TECHNICAL SPECIFICATIONS:			
Cat. No.:		**23UDT0**	**27UDT0**
SUPPLY CHARACTERISTICS:			
Supply Voltage ⏚		110 VAC	240 VAC
Supply Variation		-40 % to +10 % of ⏚	
Frequency		50 to 60 Hz, (± 3 Hz)	50 Hz (± 3 Hz)
Power Consumption (Max.)		2 VA	4 VA
Trip Voltage		88 VAC ± 6 VAC	168 VAC ± 6 VAC
Recovery Voltage		96 VAC ± 4 VAC	184 VAC ± 4 VAC
Response time Voltage Interruption		10 ms ~ 18 ms	
Response time to Voltage Dips		> 13 ms to < 34 ms	
LED Indications	Healthy	Green LED ON	
	Un-Healthy	Green LED Flashing Slow	
	Run-Time	Green LED Flashing Fast	
	Relay ON	Yellow LED ON	Red LED ON
RELAY O/P CHARACTERISTICS:			
Contact Arrangement		1 C/O	
Contact Rating (Resistive Load)		5A (Res.) @ 240 V AC/28 VDC	
Contact Material		Ag-Alloy	
Electrical Life		0.1 million	
Mechanical Life		1 million	
FEATURE CHARACTERISTICS:			
Setting Accuracy		+/- 5% of full scale	
Repeat Accuracy		+/- 1%	
Utilization Category (AC-15)		Rated Voltage (Ue): 240VAC / 125 VAC, Rated Current (Ie): 1.3 A / 2.5 A	
Delay Timing (Td)		0.3 s to 30 s	
Mounting		Base / DIN-Rail	
Dimensions (W X H X D)		22.5 x 75x 100.5 (in mm)	
Weight (Unpacked)		100 gms.	
Relative Humidity		80 % (Rh) Non Condensing	
Operating Temperature		-10° C to + 55° C	
Storage Temperature		-10° C to + 60° C	
Max. Operating Altitude		2000 m	
Housing		Flame retardant (UL 94-V0)	
Degree & Protection		IP - 20 for Terminal, IP - 40 for Housing.	
Pollution Degree		II	
Type of Insulation		Reinforced	
Operating Positions		Any	
Certifications		CE, RoHS	
Initiate Time		< 200 ms	
Reset Time		~=100 ms	

ELECTRONIC TIMER - SERIES MICON™225

BROWNOUT TIMER

Cat. No.:

23UDT0
27UDT0

CE

RoHS ✓

FEATURES:

1. Detects Voltage dips/Momentary loss of supply and resets the control panel.
2. Three functional options: ON Delay, Interval, Pulse.
3. LED indications for Healthy & Unhealthy conditions.
4. Excellent Noise Immunity.
5. Fast Response Time.
6. Low Power Consumption.

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.

NOTE:

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

ELECTRONIC TIMER - SERIES MICON™ 225
BROWNOUT TIMER

Series 225 Brownout Timer is manufactured to a high degree of precision & accuracy.

This unit senses the Voltage dips & momentary loss of supply.It combines the functions of a very fast response under-voltage relay & a 'On Delay Timer'. It has been specially developed to initiate a control panel reset following a supply 'Brown-Out or momentary supply interruptions' & Dips thus reducing down time & engineer call outs. The unit will respond to any supply interruption or dips which may cause a conventional electro-mechanical relay or contactor to release. Only after a healthy supply has been restored for the set time period, the output will change contact state allowing the Electro-mechanical apparatus to be reset or re-started.

Electro-mechanical relays or contactors used in control panels tend to release due to >13 to <34ms of voltage sags to less than 75% of nominal supply voltage level, but control equipments remain energized & synchronization is lost. This results in the malfunctioning in the logic of control action. Hence, to solve this problem, its required to reset and restart the control system.
It helps to reset main supply contactor of a control panel after detecting any brownout fault that may cause a contactor to release.

This unit can be operated in following modes :

1) MODE A (ON DELAY) :
Whenever Supply Voltage greater than the Recovery Voltage is applied, the relay will energize after set time. If there is a supply interruption of >10 ms or under voltage for >13 to <34ms, the relay will de-energize & commence timing again when supply voltage is restored.

2) MODE B (INTERVAL) :
Whenever Supply Voltage greater than the Recovery Voltage is applied, it will take fixed 2s delay after which the relay will energize for the set time & then de-energize.The relay will remain de-energized until power is re-cycled, or if there is a supply interruption of >10 ms or under voltage for >13 to <34 ms. On restoration of healthy supply voltage, the relay will take fixed 2s delay & then relay will energize for the set time.

