



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

MODELS

ETS D1, ETAD1,
ESR D1, ESD D1,
D1 ETM1, S2ETM1,
D2 ETR1,
S2 ETM2, S2 ETM3



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)

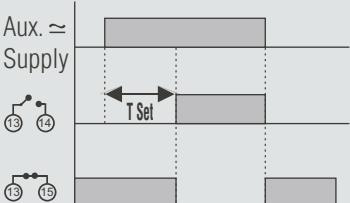
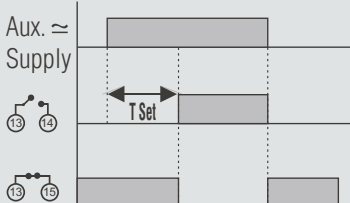
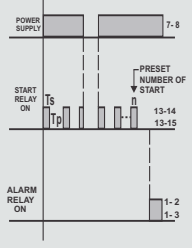
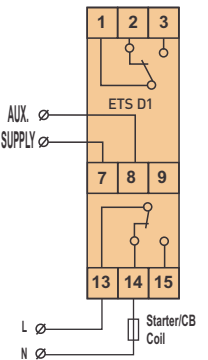
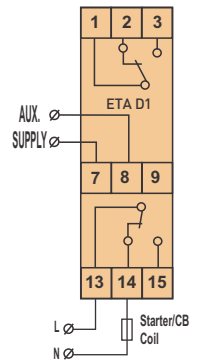
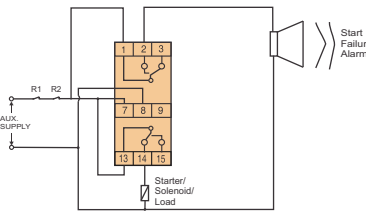
FUNCTIONS

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

Ordering Instructions

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

ON DELAY TIMERS

	ETS D1 On Delay Timer	ETA D1 On Delay Timer (Multivoltage)	ESR D1 Engine Start Relay
			
	On Delay, time range upto 209 hours, 2 CO output relay	On Delay, time range 30 Minutes, Multi-voltage supply, 2 CO output relay	Multi-attempt engine start relay
Supply Voltage Auxiliary	24/110 / 240 / 380 / 415 V AC $\pm$ 20%, 12 / 24 V DC $\pm$ 20%	24-240 V AC / DC +10%, - 20%	12, 24 VDC $\pm$ 10 % 110 / 220/ 230 / 240 VAC $\pm$ 20%
Output Contacts	2 CO	2 CO	Start attempts - 1 CO Alarm on - 1 CO
Time Range	0.1-10, 1-19, 10-109, 20-209 sec, 1-19, 10-109, 20-209 min, 1-19, 10-109, 20- 209 Hrs.	0.7 secs. - 30 mins. (4 ranges)	
Operating Modes	On Delay	On Delay	Start Time - 1 to 10 secs. (via Potentiometer) Pause Time - 2 to 20 secs. (via Potentiometer) Number of attempts - 1 to 10 (via Potentiometer)
Weight	175 gms.	160 gms.	175 gms.
Dimensions (mm)			
Overall (L x W x D)	76 x 30.5 x 120	76 x 30.5 x 117.5	76 x 30.5 x 117.5
Mounting (L x W)	68 mm centre to centre / 35 mm Rail Mounting	68 centre to centre / 35 mm Rail Mounting	68 mm centre to centre / 35 mm Rail Mounting
Wherever not specified Contact Rating : 5A @ 230 V AC (resistive)			
			
	Relay contact position shown in 'Time Elapsed' condition		
	Note: Relay contacts shown for relay in energized condition & alarm relay in de energized condition		

Note: ETS D1 old model
available on request

SPECIAL FUNCTION TIMERS

minilec®

ESD D1

Star Delta Timer



Star to Delta
Changeover timer,
Time range upto 60
seconds,
2x1NO output relays

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

110 / 240 / 380 / 415 V AC
+10%, -20%

1 NO-Star relay (NO)
1 NO-Delta relay (NO)

0.7 – 60 secs.
in 2 diff. ranges

Star Delta Changeover Time
50 / 100 m.secs.

175 gms.

76 x 30.5 x 117.5

68 mm centre to centre / 35 mm Rail Mounting

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

1 CO + 1 CO

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

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

200 gms (Approx.)

76 x 30.5 x 117.5

68 mm centre to centre / 35 mm Rail Mounting

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

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

1 CO + 1 CO

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

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

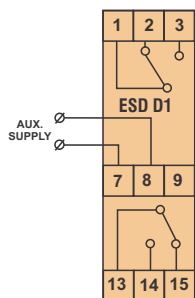
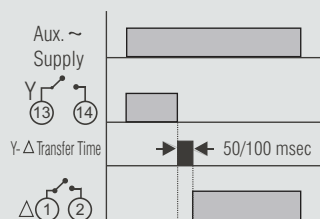
Selectable
By Rotary Switch

150 gms (Approx.)

