise direction only.

NOTE:

Product innovation being a continuous process, we reserve the right to alter specifications without any prior notice.

TERMINAL DETAILS:

 Ø3.5...4.0 mm	0.6 N.m (6 Lb.in) Terminal screw - M3
	1 x 4.0 mm^2 Solid / Stranded Wire
AWG	1 x 20 to 10

Use Cu wire of 75°C only.

AWG	CURRENT (A)
12	5.00
14	3.33
16	1.67

ELECTRONIC TIMER - SERIES MICON™ 175

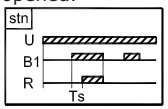
MULTI-FUNCTION

Series 175 1M MULTIMODE Timer is manufactured to a high degree of precision & accuracy. The time settings are stepless and can be set with the knob.

FUNCTION DIAGRAM :

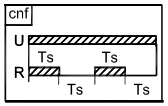
stn) Signal On Delay:

Timing starts when Switch (S) is closed. R energizes at end of period Ts and de-energizes when Switch (S) is opened.



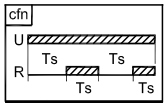
cnf) Cyclic On/Off: On start

Initially the relay (R) is On for period Ts after the power is applied. The relay (R) keeps on changing its status till power is removed with On and period = Ts.



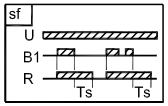
cfn) Cyclic Off/ On : Off start

Initially the relay (R) is Off for period Ts after the power is applied. The relay (R) keeps on changing its status till power is removed with On and Off period = Ts.



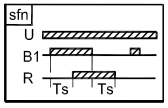
sf) OFF Delay, Constant Supply (Signal Off Delay)

R energizes when Switch (S) is closed. Timing commences after Switch (S) is opened and then the relay de-energizes.



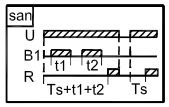
sfn) Signal Off/On

When Switch (S) is closed or opened for preset time Ts, the relay changes its state after time duration Ts.



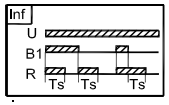
san) Accumulative Delay On Signal

Time commences as supply is present and Switch (S) is open. Closing Switch (S) pauses timing. Timing resumes when Switch (S) opened again R energizes at the end of timing.



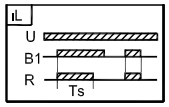
inf) Impulse On/Off

R energizes for the period Ts when Switch (S) is opened or closed. When timing commences, changing state of Switch (S) does not affect R but resets timer.



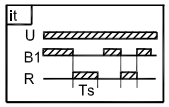
iL) ON Impulse, Constant Supply

When switch (S) is closed and remains closed output relay energizes until timing is over. If Switch (S) is Opened during period Ts, R resets.



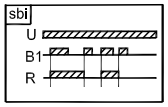
it) OFF Impulse, Constant Supply

When Switch (S) is opened, R energizes and de-energizes when timing is over. If Switch (S) is closed during period Ts R resets.



sbi) Leading Edge Bi-stable or Step relay

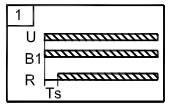
After every Signal, the output contact changes state, alternately switching from open to closed & vice versa.



Derived Modes :

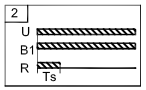
1) ON Delay

1. Select mode signal On Delay (stn) and close Switch (S) or short A1-B1 before power ON, it will work as ON Delay.
2. Select mode Accumulative On Delay (san) keeping signal open before power ON and during execution of time as well, it will work as ON Delay.

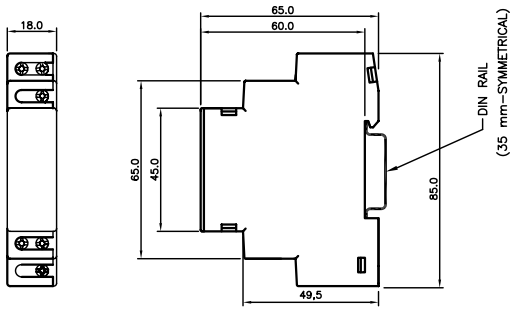


2) INTERVAL

Select mode (iL) ON Impulse. If Switch (S) is closed between A1-B1 before making power supply ON and during execution of timing, it will work as Interval.