3) MODE C (PULSE) :
Whenever Supply Voltage greater than the Recovery Voltage is applied, the relay will energize after set delay time for 500ms (Pulse On) & then de-energize. Then If there is a supply interruption of >10 ms or under voltage for >13 to <34 ms the timer will be reset, on restoration of Supply Voltage the timer will commence another set delay time after which the relay will energies for 500ms.

MODE AND DELAY TIMING SELECTION:

Mode can be selected by using 'Mode' knob on front panel of the unit.
Time can also be selected by using 'Delay Time' knob on front panel of the unit.

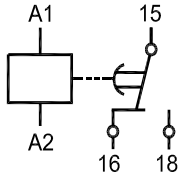
TERMINAL DETAILS:

 Ø3.5...4.0 mm	Torque 0.6 N.m (6 Lb.in) Terminal screw - M3
	1 x 1...4 mm^2 Solid Wire
AWG	1 x 18 to 10

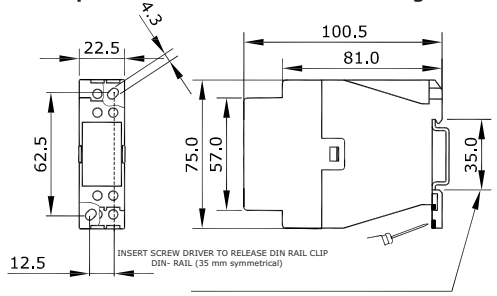
Use Cu wire of 75°C only.

AWG	CURRENT (A)
12	5.00
14	3.33
16	1.67

CONNECTION DIAGRAM:



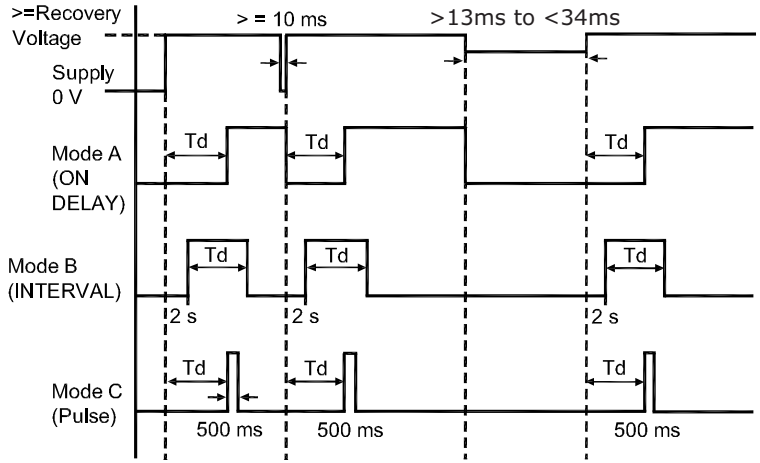
Overall product dimensions and mounting details :



INSTALLATION:

A) Base Mounting : 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.

Functional Diagram:



EMI / EMC:	
ESD	IEC 61000-4-2 Ed. 1.2 (2001-04) Level II
Radiated Susceptibility	IEC 61000-4-3 Ed. 3.0 (2006-02) Level III
Electrical Fast Transient	IEC 61000-4-4 Ed. 2.0 (2004-07) Level IV
Surge	IEC 61000-4-5 Ed. 2.0 (2005-11) Level IV
Conducted Susceptibility	IEC 61000-4-6 Ed. 2.2 (2006-05) Level III
Voltage Dips & Interruptions (AC)	IEC 61000-4-11 Ed. 2.0 (2004-3) Performance Criteria B
Conducted Emission	CISPR 14-1 Ed. 5.0 (2005 -11) Class A
Radiated Emission	CISPR 14-1 Ed. 5.0 (2005-11) Class A
Safety:	
Test Voltage between I/P and O/P	IEC 60947-5-1 Ed.3.0 (2003-11) 1.5 kv
Test Voltage between all terminals and enclosure	IEC 60947-5-1 Ed.3.0 (2003-11) 1.5 kv
Impulse Voltage between I/P and o/p	IEC 60947-5-1 Ed.3.0 (2003-11) 1.5 Kv
Single Fault	IEC 61010-1 Ed.2.0 (2001-02)
Insulation Resistance	UL 508 Ed.17 (1999-01) > 50 kΩ
Leakage Current	UL 508 Ed.17 (1999-01) < 3.5 mA
Product	IEC 61812-1 Ed.1.0 (1996-10)
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), 15 - 20 g, 6 ms
Non-Repetitive Shock	IEC 60068-2-27 Ed.4.0 (2008-02), 30 g, 15 ms

