
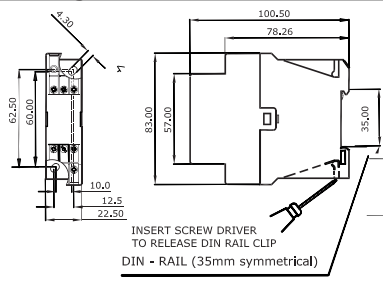
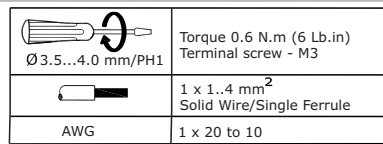
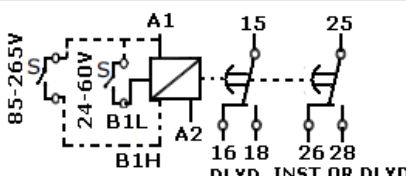
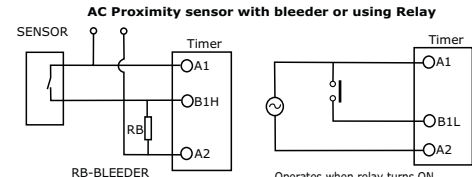
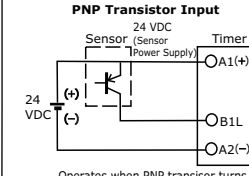
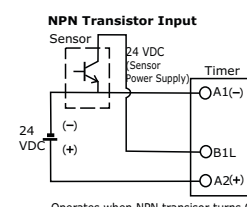


TECHNICAL SPECIFICATIONS:			ELECTRONIC TIMER - SERIES MICON™ 225 MULTI-FUNCTION INSTANT/DELAYED									
Cat. No.:	2A8DT6	EMI / EMC:										
SUPPLY CHARACTERISTIC:		Harmonic Current Emissions	IEC 61000-3-2 Ed. 3.2 (2009-04) Class A									
Supply Voltage (⎓)	24- 240 VAC / DC	ESD	IEC 61000-4-2 Ed. 2.0 (2008-12) Level II									
Supply Variation	-20 % to +10 % of ⎓	Radiated Susceptibility	IEC 61000-4-3 Ed. 3.2 (2010-04) Level III									
Frequency	50 to 60 Hz, (± 3 Hz)	Electrical Fast Transient	IEC 61000-4-4 Ed. 3.0 (2012-04) Level IV									
Power Consumption	< 2VA @ 24V AC/DC, <4VA @ 230V AC/DC	Surge	IEC 61000-4-5 Ed. 2.0 (2005-11) Level IV									
Initiate Time	Max. 100 ms	Conducted Susceptibility	IEC 61000-4-6 Ed. 3.0 (2008-10) Level III									
Reset Time	Max. 200 ms	Voltage Dips & Interruptions (AC)	IEC 61000-4-11 Ed. 2.0 (2004-3) For < 24 VAC, Performance Criteria B									
SIGNAL CHARACTERISTICS:		Voltage Dips & Interruptions (DC)	IEC 61000-4-29 Ed.1. 0 (2000-08) For < 24 VDC, Performance Criteria B									
Signal Voltage	Low Range (B1L-A2) 24-60V AC/DC High Range (B1H-A2) 85-265V AC, 100-265V DC	Conducted Emission	CISPR 14-1 Ed. 5.2 (2011-11) Class A									
Signal Sensing Time	Guaranteed Detection for Signal Present: 50 ms Guaranteed Detection for Signal Absent: 50 ms	Radiated Emission	CISPR 14-1 Ed. 5.2 (2011-11) Class A									
Signal stabilization Delay	100 ms (Applicable at Power ON Only)	Safety:										
RELAY O/P CHARACTERISTICS:		Test Voltage between I/P and O/P	IEC 60947-5-1 Ed.3.0 (2003-11) 2 kv									
Contact Arrangement	Relay 1 - 1 C/O (Delayed) Relay 2 - 1 C/O (Instant or Delayed)	Test Voltage between all terminals & enclosure	IEC 60947-5-1 Ed.3.0 (2003-11) 4 kv									
Contact Rating (Resistive Load)	5A @ 250V AC, 5A at 28V DC (Res.)	Impulse Voltage between I/P and O/P	IEC 60947-5-1 Ed.3.0 (2003-11) Level IV									
Contact Material	AgNi	Single Fault	IEC 61010-1 Ed.3.0 (2010-06)									
Electrical Life	100000 Operations min.	Insulation Resistance	UL 508 Ed.17 (1999-01) > 50 MΩ									
Mechanical Life	10000000 Operations min.	Leakage Current	UL 508 Ed.17 (1999-01) < 3.5 mA									
FEATURE CHARACTERISTICS:		Product Reference Standard	IEC 61812-1 Ed.2.0 (2011-05)									
Set Time (Ts)	0.1 seconds to 120 Days	Environmental:										
Setting Accuracy	+/- 5% of full scale	Cold Heat	IEC 60068-2-1 Ed.6.0 (2007-03)									
Repeat Accuracy	+/- 1%	Dry Heat	IEC 60068-2-2 Ed.5.0 (2007-07)									
Mode Functions	Refer "Timing Charts & Function Description" on page no. 2	Repetitive Shock	IEC 60068-2-27 Ed.4.0 (2008-02),40g,6ms									
LED Indication on front panel	Green LED ON: Power ON Amber LED ON :Relay ON for 'Delayed' contact	Non-Repetitive Shock	IEC 60068-2-27 Ed.4.0 (2008-02),30g,15ms									
Mounting	DIN-Rail/Base Mount	Vibration	IEC 60068-2-6 Ed.7.0 (2007-12), 5g									
Dimensions (W X H X D)	22.5 x 75 x 100.5 (in mm)	Overall Product Dimensions & Mounting Details										
Weight (Packed)	153 gms. (Approx.)											
Humidity	5 to 95% Rh (Non Condensing)	TERMINAL DETAILS:										
Operating Temperature	-10° C to + 60° C											
Storage Temperature	-20° C to + 70° C	Torque 0.6 N.m (6 Lb.in) Terminal screw - M3										
Housing Color	Light Grey	1 x 1.4 mm ² Solid Wire/Single Ferrule										
Max. Operating Altitude	2000 m	AWG 1 x 20 to 10										
Housing	Flame retardant (UL 94-V0)	Use Cu wire of 75°C only.										
Degree & Protection	IP - 20 for Terminal, IP - 40 for Housing	<table border="1"> <thead> <tr> <th>AWG</th> <th>CURRENT (A)</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>5.00</td> </tr> <tr> <td>14</td> <td>3.33</td> </tr> <tr> <td>16</td> <td>1.67</td> </tr> </tbody> </table>			AWG	CURRENT (A)	12	5.00	14	3.33	16	1.67
AWG	CURRENT (A)											
12	5.00											
14	3.33											
16	1.67											
Pollution Degree	II	Installation :										
Type of Insulation	Reinforced	A) Base Mounting : Timer should be mounted on a plain surface, using two M4 screws.										
Certifications	CE, RoHS	B) DIN - Rail Mounting : The Timer should be mounted on 35mm symmetrical DIN Rail.										
		NOTE: Product innovation being a continuous process, we reserve right to alter specifications without any prior notice.										
		Connection diagram:										
												