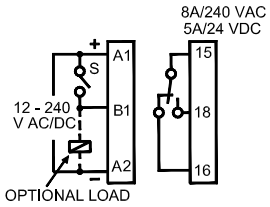


Overall product dimensions and mounting details :



OVERALL DIMENSIONS
65.0X85.0X18.0

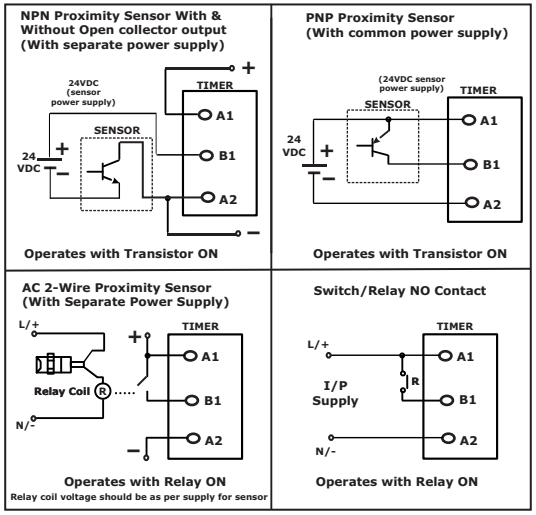
WIRING DIAGRAM:



INSTALLATION:

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

SENSOR CONNECTION DIAGRAM:



Safety:		
Test Voltage between I/P and O/P	IEC 60947-5-1/UL 508	2 kv
Test Voltage between all terminals and enclosure	IEC 60947-5-1/UL 508	2.5 kv
Impulse Voltage between I/P and o/p	IEC 60947-5-1	Level IV
Single Fault	IEC 61010-1	
Insulation Resistance	UL 508	> 50 kΩ
Leakage Current	UL 508	< 3.5 mA
Product	IEC 61812-1	
Environmental:		
Cold Heat	IEC 60068-2-1	
Dry Heat	IEC 60068-2-2	
Repetitive Shock	IEC 60068-2-27, 40 g, 6 ms	
Non-Repetitive Shock	IEC 60068-2-27, 30 g, 15 ms	

TECHNICAL SPECIFICATIONS:	
Cat. No.:	**1CQDT9**
SUPPLY CHARACTERISTIC:	
Supply Voltage ⏚	12 - 240 VAC / DC
Supply Variation	-15 % to +10 % of ⏚
Frequency	50 to 60 Hz, (±2 Hz)
Power Consumption (Max.)	AC: 3 VA, DC: 1.7W
SIGNAL CHARACTERISTICS:	
Signal sensing time	60 ms
Signal impedance	>6K@10VAC/DC; >70K@110VAC/DC; >150K@240VAC/DC
Signal switch current requirement	Switching capacity of the switch or contact should be>10mA
RELAY O/P CHARACTERISTICS:	
Contact Arrangement	1 C/O Potential free contacts
Contact Rating (Resistive Load)	16A at 250 VAC (resistive load (AC-1/4000VA))
Contact Material	$AgSnO_2$
Electrical Life	$3X10^7$
Mechanical Life	$0.7X10^5$
FEATURE CHARACTERISTICS:	
Set Time (Ts)	0.1 sec to 100 hr
Setting Accuracy	+/- 5% of full scale
Repeat Accuracy	+/- 0.2%
Mode Adjustment	10 modes for details Refer "Timing diagrams of Functions"
Supply Indication on front panel	Green LED for power; Yellow LED for Relay.
Mounting	Din-Rail
Dimensions (W X H X D)	18 x 65 x 90 (in mm)
Weight (Unpacked)	72 gms.
Humidity	95% Rh Non Condensing
Operating Temperature	-20° C to + 60° C
Storage Temperature	-30° C to + 70° C
Housing Color	Dark Gray
Max. Operating Altitude	2000 m
Housing	Flame retardant (UL 94-V0)
Degree & Protection	IP - 20 for Terminal, IP - 40 for Front Side, IP - 30 for Housing.
Pollution Degree	II
Isolation (I/P and O/P)	2 kV
Isolation (Terminal and Casing)	2.5 kV
Type of Insulation	Reinforced
Certifications	CE, RoHS
Initiate Time	Max. 100 ms
Reset Time	Max. 200 ms
EMI / EMC:	
Harmonic Current Emissions	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 III
Conducted Susceptibility	IEC 61000-4-6 Level III
Voltage Dips & Interruptions (AC)	IEC 61000-4-11 For < 24 VAC/DC, Performance Criteria B
Conducted Emission	CISPR 14-1 Class A
Radiated Emission	CISPR 14-1 Class A

