

ELECTRONIC TIMERS



Minilec offers timers for various functions and applications, in various enclosures/sizes and with multi voltage options.

MODELS

S1 ETS1, S1 ETM1, ETS D1, ETAD1,
ESR D1, S1 ESD1,
D1 ETM1, S2ETM1,
S2 ETM2



FEATURES

- Single voltage & Multi-voltage
- Single function and multi-function
- Wide time range
- Better repeat Accuracy
- Models with Micro-Controller based design
- Use of SMD Technology (S2 Series models)

FUNCTIONS

- On Delay
- Interval Delay
- Cyclic ON/OFF
- Multi-Attempt (for Engine Starting)
- Star-Delta changeover

Ordering Instructions

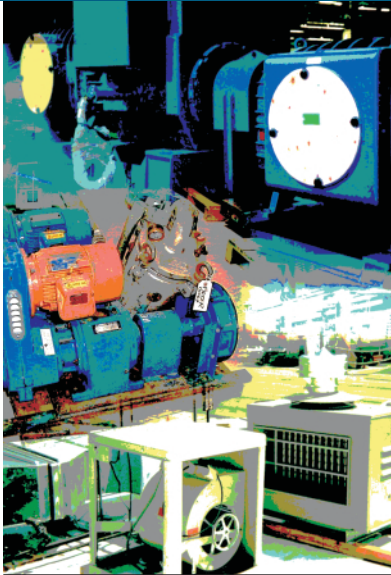
- Product Family Name
- Model Name
- Aux. Supply/Control supply voltage
- Application
- Time Range

ON DELAY TIMERS

S1 ETS1 On Delay Timer

S1 ETM1 On Delay Timer

ETS D1 On Delay Timer



On Delay timer,
Auto reset,
Time range upto 0-10,
0-30 or 0-60 sec.,
1CO output relay



On Delay timer,
Auto reset,
Time range upto 0-30
or 0-60 min.,
1CO output relay



On Delay, time range
209 hours,
2 CO output relay

Supply Voltage
Note: Mention specific voltage
(Fixed/wide range) in order
Auxiliary

100-120/220-240/380-440 V AC $\pm 20\%$
12/24VDC (-10%/+20%), 24 VAC
(-10%/+15%)

100-120/220-240/380-440 V AC $\pm 20\%$
12/24VDC (-10%/+20%), 24 VAC
(-10%/+15%)

24/110 / 240 / 380 / 415 V AC $\pm 20\%$,
12 / 24 V DC $\pm 20\%$

Output Contacts

1 CO

1 CO

2 CO

Time Range

0-10 sec., 0-30 sec., 0-60 sec.

0-30 min., 0-60 min.

0.1-10, 1-19, 10-109, 20-209 sec, 1-19, 10-109,
20-209 min, 1-19, 10-109, 20- 209 Hrs.

Operating Modes

On Delay

On Delay

On Delay

Weight

90 gms.

90 gms.

175 gms.

Dimensions (mm)

Overall (L x W x D)

90 x 18 x 60

90 x 18 x 60

76 x 30.5 x 120

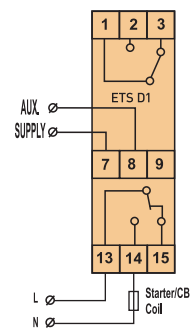
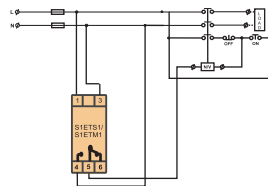
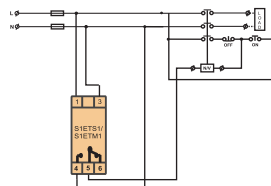
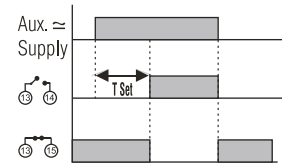
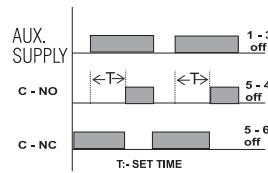
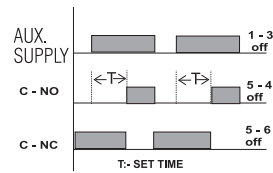
Mounting (L x W)

35 mm Rail Mounting

35 mm Rail Mounting

68 mm centre to centre / 35 mm Rail Mounting

Wherever not specified Contact
Rating :
5A @ 230 V AC (resistive)



Note : Relay contacts Shown For Relay in Power Off Condition.
ETS D1 old model available on request

SPECIAL FUNCTION TIMERS



ETA D1 On Delay Timer (Multivoltage)



On Delay, time range
30 Minutes, Multi-
voltage supply,
2 CO output relay

24-240 V AC / DC
+10%, -20%

2 CO

0.7 secs. - 30 mins.
(4 ranges)

On Delay

160 gms.