		AC Proximity sensor with bleeder or using Relay 										
		CAUTION: 1. Always follow instructions stated in this product leaflet. 2. Before installation, ensure that the intended application meets with the specifications. 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: Using of AC 2-Wire Proximity Sensor (Input signal range 85-265V AC):Please add the input bleeder resistor across signal input terminals to prevent false signal Sensing due to leakage current of proximity sensor. Generally suggested value of Bleeder is 22K, 5W. (Included with the product as an accessory).										
		Connection for sensors: PNP Transistor Input  NPN Transistor Input 										

**ELECTRONIC TIMER - SERIES MICON™ 225
MULTI-FUNCTION INSTANT/DELAYED**

This product is manufactured to high precision & accuracy with 16 Operating functions. All functions can be used for either 1I (Instant) + 1D (Delayed) or 2D (Delayed). The function and Timing Range can be set before power is applied to the product. During the timing operation any changes in these setting will not have any effect.

1I + 1D OR 2D Configuration Selection:

Device can be configured as 1 Instant Output (25-28) & 1 Delayed (as per the function selected) Output (15-18) or both Delayed Output (15-18 & 25-28) by using the DIP switch given on the Front facia. If '5th' DIP switch is set at Upper position, it will operate in 2 Delayed output for the selected function. If the '5th' DIP switch is set at Lower position, it will operate in 1 Instant Output (25-28) & 1 Delayed output for the selected mode of functionality.

Delay Timing Selection:

0.1 seconds to 120 days timing can be selected by using Range Knob 'T', Timing Multiplier Knob 't' and Timing Multiplier DIP Switch (x1 or x12) on the front facia.

Selection of Functions:

Operating function & timing can be selected by using DIP switches '1', '2', '3' & '4'.

Selection of Function	
Function	Function
On Delay (Non Signal)	Signal OFF delay
Signal ON Delay Type 1	Step Mode
Signal ON Delay	One shot
Inverted Signal On Delay	Delayed Impulse
Interval	Accumulative Delay On Signal
Leading Edge Impulse	Impulse ON/OFF
Trailing Edge Impulse	Signal ON/OFF Delay
Cyclic OFF/ON	Cyclic ON/OFF

1I+1D or 2D Selection	Timing Multiplier Selection
D I	X12
I D	X1
D I	X12
I D	X1

1I + 1D Operation Timing = 'T' X 't' X 1

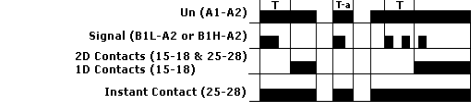
2 Delayed Operation Timing = 'T' X 't' X 12

TIMING CHART & Function Description:

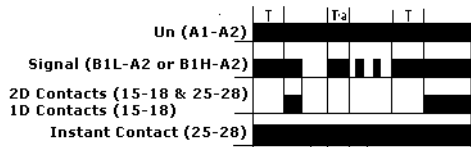
ON Delay (Non Signal Based): When the supply voltage is applied, timing starts and after the preset time duration 'T', output switches ON and remains ON till the supply is Present.



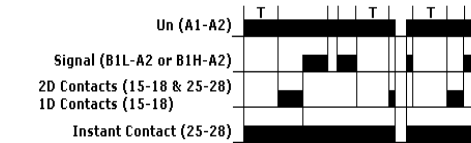
Signal ON Delay Type 1 : A permanent supply is required, On application of signal timing starts and after preset time duration 'T', output switches ON. Changing the state of signal during or after 'T' does not affect the output. Reset is only done by switching OFF and ON the supply.