ELECTRONIC TIMER - SERIES MICON™175

MULTI-FUNCTION

Cat. No.: **1CQDT9**

CE

RoHS ✓

CAUTION:

1. Always follow instructions stated in this product leaflet.
2. Before installation, check to ensure that the specifications agree with the intended application.
3. Installation to be done by skilled electrician.
4. Automation & Control devices must be properly installed so that they are protected against any risk of involuntary actuations.
5. Suitable dampers should be provided in case of excessive vibrations.
6. Use of 250 mA fuse in series with product supply is recommended.
7. The timers shall be placed in an enclosure that is minimum 200% of the size of the timer in the end use application.
8. Setting of all potentiometers must be in clockwise direction only.

NOTE:

Product innovation being a continuous process, we reserve the right to alter specifications without any prior notice.

TERMINAL DETAILS:

 Ø3.5...3.8 mm	0.4 N.m (3.6 Lb.in)
	1 x 2.5 mm^2 Solid / Stranded Wire
AWG	1 x 24 to 12

Use Cu wire of 75°C only.

AWG	Sq.mm.	Max. Current (A)
12	2.5	16*
14	2.0	15
16	1.5	10
18	1.0	7
20	0.75	5
22	0.5	3
24	0.2	2

*This maximum rating has been decided on basis of maximum current capacity of the product.
Note: Maximum current values are mentioned for resistive load.

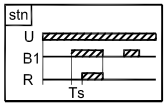
ELECTRONIC TIMER - SERIES MICON™ 175 MULTI-FUNCTION

Series 175 1M MULTIFUNCTION Timer is manufactured to a high degree of precision & accuracy. The time settings are stepless and can be set with the knob.

FUNCTION DIAGRAM :

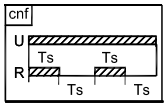
stn) Signal On Delay:

Timing starts when Switch (S) is closed. R energizes at end of period Ts and de-energizes when Switch (S) is opened.



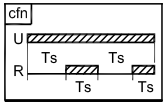
cnf) Cyclic On/Off: On start

Initially the relay (R) is On for period Ts after the power is applied. The relay (R) keeps on changing its status till power is removed with On and period = Ts.



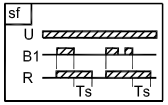
cfn) Cyclic Off/ On : Off start

Initially the relay (R) is Off for period Ts after the power is applied. The relay (R) keeps on changing its status till power is removed with On and Off period = Ts.



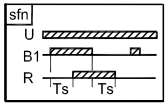
sf) OFF Delay, Constant Supply (Signal Off Delay)

R energizes when Switch (S) is closed. Timing commences after Switch (S) is opened and then the relay de-energizes.



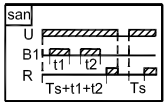
sfn) Signal Off/On

When Switch (S) is closed or opened for preset time Ts, the relay changes its state after time duration Ts.



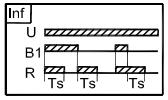
san) Accumulative Delay On Signal

Time commences as supply is present and Switch (S) is open. Closing Switch (S) pauses timing. Timing resumes when Switch (S) opened again R energizes at the end of timing.



