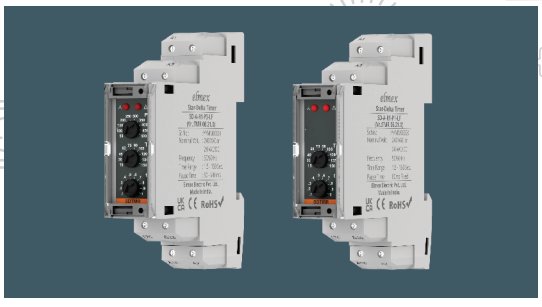
elmex®

since 1963



Solutions For
Control & Instrumentation

www.elmex.net

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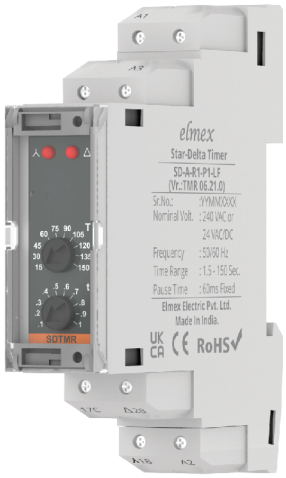
Converging Innovations Expanding Solutions

TIMERS

STAR DELTA TIMER

Type : SD-A-R1-P1



Application

'elmex' make Star Delta Timer is used with Star Delta starters and provides desired monitoring and control in Motor operations.

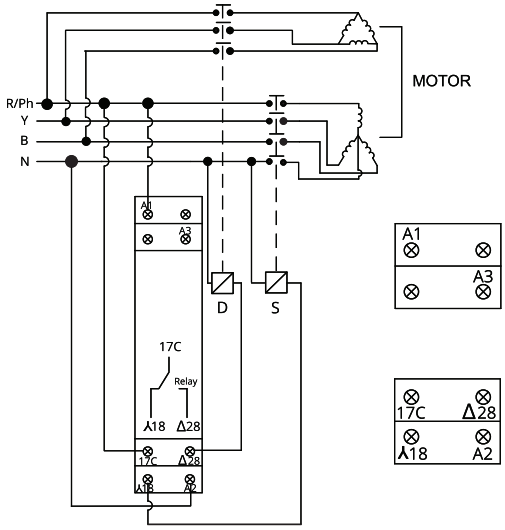
Salient Features

- 17.5 mm DIN Rail Mount.
- Star-Delta.
- Star Mode - 1 NO.
- Delta Mode - 1 NO.
- Slim, Space Saving Design.
- One Red LED for Star mode Indication.
- Second Red LED for Delta mode Indication.
- Sealable Front Cover for Tamper Proofing.
- Provision of Multimeter probe for parameters measurement.

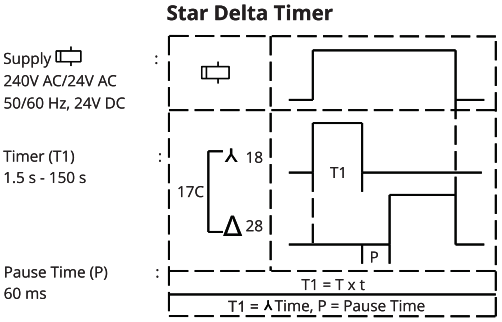
Certification

UK CA CE RoHS

Connection Diagram



Functional Diagram



Technical Specification

Input Specifications	
Supply voltage A1-A2/A3-A2	240V AC/ 24V AC-DC*
Frequency	50/60 Hz
Supply Variation	-20% to +10%
Power Consumption	8VA (max)
Accuracy	Settings: ±5% of Full Scale
Functional Specifications	
Delta mode on time delay (T1)	1.5 sec to 150 sec
Pause timing(P)	60 ms(Fix)
Output	5A @240V AC / 28V DC (Resistive)
LED Indications	
Star mode indication	3 mm Red LED
Delta mode indication	3 mm Red LED
Environmental Specifications	
Temperature	Operating: -10 to 55 °C(14 to 131 °F) Storage: -20 to 70 °C(-4 to 158 °F)
Humidity(non-condensing)	95% RH
Protection Level	IP40 for Casing IP20 for Terminals
Housing	
Housing Material	Polycarbonate
Colour	White
Dimension (H x D x W)	85 x 70.05 x 17.5 mm
Weight	70 gms
Mounting	TS 35 DIN Rail

* Other Voltages on Request

TIMERS

STAR DELTA TIMER

Type : SD-D-R2-P2

Application

'elmex' make Star Delta Timer is used with Star Delta starters and provides desired monitoring and control in Motor operations.