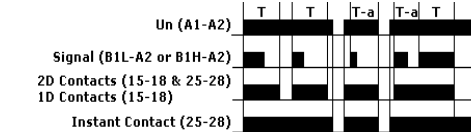
Signal ON Delay : Time commences as the supply voltage and signal is present. When input signal is opened, the timing resets. The output is switched ON at the end of the preset time duration 'T'. When output is ON if signal is opened then the output switches OFF.



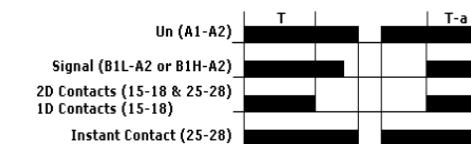
Inverted Signal ON Delay: When the supply voltage is applied and signal is opened, preset time duration 'T' starts. On completion of the 'T', output switches ON. If the signal is closed during timing 'T', timing resets.



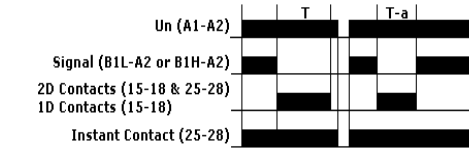
Interval: When the supply voltage is applied & signal is closed, output switches ON & timing function starts. If signal is opened and closed during the preset time, the timing restarts. After preset time 'T' has elapsed, the output switches OFF.



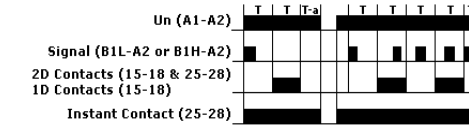
Leading Edge Impulse: When the supply voltage is applied and signal is closed, the output switches ON for preset time 'T'. After the completion of preset time 'T', the output switches OFF. If signal closed or opened during preset time 'T', the output remains unaffected.



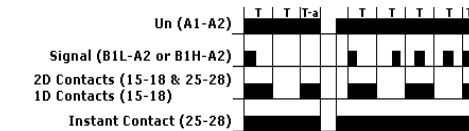
Trailing Edge Impulse: When the supply voltage is applied and signal is opened, output switches ON for the preset time duration 'T'. After completion of preset time 'T', output switches OFF. If the signal is closed during preset timing 'T', the output switches OFF & timing resets.



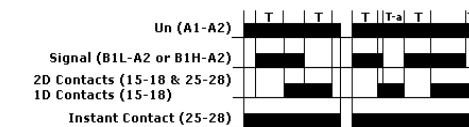
Cyclic OFF/ON: When the supply voltage applied and signal is closed, output switches OFF for the preset time duration 'T' and then switches ON for preset time 'T'. This cycle repeats while the supply is present. Changing the state of signal during timing 'T' does not affect the output.



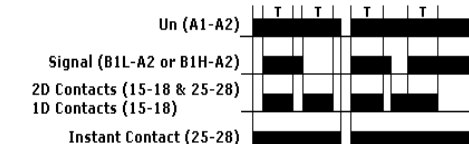
Cyclic ON/OFF: When the supply voltage applied and signal is closed, output switches ON for the preset time duration 'T' and then switches OFF for preset timing 'T'. This cycle repeats while the supply is present. Changing the state of signal during 'T' does not affect the output



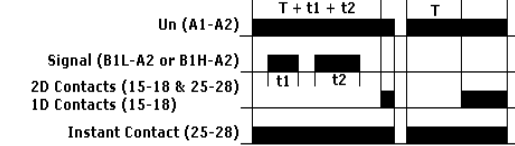
Signal ON/OFF Delay: When the supply voltage is applied and signal is closed, outputs switches ON after preset time 'T'. During the timing 'T' if signal is opened, the output switches ON immediately and OFF delay starts. Once this time period has elapsed the output switches OFF. During this OFF delay if signal is closed, the output switches OFF immediately and ON Delay restarts.



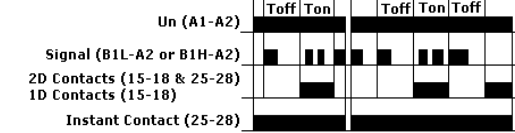
Impulse ON/OFF: When the supply voltage is applied and if signal closed or opened, output switches ON for Preset timing 'T'. During time period 'T', changing state of input signal does not affect output but resets the timing.



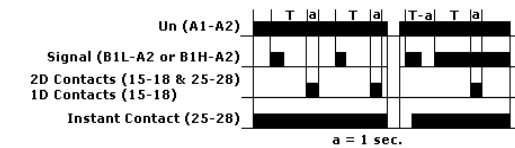
Accumulative Delay ON Signal: On application of the supply voltage, the preset timing commences. Whenever signal is closed, timing pauses & resumes back only when the input signal is opened. The output switches ON at the end of the preset time duration 'T'.



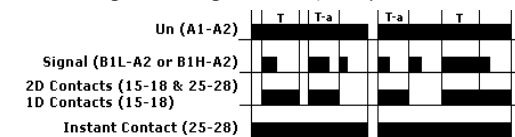
Delayed Impulse: When the supply voltage is applied & signal is closed, output switches ON at the end of the preset time 'ToFF'. Then the preset ON time 'Ton' starts irrespective of the signal state and remains ON till the completion of preset time duration 'Ton'. If signal closed during the timing 'ToFF', the timing restarts but the output state remains unaffected. The signal change does not have any effect during the timing period 'Ton'.