TECHNICAL SPECIFICATIONS:											
Catalogs	**17UDT0**	**17UDT1**	**13UDT0**	**13UDT1**	**1FUDT0F**	**1GUDT0F**	**1FUDT1F**	**1GUDT1F**	**1FUDT2F**	**1GUDT2F**
SUPPLY CHARACTERISTICS:										
Supply Voltage	220 / 240V AC		110V AC		110V AC					
Frequency	50 Hz		60 Hz		50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
Power Consumption (Max.)	10 VA MAX.		4 VA MAX.		4 VA MAX.					
Trip Voltage	170 V ±5 V		88 V ±5 V		88 V ±5 V					
Recovery Voltage	182 V ±5 V		94 V ±5 V		94 V ±5 V					
Response time for Voltage dip	11 to 19ms		11 to 17ms		0.5 to 4 ms				0.4 to 5 ms	
Modes Of Operation	On Delay	Interval	On Delay	Interval	On Delay (normally energized relay)		Pulse (Momentary ON)		Delayed Interval (normally De-energized relay)	
Initiate Time	100 ms Max.									
LED Indications – Green LED ON	POWER ON									
LED Indications – Red LED ON	RELAY ON				Remains ON when DIP or Interruption Starts till the ON delay gets completed					
LED Indications – Red LED OFF	Unhealthy Condition (UV/Interruption)				Healthy Condition					
RELAY O/P CHARACTERISTICS:										
Contact Arrangement	1 C/O									
Contact Rating (Resistive Load)	5A (Res.) @ 240 V AC/28 VDC									
Utilization Category (AC-15)	Rated Voltage (Ue): 240VAC / 125 VAC, Rated Current (ie): 1.3 A / 2.5 A									
Contact Material	AgNi									
Electrical Life	1 x 10^5 Operations									
FEATURE CHARACTERISTICS:										
Setting Accuracy	±10 % at 30 s, ±20 % @ 0.3 s.				±10 % at 30 s, ±20 % @ 3 s.					
Repeat Accuracy	±1%									
Delay Timing (T)	0.3 s to 30 s				3 s to 30 s				2 sec (±1sec)	
Pulse / Interval Time	NA	Same as Delay Timing(T)	NA	Same as Delay Timing(T)	NA		0.5 sec		3 s to 30 s	
Mounting	Base / Din-Rail									
Dimensions (W X H X D)	17.5 x 58.5 x 90 (in mm)									
Weight (Packed)	75 g Approx.									
Relative Humidity	5 to 80% (Rh) Non-Condensing									
Operating Temperature	-10° C to + 55° C									
Storage Temperature	-15° C to + 60° C									
Max. Operating Altitude	2000 m									
Housing	Flame retardant (UL 94-V0)									
Degree & Protection	IP - 20 for Terminal, IP - 40 for Housing.									
Pollution Degree	II									
Type of Insulation	Re-inforced									
Operating Positions	Any									
Certifications	CE, RoHS									

NOTE: Product innovation being a continuous process, we reserve the right to alter specifications.

ELECTRONIC TIMER - SERIES MICON™175

BROWNOUT TIMER

Catalogs

13UDT0 **13UDT1** **1FUDT2F**
17UDT0 **17UDT1** **1GUDT2F**
1FUDT0F **1FUDT1F**
1GUDT0F **1GUDT1F**

CE RoHS

FEATURES:

1. Supply Monitoring (Under Voltage).
2. Low Power Consumption.
3. Four functional mode options: On Delay, Interval, Momentary ON & Delayed Interval
4. Fast Response Time.
5. Compact Size.

CAUTIONS:

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 150 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.

ELECTRONIC TIMER - SERIES MICON™ 175 BROWNOUT TIMER

Series 175 Brownout Timers are used to initiate a control panel supply reset following a supply brownout or micro-interruption. The unit is basically an undervoltage relay. The unit will respond to voltage dips of duration which may cause an electro-mechanical relay or contactor used in panels to release. Only after a healthy supply has been restored for a set time period, the output will energize allowing the Electro-mechanical relay / contactor to be reset or re-started. These products can be operated in following modes:

1) ON DELAY MODE (Normally Energized Relay Mode A): Refer Fig. 1 & 2

In this mode, when the device is powered ON, under healthy supply conditions, product relay will get energized after the set time delay T and will remain ON.
If there is a dip or Interruption for specified duration, the relay will de-energize & commence timing T again when healthy supply voltage is restored.
Relay will remain energized after this delay.