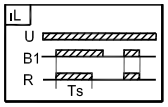
inf) Impulse On/Off

R energizes for the period Ts when Switch (S) is opened or closed. When timing commences, changing state of Switch (S) does not affect R but resets timer.



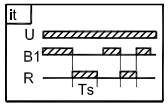
iL) ON Impulse, Constant Supply

When switch (S) is closed and remains closed output relay energizes until timing is over. If Switch (S) is Opened during period Ts, R resets.



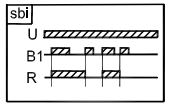
it) OFF Impulse, Constant Supply

When Switch (S) is opened, R energizes and de-energizes when timing is over. If Switch (S) is closed during period Ts R resets.



sbi) Leading Edge Bi-stable or Step relay

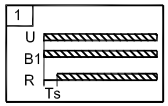
After every Signal, the output contact changes state, alternately switching from open to closed & vice versa.



Derived Modes :

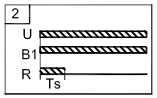
1) ON Delay

1. Select mode signal On Delay (stn) and close Switch (S) or short A1-B1 before power ON, it will work as ON Delay.
2. Select mode Accumulative On Delay (san) keeping signal open before power ON and during execution of time as well, it will work as ON Delay.

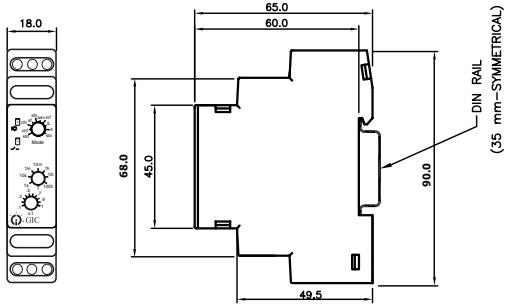


2) INTERVAL

Select mode (iL) ON Impulse. If Switch (S) is closed between A1-B1 before making power supply ON and during execution of timing, it will work as Interval.

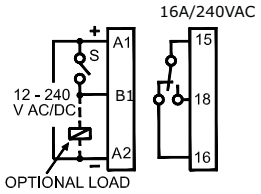


Overall product dimensions and mounting details :



OVERALL DIMENSIONS
65.0X90.0X18.0

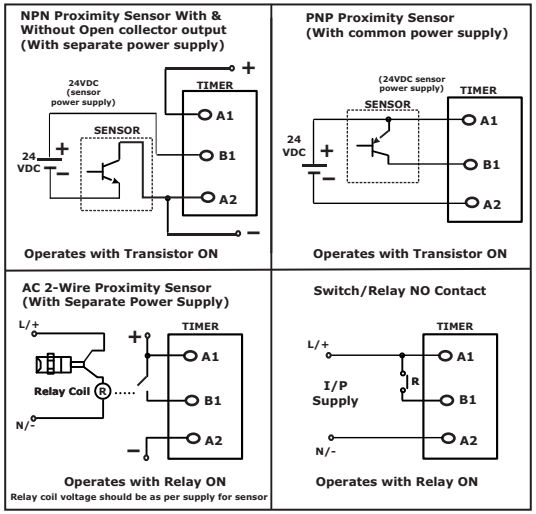
WIRING DIAGRAM:



INSTALLATION:

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

SENSOR CONNECTION DIAGRAM:



Safety:		
Test Voltage between I/P and O/P	IEC 60947-5-1/UL 508	2 kv
Test Voltage between all terminals and enclosure	IEC 60947-5-1/UL 508	2.5 kv
Impulse Voltage between I/P and o/p	IEC 60947-5-1	Level IV
Single Fault	IEC 61010-1	
Insulation Resistance	UL 508	> 50 kΩ
Leakage Current	UL 508	< 3.5 mA
Product	IEC 61812-1	
Environmental:		
Cold Heat	IEC 60068-2-1	
Dry Heat	IEC 60068-2-2	
Repetitive Shock	IEC 60068-2-27, 40 g, 6 ms	
Non-Repetitive Shock	IEC 60068-2-27, 30 g, 15 ms	
Vibration	IEC 60068-2-6,10Hz to 55Hz	