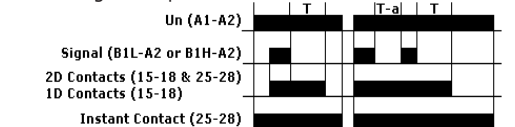
One Shot: When the supply voltage is applied and signal is closed, timing starts and after the preset time duration 'T', output switches ON for One sec. only.



Step : When the supply voltage is applied and signal is closed, output switches ON for preset time duration 'T'. Opening of the input signal during this timing 'T' does not affect the output state. But if the signal is opened and closed again during time 'T', output switches OFF.



Signal OFF Delay: When the supply voltage is applied & signal is closed, the output switches ON. When signal is opened, the preset timing commences and the output switches OFF at the end of time duration 'T'. If signal is closed during timing period, then timing stops & restarts when signal is opened.

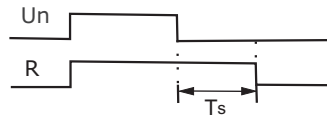


ELECTRONIC TIMER - SERIES MICON™ 225

TRUE - OFF DELAY

Series 225 TRUE - OFF DELAY Timer is manufactured to a high degree of precision & accuracy. The time settings are stepless and can be set with the knob.

FUNCTION DIAGRAM :



Un : SUPPLY VOLTAGE

R : OUTPUT RELAY STATUS

Ts : Set Time

OFF Delay can be set using Range and T potentiometers provided on the front facia.
SET TIME = RANGE X T Sec.

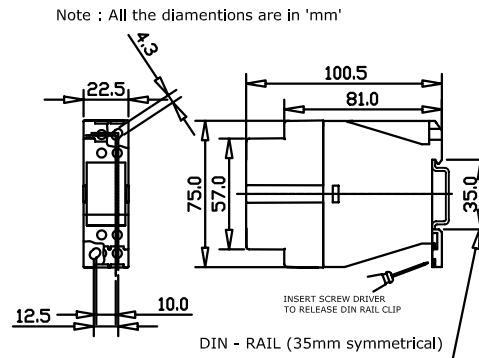
FUNCTION DESCRIPTION:

The output relay energizes as soon as the power is switched On (Min. Energizing time 1 sec.), but the time count starts only after the power is switched Off, and relay de-energizes after the set time has elapsed.

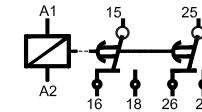
FEATURES:

- Time has wide application area.
- Normal supply frequency variation does not affect the timing accuracy.
- Enclosure : Compact, Rugged and light weight.
- Mounting : Din Rail and Base mounting facility.

Overall product dimensions and mounting details :



WIRING DIAGRAM:



Note:

1. Setting of all potentiometers must be in clockwise direction only.
2. Use of 500 mA fuse in series with product supply is recommended.

INSTALLATION:

- a. Base Mounting:
The Timer should be mounted on a plain surface using two M4 screws.
- b. DIN-Rail Mounting:
The Timer should be mounted on 35 mm symmetrical DIN Rail.

Safety:	
Test Voltage between I/P and O/P	IEC 60947-5-1 Ed.3.0 (2003-11) Level 2 kv
Test Voltage between all terminals and enclosure	IEC 60947-5-1 Ed.3.0 (2003-11) Level 4 kv
Impulse Voltage between I/P and o/p	IEC 60947-5-1 Ed.3.0 (2003-11) Level IV
Single Fault	IEC 61010-1 Ed.3.0 (2010-06)
Insulation Resistance	UL 508 Ed.17 (1999-01) <2000 MΩ
Leakage Current	UL 508 Ed.17 (1999-01) <3.5 mA
Product	IEC 61812-1 Ed.2.0 (2011-05)
Environmental:	
Cold Heat	IEC 60068-2-1 Ed.6.0 (2007-03)
Dry Heat	IEC 60068-2-2 Ed.5.0 (2007-07)
Repetitive Shock	IEC 60068-2-27 Ed.4.0 (2008-02), 40 g, 6 ms
Non-Repetitive Shock	IEC 60068-2-27 Ed.4.0 (2008-02), 30 g, 15 ms