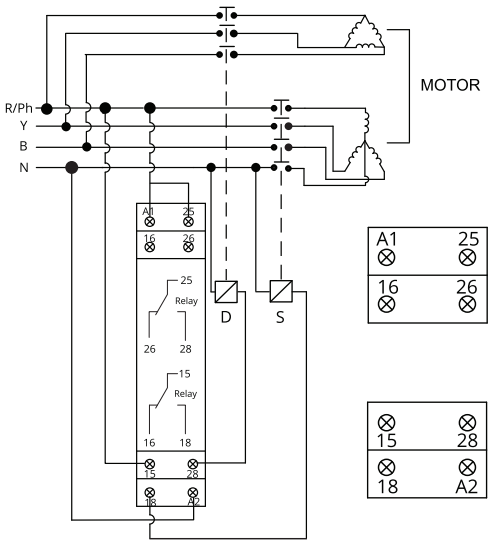
Salient Features

- 17.5 mm DIN Rail Mount.
- Star-Delta.
- Star Mode - 1 C/O.
- Delta Mode - 1 C/O.
- Slim, Space Saving Design.
- One Red LED for Star mode Indication.
- Second Red LED for Delta mode Indication.
- Sealable Front Cover for Tamper Proofing.
- Provision of Multimeter probe for parameters measurement.

Certification

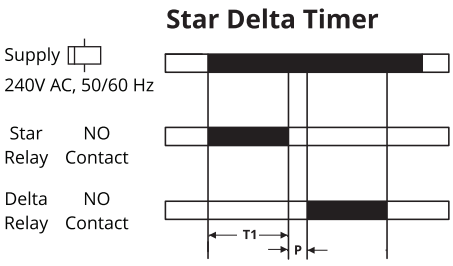
UK CA CE RoHS✓

Connection Diagram



Note: Short 15-25 externally to make common 'Pole'

Functional Diagram



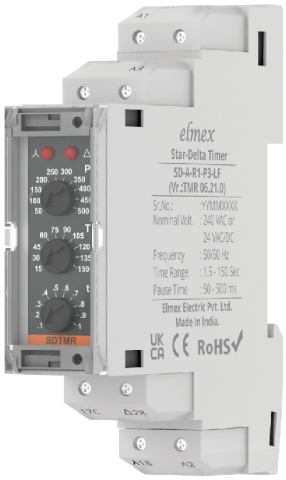
T1 = T x t (Run up time (3 - 30 s, 6 - 60 s))
P = Pause time (50 ms / 100 ms)

Technical Specification

Input Specifications	
Supply voltage A1-A2	240V AC*
Frequency	50/60 Hz
Supply Variation	-20% to +10%
Power Consumption	8VA (max)
Accuracy	Settings: ±5% of Full Scale
Functional Specifications	
Delta mode on time delay (T1)	3-30sec, 6-60 sec
Pause timing(P)	50 msec / 100 msec.
Output	5A @240V AC / 28V DC (Resistive)
LED Indications	
Star mode indication	3 mm Red LED
Delta mode indication	3 mm Red LED
Environmental Specifications	
Temperature	Operating: -10 to 55 °C(14 to 131 °F) Storage: -20 to 70 °C(-4 to 158 °F)
Humidity(non-condensing)	95% RH
Protection Level	IP40 for Casing IP20 for Terminals
Housing	
Housing Material	Polycarbonate
Colour	White
Dimension (H x D x W)	85 x 70.05 x 17.5 mm
Weight	70 gms
Mounting	TS 35 DIN Rail

* Other Voltages on Request

TIMERS
STAR DELTA TIMER
Type : SD-A-R1-P3



Application

'elmex' make Star Delta Timer is used with Star Delta starters and provides desired monitoring and control in Motor operations.

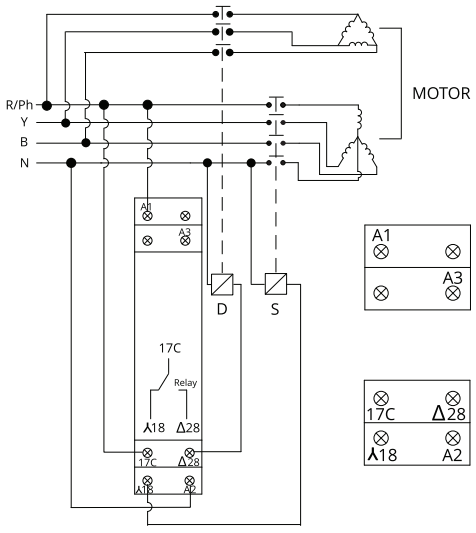
Salient Features

- 17.5 mm DIN Rail Mount.
- Star-Delta.
- Star Mode - 1 NO.
- Delta Mode - 1 NO.
- Slim, Space Saving Design.
- Wide range of pause time.
- One Red LED for Star mode Indication.
- Second Red LED for Delta mode Indication.
- Sealable Front Cover for Tamper Proofing.
- Provision of Multimeter probe for parameters measurement.