76 x 30.5 x 117.5

68 centre to centre / 35 mm Rail Mounting

ESR D1 Engine Start Relay



Multi-attempt
engine start relay

12, 24 VDC $\pm 10\%$
110 / 220/ 230 / 240 VAC $\pm 20\%$

Start attempts - 1 CO
Alarm on - 1 CO

Start Time - 1 to 10 secs. (via Potentiometer)
Pause Time - 2 to 20 secs. (via Potentiometer)
Number of attempts - 1 to 10 (via Potentiometer)

175 gms.

76 x 30.5 x 117.5

68 mm centre to centre / 35 mm Rail Mounting

S1 ESD1 Start Delta Timer



Star to Delta,
Changeover timer,
Time range
upto 60 seconds,
2x1 NO output relay

100-120/220-240/380-440 V AC $\pm 20\%$
12/24 VDC (-10%+20%)

1 NO-Star relay
1 NO-Delta relay

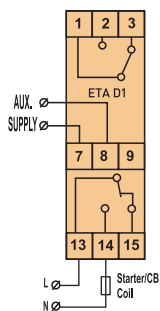
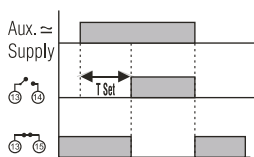
0.75 - 75. sec., 6 - 60sec.

Star Delta Changeover Time
50 / 100 m.secs.

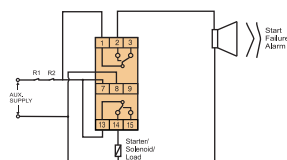
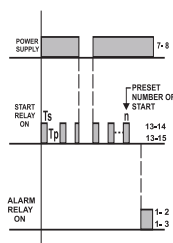
120 gms. (Approx.)

90 x 18 x 60

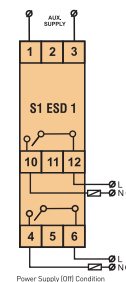
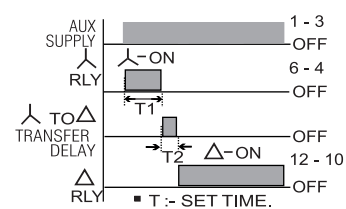
35 mm Rail Mounting



Relay contact position shown in
'Time Elapsed' condition



Note: Relay contacts shown for relay in energized condition & alarm relay in energized condition



Starter Coil (240 V AC or
Line Supply for Starter
Coil (415 V AC)

Starter Coil (240 V AC or
Line Supply for Starter
Coil (415 V AC)

Relay contact position shown in
'Time Elapsed' condition

CYCLIC TIMERS

D1 ETM1 Multi Function Timer



Microcontroller based Multi-function timer (On delay, interval delay, cyclic, star-delta, Engine starting), time range upto 100 Hrs, 2x1CO output relays

S2 ETM1 Multi Function Timer

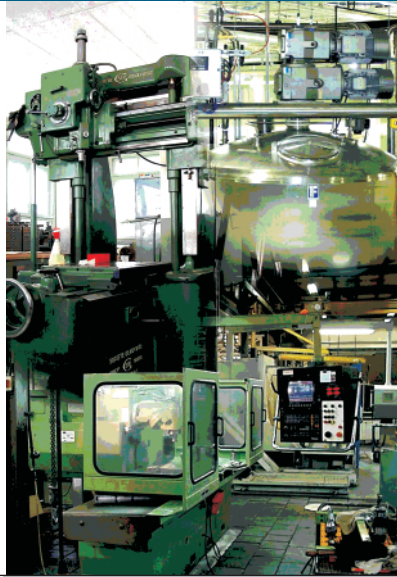


Microcontroller based, SMD technology Multi-function timer (On delay, interval delay, cyclic, star-delta, Engine starting), time range upto 100 Hrs, 2x1CO output relays