TECHNICAL SPECIFICATIONS:	
Cat. No.:	23GDT0
SUPPLY CHARACTERISTIC:	
Nominal Supply ϕ	24-240 VAC / DC, 50/60 Hz
Limits	-20 % to +10 % of ϕ
Power Consumption (Max.)	2.5VA
RELAY O/P CHARACTERISTICS:	
Contact Arrangement	2 C/O
Contact Rating	5 A (Res.) @ 240 VAC / 28 VDC
Contact Material	Ag Alloy
Mechanical Life Expectancy (At no load)	10 x 10 ⁶ operations
Electrical Life Expectancy	1 x 10 ⁶ operations
Switching Frequency (Max.)	1800 operations (Under rated load) / h (Electrical)
FEATURE CHARACTERISTICS:	
Mode Available	True off Delay
Time	0.6-600 s
Setting Accuracy	+/- 10% of full scale
Repeat Accuracy	+/- 1%
Minimum Energizing Time	1 sec. minimum
Supply Indication on front panel	Green LED - Power ON
Mounting	Base / DIN-Rail (35 mm sym.)
Dimensions (W X H X D)	22.5 x 75 x 100.5 (in mm)
Weight (Unpacked)	120 gms.
Humidity	95% Rh
Operating Temperature	-15° C to 60° C
Storage Temperature	-20° C to 70° C
Vibration Resistance	Destruction Malfunction
Housing Degree & Protection	10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude)
Pollution Degree	Flame retardant UL 94-V0, IP - 20 for Terminal, IP - 40 for Housing
Isolation (I/P and O/P)	II
Isolation (Terminal and Casing)	2 kV
Type of Insulation	4 kV
Certifications	Reinforced
EMI / EMC:	
Harmonic Current Emissions	CE, RoHS
ESD	IEC 61000-3-2 Ed. 3.2 (2009-04) Class A
Radiated Susceptibility	IEC 61000-4-2 Ed. 2.0 (2008-12) Level II
Electrical Fast Transient	IEC 61000-4-3 Ed. 3.2 (2010-04) Level III
Surge	IEC 61000-4-4 Ed. 3.0 (2012-04) Level IV
Conducted Susceptibility	IEC 61000-4-5 Ed. 2.0 (2005-11) Level IV
Voltage Dips & Interruptions (AC)	IEC 61000-4-6 Ed. 3.0 (2008-10) Level III
Voltage Dips & Interruptions (DC)	IEC 61000-4-11 Ed. 2.0 (2004-03) All seven levels
Conducted Emission	IEC 61000-4-29 Ed. 1.0 (2000-08) All five levels
Radiated Emission	CISPR 14-1 Ed. 5.2 (2011-11) Class B
	CISPR 14-1 Ed. 5.2 (2005-11) Class B

ELECTRONIC TIMER - SERIES MICON™ 225

True Off Delay

Cat. No.: **23GDT0**






CAUTION:

1. Always follow instructions stated in this product leaflet.
2. Before installation, check & 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.

NOTE:

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

Terminal Details:

 Ø3.5...4.0 mm	0.6 N.m (6 Lb.in) Terminal screw - M3
	1 x 1...4 mm ² Solid Wire / Single Wire Ferrule
	2 x 0.5...2.5 mm ² Insulated Twin Wire Ferrule
AWG	1 x 17 to 11

Use Cu wire of 75°C only.

AWG	CURRENT (A)
12	5.00
14	3.33
16	1.67

The timers shall be placed in an enclosure that is minimum 200% of the size of the timer in the end use application.