TECHNICAL SPECIFICATIONS:	
Cat. No.:	**1CJDT0**
SUPPLY CHARACTERISTICS:	
Supply Voltage ⏚	12 - 240 VAC / DC
Supply Variation	-15 % to +10 % of ⏚
Frequency	50 to 60 Hz, (± 3 Hz)
Power Consumption (Max.)	2 VA
RELAY O/P CHARACTERISTICS:	
Contact Arrangement	1 C/O Potential free contacts
Contact Rating (Resistive Load)	8A (Res.) @ 250 V AC, 5A at 24 VDC
Contact Material	AgNi
Electrical Life	50000 Operations min.
Mechanical Life	10000000 Operations min.
FEATURE CHARACTERISTICS:	
Timing Ranges	0.1 s; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10h; 100h
Setting Accuracy	+/- 5% of full scale
Repeat Accuracy	+/- 1%
Mode Adjustment	Flush (Refer "Functions diagram")
Supply Indication on front panel	Green LED for power Amber LED for Relay.
Mounting	Din-Rail
Dimensions (W X H X D)	18 x 60 x 85 (in mm)
Weight (Unpacked)	72 gms.
Humidity	95% Rh Non Condensing
Operating Temperature	-10° C to + 60° C
Storage Temperature	-15° C to + 70° C
Housing Color	Dark Gray
Max. Operating Altitude	2000 m
Housing	Flame retardant (UL 94-V0)
Degree & Protection	IP - 20 for Terminal, IP - 40 for Housing.
Pollution Degree	II
Isolation (I/P and O/P)	2 kV
Isolation (Terminal and Casing)	4 kV
Type of Insulation	Reinforced
Certifications	CE, RoHS
Initiate Time	Max. 100 ms
Reset Time	Max. 200 ms
EMI / EMC:	
Harmonic Current Emissions	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 III
Conducted Susceptibility	IEC 61000-4-6 Level III
Voltage Dips & Interruptions (AC)	IEC 61000-4-11 For < 24 VAC/DC, Performance Criteria B
Conducted Emission	CISPR 14-1 Class B
Radiated Emission	CISPR 14-1 Class A

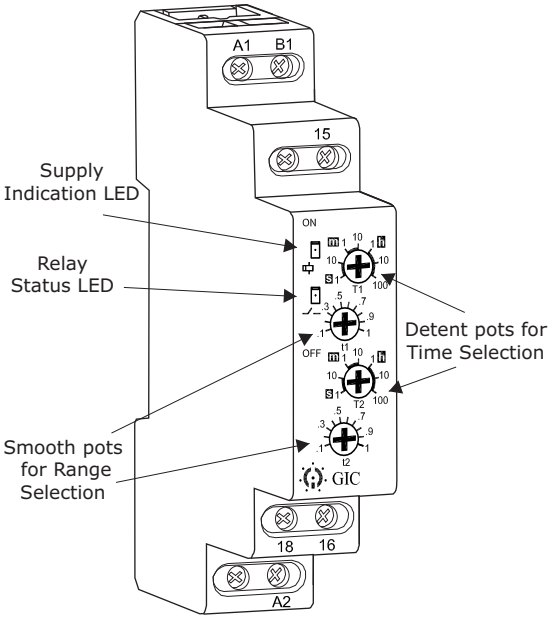
ELECTRONIC TIMER - SERIES MICON™175

ASYMMETRIC ON OFF / OFF ON TIMER

Cat. No.: **1CJDT0**

CE

RoHS ✓



TERMINAL DETAILS:

Ø3.5...4.0 mm	Torque 0.6 N.m (6 Lb.in) Terminal screw - M3
	1 x 4.0 mm^2 Solid / Stranded Wire
AWG	1 x 20 to 10

Use Cu wire of 75°C only.