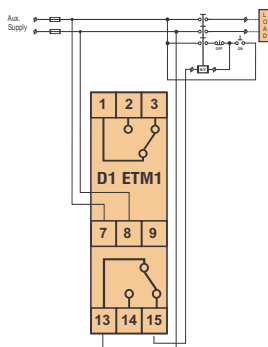
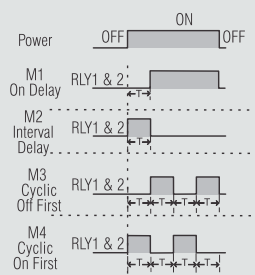
90 x 35 x 60

35 mm Rail Mounting

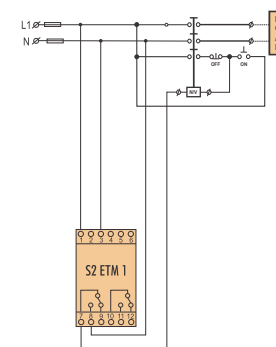
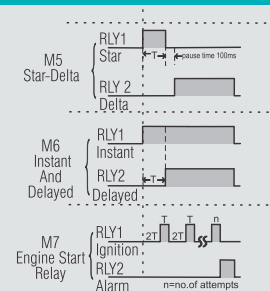
*CE/CSA Not available for 110VAC models



Relay contact position
shown in 'Time Elapsed' condition



Relay contact position shown in 'Power off' condition



Note: S2 Series - RoHS Product available on request.

CYCLIC TIMERS

S2 ETM3

Off Delay Timer



Off Delay timer,
Auto reset,
Time range upto 200 seconds,
2 CO output relay

D2 ETR1

Cyclic & Forward-Reverse Timer



Microcontroller based,
Unequal cyclic and forward-
reverse functions, on time and
pause time selectable,
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

Auxiliary

110/240 V AC $\pm 10\%$

*24/110/240/415VAC, $\pm 20\%$,
12/24 VDC $\pm 10\%$

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

Output Contacts

2 CO

1 CO + 1 CO

1 CO + 1 CO

Time Range

20-200 Sec.

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

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

Operating Modes

Power On

Mode 1 Unequal Cyclic Operation
Mode 2 Forward Reverse Cyclic Operation

Mode 1 Unequal Cyclic Operation
Mode 2 Forward Reverse Cyclic Operation

Weight

170 gms. (Approx).

200 gms (Approx.)

100 gms (Approx.)

Dimensions (mm)

Overall (L x W x D)

90 x 35 x 60

76 x 56.5 x 117.5

90 x 35 x 60

Mounting (L x W)

35 mm Rail Mounting

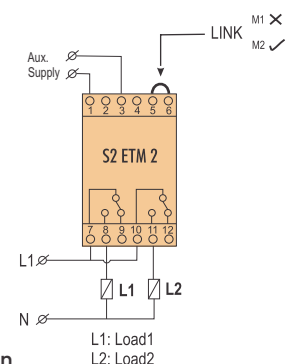
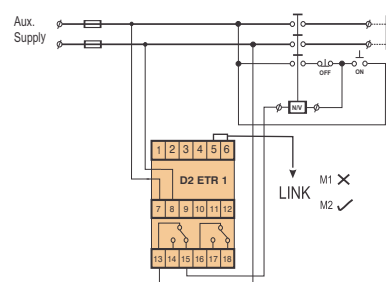
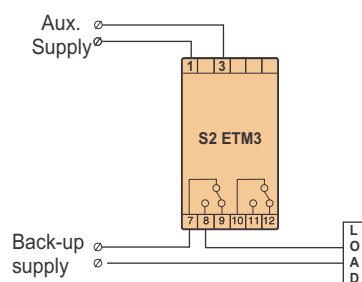
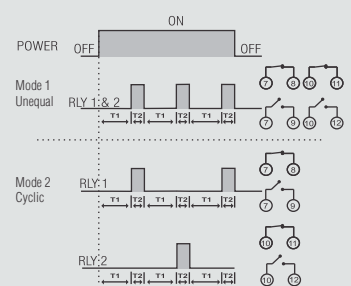
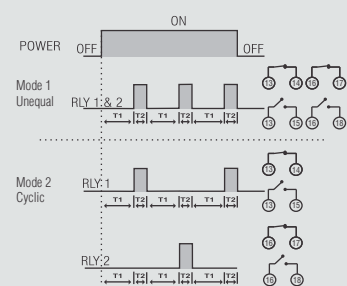
67 x 46 / 35 mm Rail Mounting

35 mm Rail Mounting

*CE/CSA mark 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.