2LL019_05

TECHNICAL SPECIFICATIONS

Cat. No.:	2A5DT5*	2A6DT6	2AJDT0/1*	2ANDT0*	2AODT5*	2AADT5*	2B5DT5*	2B6DT6	2ASDT0/1*	2BSDT0/1*	22LDT0	23LDT0	20JDTT	20NDTT				
Functions	MULTI-FUNCTION with 5 functions	MULTI-FUNCTION with 6 functions	ASYMMETRIC ON-OFF / OFF-ON	SIGNAL BASED MULTI-FUNCTION	ON DELAY	ASYMMETRIC ON-OFF	MULTI-FUNCTION with 5 functions	MULTI-FUNCTION with 6 functions	STAR - DELTA		MOTOR RESTART CONTROL		SOLID STATE ASYMMETRIC ON-OFF / OFF-ON	SOLID STATE SIGNAL BASED MULTI-FUNCTION				
Supply Characteristics :																		
Supply Voltage (⚡)	24-240 VAC/DC						240 - 415 VAC		24 - 240 VAC/DC		240 VAC		110 VAC		110 - 240 VAC			
Supply Variation	-20 % to + 10 % (⚡)																	
Supply Frequency	50/60 Hz																	
Power Consumption (Max.)	4 VA						7 VA		4 VA		7 VA		4 VA		2 VA		3 VA	
Signal Characteristics :																		
Signal Sensing Time	Not Applicable		60 ms						Not Applicable						40 ms			
Signal I/P Impedance			1466 KΩ												1466 KΩ			
Timing and Accuracy :																		
Setting Accuracy	+/-5 % of full scale																	
Repeat Accuracy	+1%																	
Initiate Time	Max.100 ms								Max. 100 ms		Not Applicable				Max. 100 ms			
Reset Time	Max.200 ms								Max. 200 ms		Not Applicable				Max. 100 ms			
Set Time (Ts)	0.1 s - 10 h								3 s - 120 s		Tm : 0.2 s - 6 s Td : 0.2 s - 60s Retentive Trip Voltage : 176 VAC, ± 6 VAC Hysteresis : 10 VACmax.		Tm : 0.2 s - 6 s Td : 0.2 s - 60s Ret. Trip Voltage : 80 VAC, ± 6 VAC Hysteresis : 10 VACmax.		0.06 s - 10 h			
Pause Time (P)	Not Applicable								60 ms, 90 ms, 120 ms, 150 ms		Not Applicable				Not Applicable			
Operating Temperature	-15°C to + 60°C																	
Storage Temperature	-20°C to + 80°C																	
Max.Operating Altitude	2000 m																	
Humidity	≤ 95% (Rh)										≤ 80% (Rh)				≤ 95% (Rh)			
LED Indication	Green LED : Power ON ; Red : Relay ON								λ:Star Relay ON; Δ :Delta Relay ON		Green LED :Power ON ; Red :Relay ON				Green LED : Power ON ; Red LED : Output ON			
Housing	Flame Retardant UL 94-V0																	
Dimensions in mm (W X H X D)	22.5 X 75 X 100.5																	
Weight (Unpacked)	130 g										100 g				107 g			
Mounting	Base / DIN Rail																	
Relay O/P Characteristics :																		
Contact Rating	5A (Res.) @ 240 VAC / 28 VDC																	
Contact Material	Ag Alloy																	
Mechanical Life	10 million																	
Electrical Life	0.1 million																	
Switching Frequency	Electrical:1800 operations / h at rated load																	
Utilization Category AC-15	Rated Voltage (Ue) : 230 V / 125 V; Rated Current (Ie) : 1.3 A / 2.5 A																	
Utilization Category DC-13	Rated Voltage (Ue) : 250 V / 120 V / 24 V; Rated Current (Ie) : 0.1 A / 0.22 A / 2 A																	
Contact Arrangement	2C/O		2C/O & 1I+1D		1C/O		2C/O		2C/O & 1I+1D		1NO+1NO		1C/O					
Certification :	CE, RoHS																	
Product Reference Standard	IEC 61812-1																	
EMI/EMC :																		
Harmonic Current Emissions	IEC 61000-3-2		Class A												IEC 61000-3-2 Class A			
ESD	IEC 61000-4-2		Level II								Level III		Level II		IEC 61000-4-2 Level II			
Radiated Susceptibility	IEC 61000-4-3		Level III												IEC 61000-4-3 Level III			
Electrical Fast Transient	IEC 61000-4-4		Level IV												IEC 61000-4-4 Level IV/4 kV,5 kHz			
Surge	IEC 61000-4-5		Level IV										Level III		IEC 61000-4-5 Level IV			
Conducted Susceptibility	IEC 61000-4-6		Level III												IEC 61000-4-6 Level IV			
Voltage Dips & Interruptions (AC)*	IEC 61000-4-11						(Note: For 24 VAC, Performance Criteria B)								IEC 61000-4-11 All 7 Levels			
Voltage Dips & Interruptions (DC)†	IEC 61000-4-29						(Note: For 24 VDC, Performance Criteria B)								Not Applicable			
Conducted Emission	CISPR 14-1		Class A												CISPR 14-1 Class B			
Radiated Emission	CISPR 14-1		Class A												CISPR 14-1 Class A			
Safety :																		
Test Voltage Between I/P & O/P	2.5 kV		1.5 kV		1.5 kV / 2.5 kV		2.5 kV		2.5 kV		1.5 kV / 2.5 kV		Not Applicable		2.5 kV			
Impulse Voltage Between I/P & O/P	4 kV		1.5 kV		1.5 kV / 4 kV		4 kV		4 kV		1.5 kV / 4 kV		Not Applicable		IEC 60947-5-1 2.5 kV			
Single Fault	IEC 61010-01																	
Insulation Resistance	UL 508		> 2000 MΩ															
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 Hz to 55 Hz															
Repetitive Shock	IEC 60068-2-27		40 g, 6ms															
Non-repetitive Shock	IEC 60068-2-27		30 g, 15 ms															
Solid State Output :																		
Type	Not Applicable																	
Form																		
Rated Current																		
Maximum Admissible Current																		
Leakage Current																		
Voltage Breaking Capacity																		
Maximum Voltage Drop at Terminals	<=8V																	
Minimum Load Current	10 mA																	
Electrical Life	1 X 10 ⁶																	
Optical Isolation																		
SPST																		
1 A AC																		
20 A (10 mS)																		
<= 5 mA																		
110-240 VAC																		

*†: This standard is applicable only for 2A series.

⚡: For 22LDT0, Performance Criteria "B".

* * * marked products have 2.5 kV test voltage between I/P and O/P.

1) MULTI-FUNCTION :

Cat. No.: 2ASDT5 / 2BSDT5 / 2A6DT6
2B6DT6

A) ON DELAY :

When the supply is applied, timing starts. Output Relay turns ON after the set timing (Ts) has elapsed and remains ON till the supply is present.

B) INTERVAL :

When the supply is applied, Output Relay turns ON and timing starts. Output Relay turns OFF after the set Timing (Ts) has elapsed.

C) CYCLIC ON/OFF :

When the supply is applied, Output Relay turns ON and timing starts. Output Relay turns OFF after set Timing (Ts) has elapsed and remains OFF for the same set Timing (Ts) and ON/OFF cycle repeats till the supply is present.

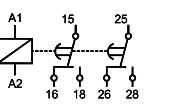
D) CYCLIC OFF/ON :

When the supply is applied, Output Relay is kept OFF for set Timing (Ts). After set Timing (Ts) has elapsed, Output Relay turns ON for the same set timing (Ts) and this OFF/ON Cycle repeats till supply is present.

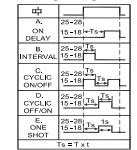
E) ONE SHOT :

When the supply is applied, timing starts. After set Timing (Ts) has elapsed Output Relay turns ON for one second, and Output Relay turns OFF.

Connection Diagram :



Timing Diagram :

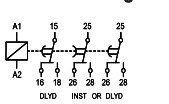


F) 11+1D ON DELAY :

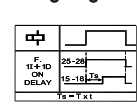
Only for Cat. No.: 2A6DT6/2B6DT6

When supply is applied, Timing starts and Instant Relay (25-28) turns on. After set Timing (Ts), Delayed Relay (15-18) turns on and remains ON till supply is present.