Certification

UK CA CE RoHS

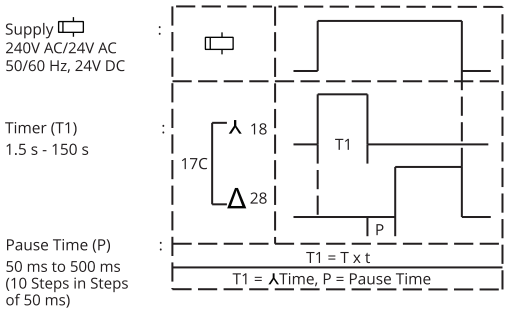
Connection Diagram



Note: Short 15-25 externally to make common 'Pole'

Functional Diagram

Star Delta Timer



Technical Specification

Input Specifications	
Supply voltage A1-A2/A3-A2	240V AC/ 24V AC-DC*
Frequency	50/60 Hz
Supply Variation	-20% to +10%
Power Consumption	8VA (max)
Accuracy	Settings: ±5% of Full Scale
Functional Specifications	
Delta mode on time delay (T1)	1.5 sec to 150 sec
Pause timing(P)	50 to 500 msec. in steps of 50 msec.
Output	5A @240V AC / 28V DC (Resistive)
LED Indications	
Star mode indication	3 mm Red LED
Delta mode indication	3 mm Red LED
Environmental Specifications	
Temperature	Operating: -10 to 55 °C(14 to 131 °F) Storage: -20 to 70 °C(-4 to 158 °F)
Humidity(non-condensing)	95% RH
Protection Level	IP40 for Casing IP20 for Terminals
Housing	
Housing Material	Polycarbonate
Colour	White
Dimension (H x D x W)	85 x 70.05 x 17.5 mm
Weight	70 gms
Mounting	TS 35 DIN Rail

* Other Voltages on Request

TIMERS
ON DELAY TIMER
Type : OD-A-R3

Application

'elmex' On Delay Timer is used for facilitating simple, Reliable and economical control for definite purpose solution in Industrial Application or in OEMs.

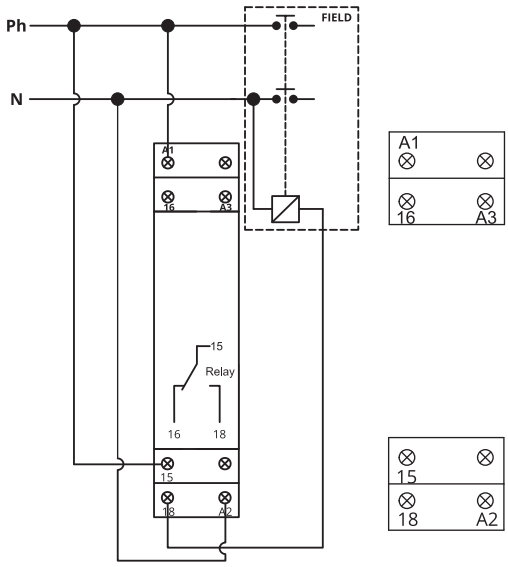
Salient Features

- 17.5 mm DIN Rail Mount.
- On Delay.
- 10 Time Ranges.
- Front knobs for Time Range & Time Scale.
- Slim, Space Saving Design.
- Green LED for Power ON.
- Red LED for Relay ON.
- Sealable Front Cover for Tamper Proofing.
- Provision of Multimeter probe for parameters measurement.

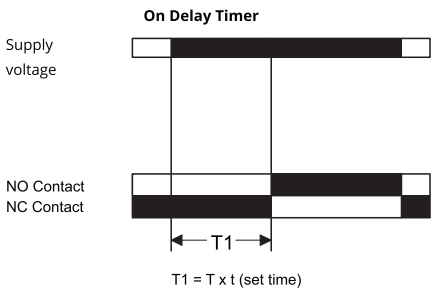
Certification

UK CA CE RoHS

Connection Diagram



Functional Diagram



Technical Specification

Input Specifications	
Supply voltage A1-A2/A3-A2	240V AC/ 24V AC-DC*
Frequency	50/60 Hz
Supply Variation	-20% to +10%
Power Consumption	8VA (max)
Accuracy	Settings: ±5% of Full Scale
Functional Specifications	
Mode	On Delay
Output Contact	SPDT(1C/O)
Contact Rating	5A @240V AC / 28V DC (Resistive)
Time Ranges	0.1 - 1 sec, 0.3 - 3 sec, 1 - 10 sec, 3 - 30sec, 0.1 - 1 min, 0.3 - 3 min, 1 - 10 min, 3 - 30min, 0.1 - 1 hrs, 0.3 - 3 hrs
LED Indications	
Power ON	3 mm Green LED
Relay ON	3 mm Red LED
Environmental Specifications	
Temperature	Operating: -10 to 55 °C(14 to 131 °F) Storage: -20 to 70 °C(-4 to 158 °F)
Humidity(non-condensing)	95% RH
Protection Level	IP40 for Casing IP20 for Terminals
Housing	
Housing Material	Polycarbonate
Colour	White
Dimension (H x D x W)	85 x 70.05 x 17.5 mm
Weight	62 gms
Mounting	TS 35 DIN Rail

* Other Voltages on Request

TIMERS
ON DELAY TIMER
Type : OD-A-R4

Application

'elmex' On Delay Timer is used for facilitating simple, Reliable and economical control for definite purpose solution in Industrial Application or in OEMs.