AWG	CURRENT (A)
10	5.00
12	5.00
14	3.33
16	1.67
18	1.00
20	1.00

ELECTRONIC TIMER - SERIES MICON™ 175
ASYMMETRIC ON OFF / OFF ON TIMER

Series 175 Asymmetric On Off / Off On Timer is manufactured to a high degree of precision & accuracy. The time settings are stepless and can be set with the knob.

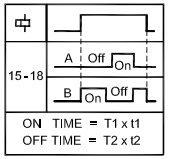
Feature:

Asymmetric On-Off / Off-On Timer:
- 17.5mm wide
- Time setting from:0.1 s; 1 s; 10 s; 1 min; 10 min; 1 h; 10 h; 100 h.
- LED status indicators: Power On (Green) and Relay status (Amber).
- Cadmium free contact material.

FUNCTION DIAGRAM :

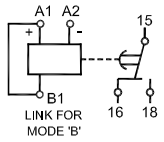
A) ASYMMETRIC OFF - ON :
If the link is not connected at A1-B1 and Supply is turned ON. Timing starts and Output Relay remains OFF for set Time. After set OFF Time has elapsed, Output Relay turns ON and remains ON till the set ON time has elapsed and the cycle repeats.

B) ASYMMETRIC ON - OFF :
If the link is connected at A1-B1 and supply is turned ON, Output Relay turns On and Timing starts. Output Relay turns OFF after the Set ON time has elapsed and remains OFF till the Set OFF time has elapsed and the cycle repeats.



NOTE:
1. T1 and T2 are detent pots for Time selection
2. t1 and t2 are smooth pots for Range Selection

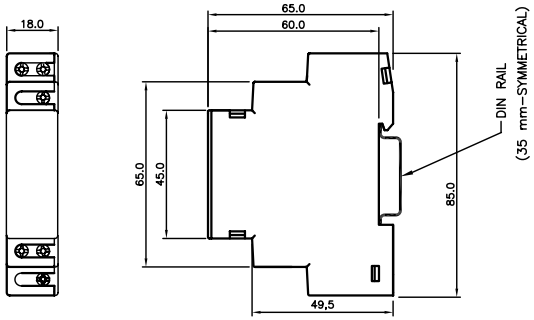
Connection Diagram:



MODE SELECTION:

MODE	SELECTION
ASYMMETRIC OFF - ON	Do not connect Link between A1 & B1
ASYMMETRIC ON - OFF	Connect Link between A1 & B1

Overall product dimensions and mounting details :



OVERALL DIMENSIONS
65.0X85.0X18.0

INSTALLATION:

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

CAUTION:

1. Always follow the instructions stated in this product leaflet.
2. Before installation, check to ensure that the specifications agree with the intended application.
3. Installation to be done by skilled electrician.
4. Automation & Control devices must be properly installed so that they are protected against any risk of involuntary actuations.
5. Suitable dampers should be provided in case of excessive vibrations.
6. Use of 250 mA fuse in series with product supply is recommended, for protection.
7. The timers shall be placed in an enclosure that is minimum 200% of the size of the timer in the end use application.
8. Setting of all potentiometers must be done in the clockwise direction only.
9. At power on to detect the proper mode, 100 ms (minimum) stable signal input should be present.
10. Keep at least 1 cm clearance from both side while using this product.

NOTE:

Product innovation being a continuous process, we reserve the right to alter specifications without any prior notice.

Safety:	
Test Voltage between I/P and O/P	IEC 60947-5-1 2 kv
Test Voltage between all terminals and enclosure	IEC 60947-5-1 4 kv
Impulse Voltage between I/P and o/p	IEC 60947-5-1 Level IV
Single Fault	IEC 61010-1
Insulation Resistance	UL 508 > 50 kΩ
Leakage Current	UL 508 < 3.5 mA
Product	IEC 61812-1
Environmental:	
Cold Heat	IEC 60068-2-1
Dry Heat	IEC 60068-2-2
Repetitive Shock	IEC 60068-2-27, 40 g, 6 ms
Non-Repetitive Shock	IEC 60068-2-27 , 30 g, 15 ms