Connection Diagram :



Timing Diagram :



2) ASYMMETRIC ON - OFF/OFF - ON :

Cat. No.: 2AJDT0/2AJDT1/ 2OJDTT

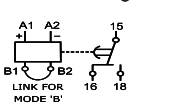
A) ASYMMETRIC OFF - ON :

If the link is not connected at B1-B2 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.

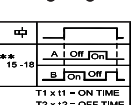
B) ASYMMETRIC ON - OFF :

If the link is connected at B1-B2 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.

Connection Diagram :



Timing Diagram :



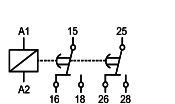
** (Incase of 2OJDTT, consider 15= Y1; 18=Y2.)

3) ASYMMETRIC ON - OFF :

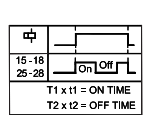
Cat. No.: 2AADT5

Supply is turned ON, Output Relay turns ON and Timing starts. Output Relay turns OFF after Set ON time has elapsed and remains OFF till set OFF time has elapsed and cycle repeats.

Connection Diagram :



Timing Diagram :

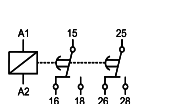


4) ON DELAY :

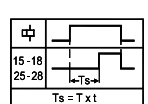
Cat. No.: 2AODT5

After applying the supply, Timing (Ts) starts Output Relay turns ON after the set Timing (Ts) has elapsed and remains ON till the Supply is present.

Connection Diagram :



Timing Diagram :

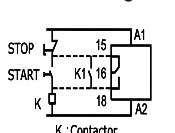


5) MOTOR RESTART CONTROL :

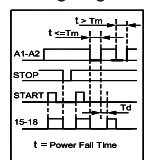
Cat. No.: 22LDT0 / 23LDT0

This product is intended for Instant and delayed restarting of motor in the event of supply interruption for a short time (6s max.)

Connection Diagram :



Timing Diagram :



Application :

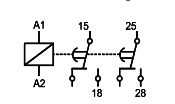
For continuous process control, where a Stop resulting from a short, voltage fault could cause serious problems. If supply interruption is < 0.2 s, then motor can be restarted immediately due to motor inertia properties. If supply interruption is within 0.2 s to 6 s (Tm settable), then relay is made ON after set delay time (Retentive) as motor requires stabilization period. After set memory time Tm, Relay will not START until START button is pressed.

6 STAR - DELTA :

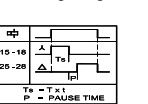
Cat. No.: 2ASDT0/1 & 2BSDT0/1

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 the set Pause Time and remains ON till the Supply is present.

Connection Diagram :



Timing Diagram :



7) SIGNAL BASED MULTI-FUNCTION TIMER :

Cat. No. : 2ANDT0 / 20NDTT

A) SIGNAL ON DELAY :

Supply is present. Whenever switch (S) is closed, Timing (Ts) starts. Output Relay energizes at the end of set Timing (Ts). Output Relay de-energizes or Timing reset if switch (S) is opened.

B) ACCUMULATIVE ON DELAY :

Supply is present. Timing (Ts) starts if Switch (S) is open. Closing Switch (S) creates a Pause in Timing. Output Relay energizes at the end of set time (Ts).

C) SIGNAL OFF DELAY :

Supply is present. Whenever Switch (S) is closed, Output Relay energizes. Timing (Ts) starts when Switch is opened and Output Relay de-energizes at the end of set time. Timing (Ts) will reset if Switch (S) is re-opened.

D) SIGNAL OFF / ON DELAY :

Supply is present. Whenever Switch (S) is closed or opened, Timing (Ts) starts. Output Relay changes its state after set time (Ts). If Switch (S) is opened or closed before Timing ends, product will reset Timing (Ts) with Output Relay state unchanged.

E) LEADING EDGE IMPULSE :

Supply is present. If Switch (S) is closed, Output Relay energizes and de-energizes at the end of set Timing (Ts) irrespective of further action on Switch.

Derived Modes :

A) ON DELAY :

1. Select mode signal On Delay (A) and close Switch (S) or short B1-B2 before power ON, it will work as ON Delay.

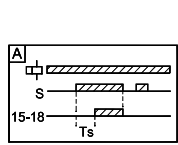
2. Select mode Accumulative On Delay (B) keeping signal open before power ON and during execution of time as well, it will work as ON Delay.

E) INTERVAL :

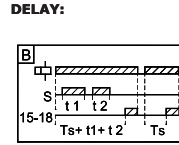
Select mode (E) Leading Edge Impulse. If Switch (S) is closed between B1- B2 before making power supply ON and during execution of timing, it will work as Interval.