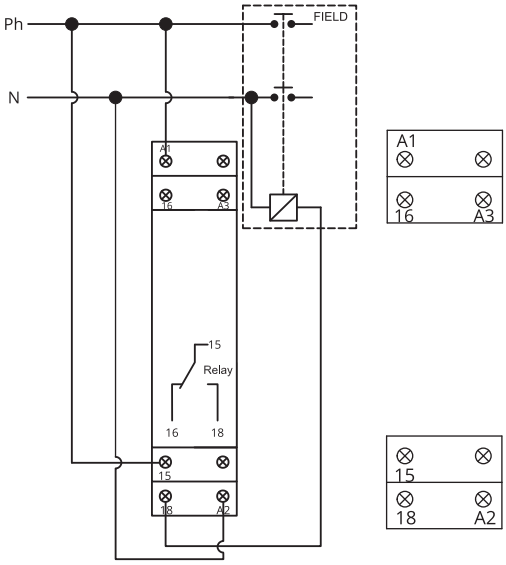
Salient Features

- 17.5 mm DIN Rail Mount.
- On Delay.
- 6 Time Ranges.
- Front knobs for Time Range & Time Scale.
- Slim, Space Saving Design.
- Green LED for Power ON.
- Red LED for Relay ON.
- Sealable Front Cover for Tamper Proofing.
- Provision of Multimeter probe for parameters measurement.

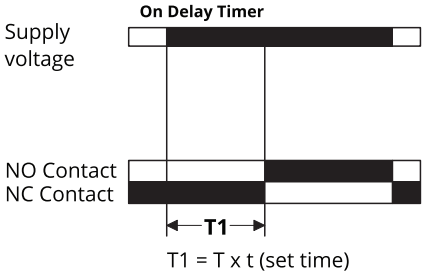
Certification

UK CA CE RoHS

Connection Diagram



Functional Diagram



T1 = T x t (set time)

Technical Specification

Input Specifications	
Supply voltage A1-A2/A3-A2	240V AC/ 24V AC-DC*
Frequency	50/60 Hz
Supply Variation	-20% to +10%
Power Consumption	8VA (max)
Accuracy	Settings: ±5% of Full Scale
Functional Specifications	
Mode	On Delay
Output Contact	SPDT(1C/O)
Contact Rating	5A @240V AC / 28V DC (Resistive)
Time Ranges	0.3 - 3 sec, 3 - 30sec, 0.3 - 3 min, 3 - 30min, 0.3 - 3 hrs, 3 - 30 hrs
LED Indications	
Power ON	3 mm Green LED
Relay ON	3 mm Red LED
Environmental Specifications	
Temperature	Operating: -10 to 55 °C(14 to 131 °F) Storage: -20 to 70 °C(-4 to 158 °F)
Humidity(non-condensing)	95% RH
Protection Level	IP40 for Casing IP20 for Terminals
Housing	
Housing Material	Polycarbonate
Colour	White
Dimension (H x D x W)	85 x 70.05 x 17.5 mm
Weight	62 gms
Mounting	TS 35 DIN Rail

* Other Voltages on Request

TIMERS
ON DELAY/ INTERVAL TIMER
Type : ODI-A-R4

Application

'elmex' On Delay / Interval timer is used for facilitating simple, Reliable and economical control for definite purpose solution in Industrial Application or in OEMs.

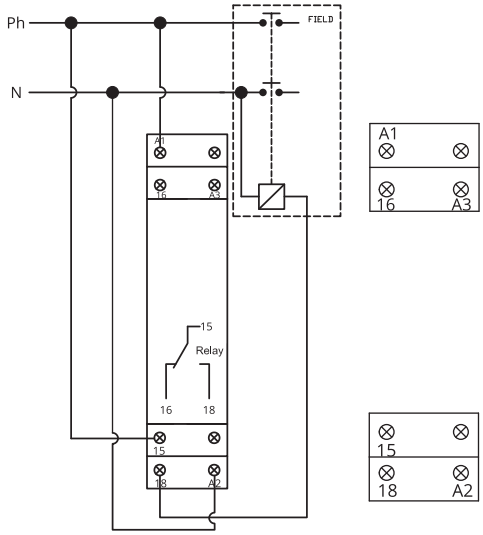
Salient Features

- 17.5 mm DIN Rail Mount.
- On Delay/ Interval.
- 6 Time Ranges.
- Front knobs for Time Range, Time Scale & Mode Setting.
- Slim, Space Saving Design.
- Green LED for Power ON.
- Red LED for Relay ON.
- Sealable Front Cover for Tamper Proofing.
- Provision of Multimeter probe for parameters measurement.