S2 ETM2 Cyclic & Forward-Reverse Timer



Microcontroller based, SMD technology Unequal cyclic and forward-reverse functions, on time and pause time selectable, 2x1CO output relays



Supply Voltage
Note: Mention specific voltage (Fixed/wide range) in order
Auxiliary

12 VDC ± 20%
24 VAC/DC ± 20%
*24-240VAC/DC +10%,-20%
*100-120/220-240/380-440VAC ± 20%

12 VDC ± 20%
24 VAC/DC ± 20%
*100-120/220-240/380-440VAC ± 20%

*100-120/220-240/380-440 V AC ± 20%,
12/24 VDC ± 20%

Output Contacts

1 CO + 1 CO

1 CO + 1 CO

1 CO + 1 CO

Time Range

0.1-1,1-10, 6 - 60, 60-600 seconds
0.1- 1, 1-10,10-100 hours

0.1-1,1-10, 6 - 60, 60-600 seconds
0.1- 1, 1-10,10-100 hours

On Time- 0.1 Sec.To 100 Hrs.
Pause Time- 0.1 Sec.To 100 Hrs

Operating Modes

M1 - On delay
M2 - Interval
M3 - Cyclic off first
M4 - Cyclic on first
M5 - Star Delta
M6 - Instant & Delayed
M7 - Engine Start Mode

Selectable By Rotary Switch

M1 - On delay
M2 - Interval
M3 - Cyclic off first
M4 - Cyclic on first
M5 - Star Delta
M6 - Instant & Delayed
M7 - Engine Start Mode

Selectable By Rotary Switch

Mode 1 Unequal Cyclic Operation
Mode 2 Forward Reverse Cyclic Operation

Weight

200 gms (Approx.)

150 gms (Approx.)

100 gms (Approx.)

Dimensions (mm)

Overall (L x W x D)

76 x 30.5 x 117.5

90 x 35 x 60

90 x 35 x 60

Mounting (L x W)

68 mm centre to centre / 35 mm Rail Mounting

35 mm Rail Mounting

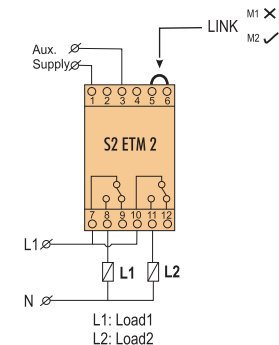
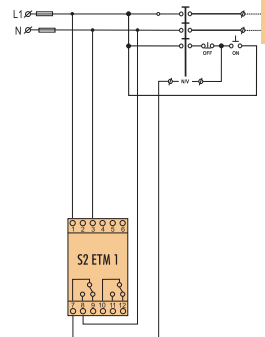
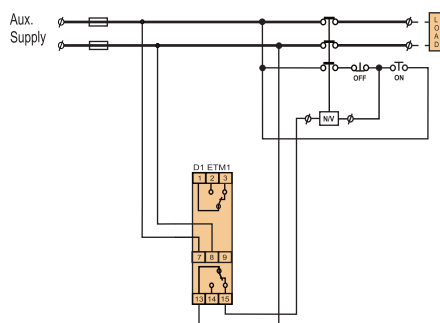
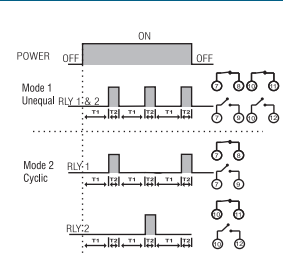
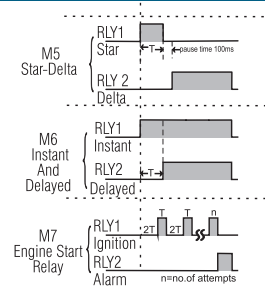
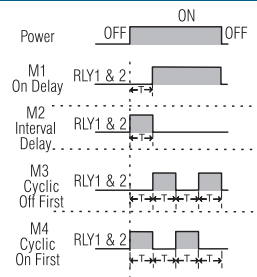
35 mm Rail Mounting

*CE/CSA Not available for 110 V AC & 24-240 VAC/DC Models

*CE/CSA Not available for 110VAC models

*CE/CSA mark not available for 110VAC models

Wherever not specified Contact Rating :
5A @ 230 V AC (resistive)



Relay contact position shown in 'Power off' condition

Note: S2 Series - RoHS Product available on request.