Connection Diagram for 2ANDT0 & 20NDTT :

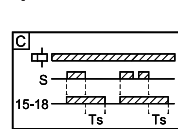
A) SIGNAL ON DELAY :



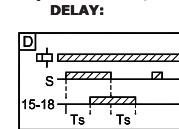
B) ACCUMULATIVE ON DELAY :



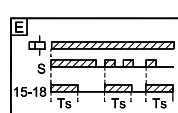
C) SIGNAL OFF DELAY :



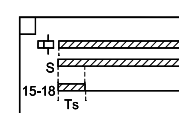
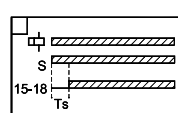
D) SIGNAL OFF / ON DELAY :



E) LEADING EDGE IMPULSE 1 :

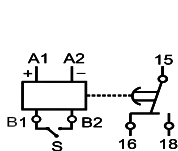


a) ON DELAY : e) INTERVAL :

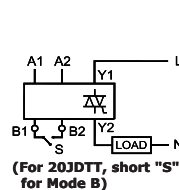


(Incase of 20NDTT & 20JDTT, 15=Y1; 18=Y2)

Connection Diagram For 2ANDT0



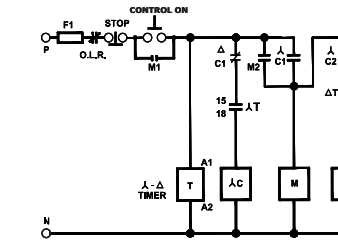
Connection Diagram for 20NDTT & 20JDTT



(For 20JDTT, short "S" for Mode B)

Recommended Star - Delta Control Circuit :

(Below circuit is for STAR - DELTA Timer with 240 VAC Supply.)



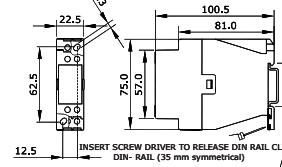
- F1 - Mains Protection Fuse
- O.L.R - Over Load Relay
- M1 - First 'NO' Contact of Main Contact or
- M2 - Second 'NO' Contact of Main Contact or
- M - Main Contact of driving Motor
- ΔC - 'NO' Contact
- ΔC1 - 'NO' Contact of Star Contact or
- ΔC2 - 'NO' Contact of Star Contact or
- ΔC - Delta Contact or
- ΔC1 - 'NC' Contact of Delta Contact or
- ΔT - Star Contact of Timer (Δ-Δ)
- ΔT - Delta Contact of Timer (Δ-Δ)

Installation :

- Base Mounting : Timer should be mounted on a plain surface. Pull out Din Rail clips half way. Mount the device using two M4 screws.
- DIN - Rail Mounting : The Timer should be mounted on 35 mm symmetrical DIN Rail.

Product overall dimensions and mounting details :

Note : All dimensions are in 'mm'.



NOTE :

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

Terminal Details :

	0.6 N.m (5.3 Lb.in) Terminal screw - M3
Ø 3.5...4.0 mm	
	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

The timers shall be placed in an enclosure that is minimum 200% of the size of the timer in the end use application.

ELECTRONIC TIMER - SERIES MICON™ 225



- Cat. No. :**
- 2ASDT5
 - 2A6DT6
 - 2AJDT0
 - 2AJDT1
 - 2ANDT0
 - 2AODT5
 - 2AADT5
 - 2B5DT5
 - 2B6DT6
 - 22LDT0
 - 23LDT0
 - 2ASDT0
 - 2ASDT1
 - 2BSDT0
 - 2BSDT1
 - 20NDTT
 - 20JDTT

225 is manufactured to high precision and accuracy. Following types of functions are available in this series:

- MULTI-FUNCTION TIMER
- MULTI-FUNCTION 11 + 1D TIMER
- ASYMMETRIC ON-OFF/OFF-ON TIMER
- SIGNAL BASED MULTI-FUNCTION TIMER
- ON DELAY TIMER
- MOTOR RESTART CONTROL
- STAR-DELTA TIMER
- SOLID STATE ASYMMETRIC ON-OFF/OFF-ON TIMER
- SOLID STATE SIGNAL BASED MULTI-FUNCTION TIMER

Main features :

- Supply Voltage (2A) : 24-240 VAC /DC
- Supply Voltage (2B) : 240-415 VAC
- Supply Voltage (22) : 240 VAC
- Supply Voltage (20) : 110-240 VAC
- Supply frequency : 50/60 Hz
- Timing, Mode, Range and Pause Time wherever applicable can be set before power is applied to the product. Once Timer operation starts, any change in these settings have no effect.
- Range : 0.1 s to 10 h
- Range : 3 s to 120 s (2ASDT0/1, 2BSDT0/1)
- Range : 0.2 s to 60 s (22LDT0 / 23LDT0)
- Range : 0.06 s to 10 h (20JDTT/20NDTT)
- Memory Time : 0.2 s to 6 s (22LDT0 only)
- Output : Solid state output (20JDTT/20NDTT)
- Blinking of Green LED indicates timing is in progress (Except for STAR-DELTA).

Caution :

- Always follow instructions stated in this product leaflet.
- Before installation, check that the specifications agree with the intended application.
- Installation to be done by skilled electrician.
- Automation and control devices must be installed properly so that they are protected against any risk of involuntary actuations.
- Suitable dampers should be provided in the event of excessive vibrations.
- Setting of all the potentiometers should be in clockwise direction only.
- Do not connect supply between B1 and B2 terminals. For proper signal operation, follow supply polarity as per connection diagram.
- In 2AJDT0/1, any change at B1-B2 will have no effect once timer starts.
- Use 250 mA fuse in series with the above mentioned products.
- In 20NDTT & 20JDTT, use 3 A²s (1²t) fuse externally.
- In 20NDTT & 20JDTT, Minimum switching operational current is 10 mA.