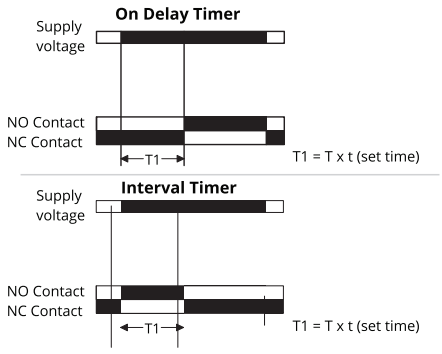
Certification

UK CA CE RoHS

Connection Diagram



Functional Diagram

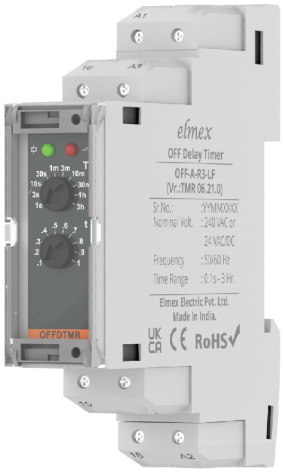


Technical Specification

Input Specifications	
Supply voltage A1-A2/A3-A2	240V AC/ 24V AC-DC*
Frequency	50/60 Hz
Supply Variation	-20% to +10%
Power Consumption	8VA (max)
Accuracy	Settings: ±5% of Full Scale
Functional Specifications	
Mode	On Delay/ Interval (Selectable)
Output Contact	SPDT(1C/O)
Contact Rating	5A @240V AC / 28V DC (Resistive)
Time Ranges	0.3 - 3 sec, 3 - 30 sec, 0.3 - 3 min, 3 - 30 min, 0.3 - 3 hrs, 3 - 30 hrs
LED Indications	
Power ON	3 mm Green LED
Relay ON	3 mm Red LED
Environmental Specifications	
Temperature	Operating: -10 to 55 °C(14 to 131 °F) Storage: -20 to 70 °C(-4 to 158 °F)
Humidity(non-condensing)	95% RH
Protection Level	IP40 for Casing IP20 for Terminals
Housing	
Housing Material	Polycarbonate
Colour	White
Dimension (H x D x W)	85 x 70.05 x 17.5 mm
Weight	70 gms
Mounting	TS 35 DIN Rail

* Other Voltages on Request

TIMERS
OFF DELAY TIMER
Type : OFF-A-R3



Application

'elmex' Off Delay Timer is used for facilitating simple, Reliable and economical control for definite purpose solution in Industrial Application or in OEMs.

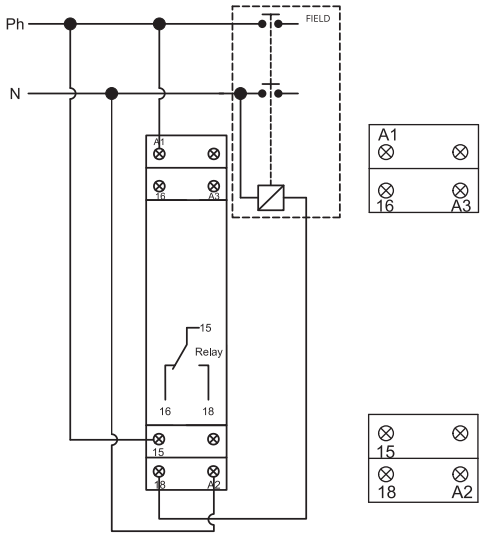
Salient Features

- 17.5 mm DIN Rail Mount.
- Off Delay.
- 10 Time Ranges.
- Front knobs for Time Range & Time Scale.
- Slim, Space Saving Design.
- Green LED for Power ON.
- Red LED for Relay ON.
- Sealable Front Cover for Tamper Proofing.
- Provision of Multimeter probe for parameters measurement.

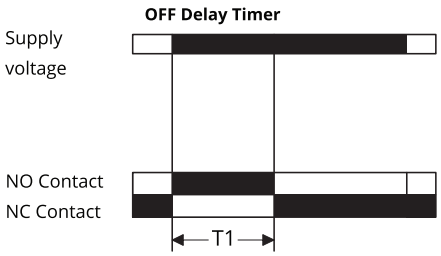
Certification

UK CA CE RoHS

Connection Diagram



Functional Diagram



T1 = T x t (set time)

Technical Specification

Input Specifications	
Supply voltage A1-A2/A3-A2	240V AC/ 24V AC-DC*
Frequency	50/60 Hz
Supply Variation	-20% to +10%
Power Consumption	8VA (max)
Accuracy	Settings: ±5% of Full Scale
Functional Specifications	
Mode	Off Delay
Output Contact	SPDT(1C/O)
Contact Rating	5A @240V AC / 28V DC (Resistive)
Time Ranges	0.1 - 1 sec, 0.3 - 3 sec, 1 - 10 sec, 3 - 30sec, 0.1 - 1 min, 0.3 - 3 min, 1 - 10 min, 3 - 30min, 0.1 - 1 hrs, 0.3 - 3 hrs
LED Indications	
Power ON	3 mm Green LED
Relay ON	3 mm Red LED
Environmental Specifications	
Temperature	Operating: -10 to 55 °C(14 to 131 °F) Storage: -20 to 70 °C(-4 to 158 °F)
Humidity(non-condensing)	95% RH
Protection Level	IP40 for Casing IP20 for Terminals
Housing	
Housing Material	Polycarbonate
Colour	White
Dimension (H x D x W)	85 x 70.05 x 17.5 mm
Weight	62 gms
Mounting	TS 35 DIN Rail

*Other Voltages on Request

TIMERS

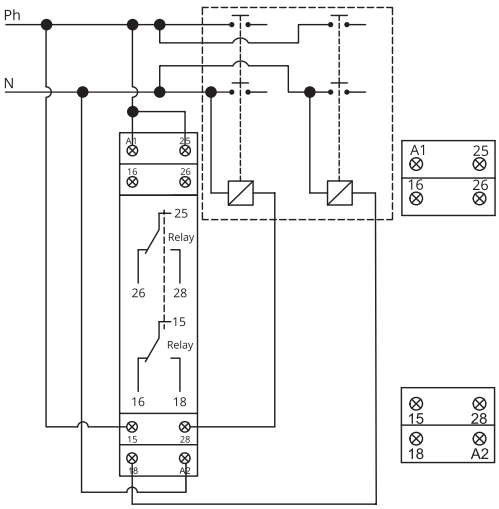
MULTI FUNCTION TIMER

Type : M05-D-R3

Certification

UK CA CE RoHS

Connection Diagram



Application

'elmex' Multi-Function timer is used for facilitating simple, Reliable and economical control for definite purpose solution in Industrial Application or in OEMs.