2) INTERVAL MODE (Normally De-Energized Relay Mode B), for slow brown out timer Refer: Fig. 1

In this mode, when the device is powered ON under healthy supply conditions, relay will get energized after the set time delay T and it will remain ON for Set time T then will de-energize.
If there is a dip or Interruption for specified duration, the relay will get energized after commence timing T after supply voltage is restored and remains energized for set time T.
Relay will remain de-energized after this delay.

3) Pulse (Momentary Mode C): Refer Fig. 2

In this mode, when the device is powered ON under healthy supply conditions, relay will get energized after the set time delay T and it will remain ON only for fixed time 0.5 second.
If there is a dip or interruption for specified duration, the relay will de-energize & commence timing T again when healthy supply voltage is restored.
Relay will remain de-energized after this delay.

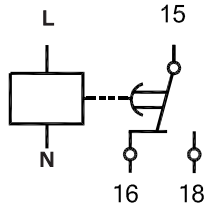
4)Delayed Interval MODE(Normally De-Energized Relay Mode), for fast brown out timer : Refer Fig. 3

In this mode, when the device is power ON under healthy supply conditions, relay will energize after fixed time 2 sec (±1sec) of "recovery delay" (t1) and remain ON for set time "t2"and then relay will become OFF.
If there is a dip or interruption for specified duration, the and supply recovers, relay will get energized after fixed time 2 sec (±1sec) of recovery delay(t1) and remain ON for set time "t2" and then relay will become OFF.
Relay will remain de-energized after this delay.

DELAY TIMING SELECTION:

Timing range can be selected by using 'Time Setting T' knob on front panel of the unit.

CONNECTION DIAGRAM:



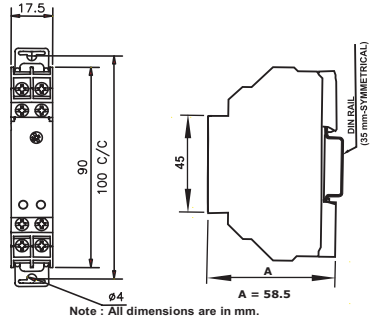
TERMINAL DETAILS:

Ø4.....5.0mm Combi Head Bit./Flat	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

Use Cu wire of 75°C only.

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

Overall Product Dimensions & Mounting Details :



Note : All dimensions are in mm.

Installation

1. Base Mounting : Pull the DIN clips halfway out. Mount the timer on plain surface by using two M4 screws in the holes provided on clips.
2. DIN-Rail Mounting : The Timer should be mounted on 35 mm symmetrical DIN Rail.

Functional Diagram:

For 13UDT0,13UDT1 17UDT0,17UDT1

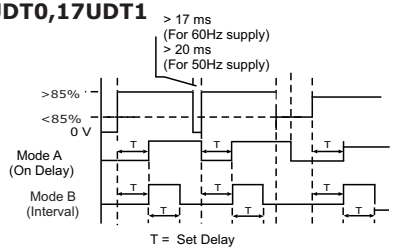


Figure 1

For 1FUDT0F, 1FUDT1F 1GUDT0F, 1GUDT1F

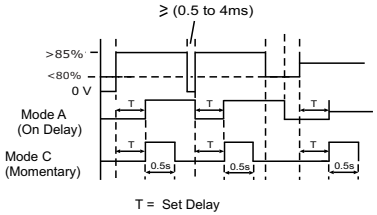


Figure 2

For 1FUDT2F, 1GUDT2F

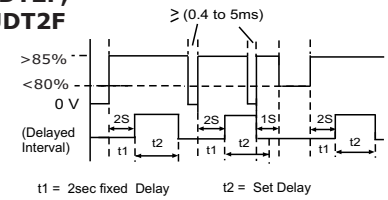


Figure 3

Note: When Delay Timing or Pulse/Interval Timing is in progress and specified dip or interrupt comes during this, the device will get reset to initial condition as on power ON condition. This is applicable for all CAT IDs.

EMI / EMC:	
Product	IEC 61812-1
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, All seven levels
Conducted Emission	CISPR 14-1 , Class A
Radiated Emission	CISPR 14-1 , Class A
Safety:	
Test Voltage between I/P and O/P	IEC 61812-1
Test Voltage between all terminals and enclosure	IEC 61812-1
Impulse Voltage between I/P and o/p	IEC 61812-1
Single Fault	IEC 61010-1
Insulation Resistance	UL 508 , > 50 kΩ
Leakage Current	UL 508 , < 3.5mA
Environmental:	
Cold Heat	IEC 60068-2-1
Dry Heat	IEC 60068-2-2
Repetitive Shock	IEC 60068-2-27 , 40g, 6ms
Non-Repetitive Shock	IEC 60068-2-27 , 30g, 15ms
Vibration	IEC 60068-2-6 , 10 to 55Hz