Salient Features

- 17.5 mm DIN Rail Mount.
- 5 Function.
- 10 Time Ranges.
- Front knobs for Time Range, Time Scale & Mode Setting.
- Slim, Space Saving Design.
- Green LED for Power ON.
- Red LED for Relay ON.
- Sealable Front Cover for Tamper Proofing.
- Provision of Multimeter probe for parameters measurement.

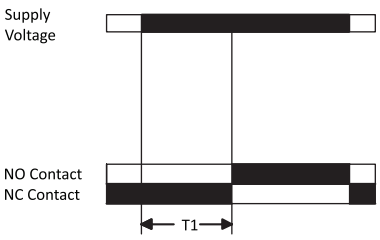
Technical Specification

Input Specifications	
Supply Voltage A1-A2	240V AC*
Frequency	50/60 Hz
Supply Variation	-20% to +10%
Power Consumption	12VA (max)
Accuracy	Settings: ±5% of Full Scale
Functional Specifications	
Mode	On Delay/ Interval (Selectable)
Output Contact	DPDT(2 C/O)
Contact Rating	5A @240V AC / 28V DC (Resistive)
Time Ranges	0.1 - 1 sec, 0.3 - 3 sec, 1 - 10 sec, 3 - 30sec, 0.1 - 1 min, 0.3 - 3 min, 1 - 10 min, 3 - 30min, 0.1 - 1 hrs, 0.3 - 3 hrs
LED Indications	
Power ON	3 mm Green LED
Relay ON	3 mm Red LED
Environmental Specifications	
Temperature	Operating: -10 to 55 °C(14 to 131 °F) Storage: -20 to 70 °C(-4 to 158 °F)
Humidity(non-condensing)	95% RH
Protection Level	IP40 for Casing IP20 for Terminals
Housing	
Housing Material	Polycarbonate
Colour	White
Dimension (H x D x W)	85 x 70.05 x 17.5 mm
Weight	70 gms
Mounting	TS 35 DIN Rail

* Other Voltages on Request

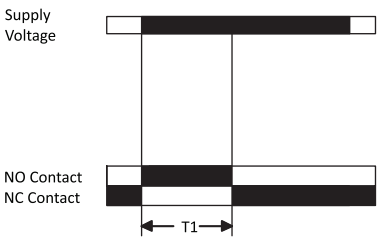
Functional Diagram

Function : ON Delay (A)



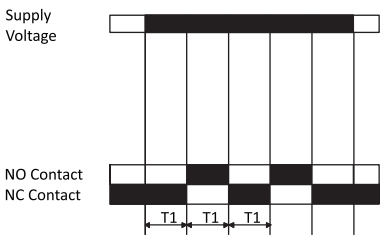
T1 = T x t (set time)

Function : Interval (B)



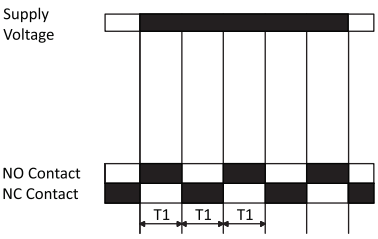
T1 = T x t (set time)

Function : Cyclic Equal OFF First (C)



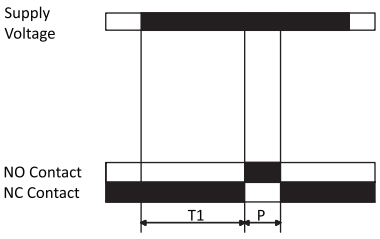
T1 = T x t (set time)

Function : Cyclic Equal ON First (Ci)



T1 = T x t (set time)

Function : Pulse Output (One Shot)(D)



T1 = T x t (set time); P = 500 msec.

TIMER CODE DESCRIPTION

XXX	X	X	X

Function
- **SD** : Star- Delta
- **OD** : ON Delay
- **ODI** : ON Delay / Interval
- **OFF** : OFF Delay
- **M05** : 5- Function

Supply Voltage
- **A** : 240V AC / 24V AC-DC
- **D** : 240V AC

Run Time
- **R1** : 1.5 sec. - 150 sec.
- **R2** : 3 - 30 sec., 6 - 60 sec.
- **R3** : 0.1 sec. - 3 hr.
- **R4** : 0.3 sec. - 30 hr.

Pause Time
- **P1** : 60 msec. Fixed.
- **P2** : 50/100 msec.
- **P3** : 50-500 msec. (in steps of 50 msec.)

TIMERS
MULTI FUNCTION TIMER
Type : M10-A-R6

Application

'elmex' Multi-Function timer is used for facilitating simple, Reliable and economical control for definite purpose solution in Industrial Application or in OEMs.

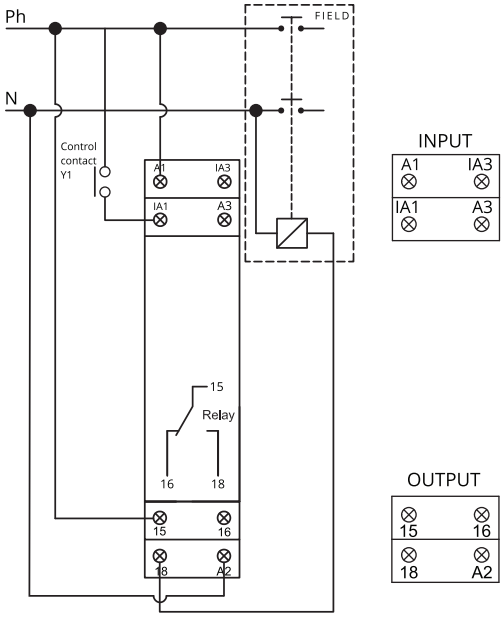
Salient Features

- 17.5 mm DIN Rail Mount.
- 10 Function.
- 7 Time Ranges.
- Green LED for Power ON.
- Red LED for Relay ON.
- Front knobs for Time Range, Time Scale & Mode Setting.
- Slim, Space Saving Design.
- Sealable Front Cover for Tamper Proofing.
- Provision of Multimeter probe for parameters measurement.

Certification

UK CA CE RoHS

Connection Diagram

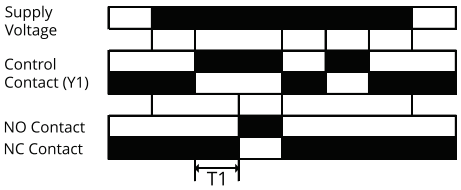


Technical Specification

Input Specifications	
Supply Voltage A1-A2	240V AC/ 24V AC-DC
Frequency	50/60 Hz
Supply Variation	-20% to +10%
Power Consumption	12VA (max)
Accuracy	Settings: ±5% of Full Scale
Functional Specifications	
Mode	Signal ON Delay (stn), Cyclic Equal ON/OFF (cnf), Cyclic Equal OFF/ON (cfn), Signal OFF Delay (sf), Signal OFF/ON (sfn), Accumulative Delay ON Signal (san), Impulse ON/OFF (inf), Leading Edge Impulse (iL), Trailing Edge Impulse (it), Leading Edge Bi-Stable (sbi)
Output Contact	SPDT(1C/O)
Contact Rating	5A @240V AC / 28V DC (Resistive)
Time Ranges	0.1 - 1 sec, 1 - 10 sec, 0.1 - 1 min, 1 - 10 min, 0.1 - 1 hrs, 1 - 10 hrs, 10 - 100 hrs
LED Indications	
Power ON	3 mm Green LED
Relay ON	3 mm Red LED
Environmental Specifications	
Temperature	Operating: -10 to 55 °C(14 to 131 °F) Storage: -20 to 70 °C(-4 to 158 °F)
Humidity(non-condensing)	95% RH
Protection Level	IP40 for Casing IP20 for Terminals
Housing	
Housing Material	Polycarbonate
Colour	White
Dimension (H x D x W)	85 x 70.05 x 17.5 mm
Weight	70 gms
Mounting	TS 35 DIN Rail

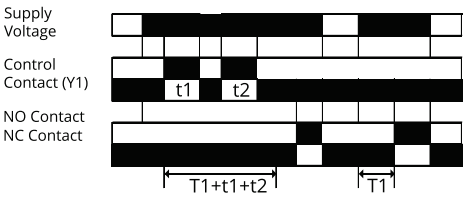
Functional Diagram

Mode : Signal ON Delay (stn)



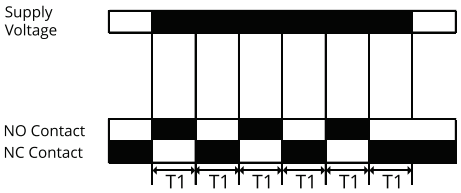
T1 = T x t (set time)

Mode : Accumulative Delay ON Signal (san)



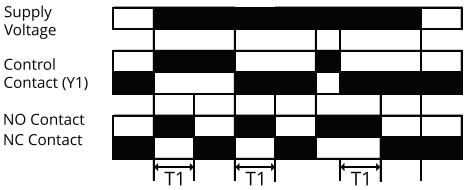
T1 = T x t (set time)

Mode : Cyclic Equal ON/OFF (cnf)



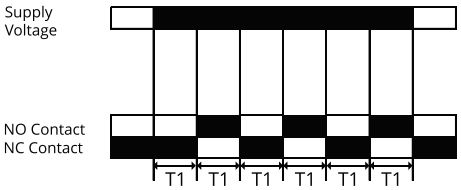
T1 = T x t (set time)

Mode : Impulse ON/OFF (inf)



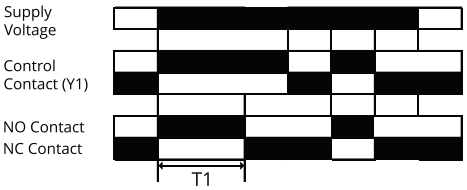
T1 = T x t (set time)

Mode : Cyclic Equal OFF/ON (cfn)



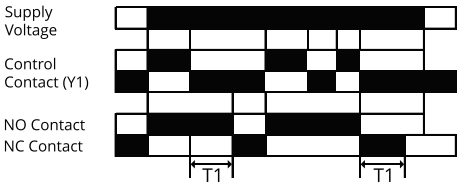
T1 = T x t (set time)

Mode : Leading Edge Impulse (iL)



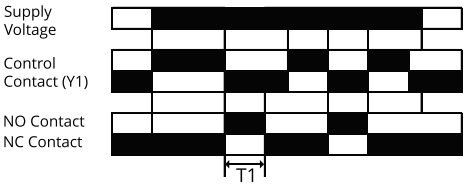
T1 = T x t (set time)

Mode : Signal OFF Delay (sf)



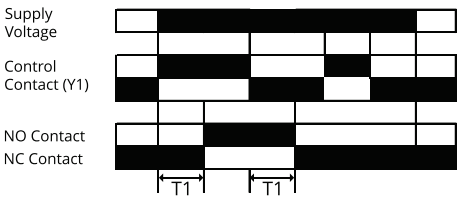
T1 = T x t (set time)

Mode : Trailing Edge Impulse (it)



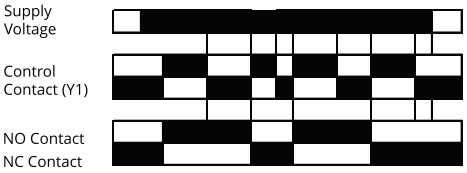
T1 = T x t (set time)

Mode : Signal OFF/ON Delay (sfn)



T1 = T x t (set time)

Mode : Leading Edge Bi-Stable (sbi)



TIMERS

MULTI FUNCTION TIMER

Type : M13-A-R3

Application

'elmex' Multi-Function timer is used for facilitating simple, Reliable and economical control for definite purpose solution in Industrial Application or in OEMs.

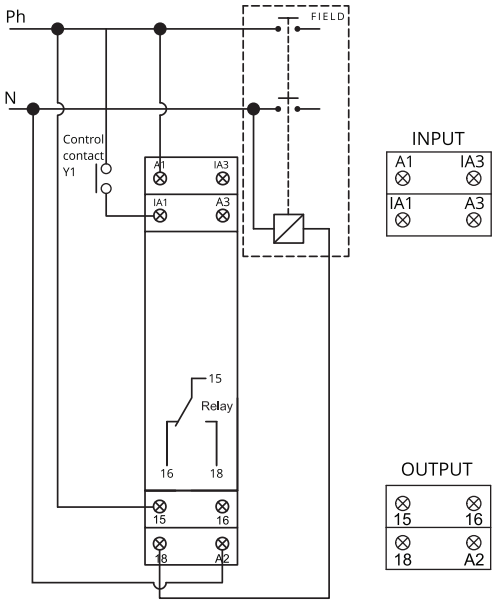
Salient Features

- 17.5 mm DIN Rail Mount.
- 13 Function.
- 10 Time Ranges.
- Green LED for Power ON.
- Red LED for Relay ON.
- Front knobs for Time Range, Time Scale & Mode Setting.
- Slim, Space Saving Design.
- Sealable Front Cover for Tamper Proofing.
- Provision of Multimeter probe for parameters measurement.

Certification

UK CA CE RoHS

Connection Diagram

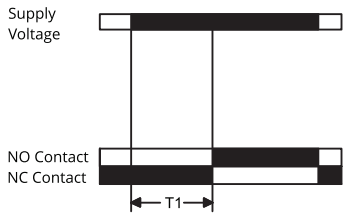


Technical Specification

Input Specifications	
Supply Voltage A1-A2	240V AC/ 24V AC-DC
Frequency	50/60 Hz
Supply Variation	-20% to +10%
Power Consumption	12VA (max)
Accuracy	Settings: ±5% of Full Scale
Functional Specifications	
Mode	On Delay(A), Interval(B), Cyclic equal OFF first (C), Cyclic equal ON first (Ci), Pulse output, 500ms fixed (D), Delay ON break (E), Delay ON make/Delay ON break (F), Interval after break(H), Single Shot (I), Retriggerable Single shot(J), Latching Relay (K), Delay with Totalise (Ai), Interval with Totalise (Bi)
Output Contact	SPDT(1C/O)
Contact Rating	5A @240V AC / 28V DC (Resistive)
Time Ranges	0.1 - 1 sec, 0.3 - 3 sec, 1 - 10 sec, 3 - 30sec, 0.1 - 1 min, 0.3 - 3 min, 1 - 10 min, 3 - 30min, 0.1 - 1 hrs, 0.3 - 3 hrs
LED Indications	
Power ON	3 mm Green LED
Relay ON	3 mm Red LED
Environmental Specifications	
Temperature	Operating: -10 to 55 °C(14 to 131 °F) Storage: -20 to 70 °C(-4 to 158 °F)
Humidity(non-condensing)	95% RH
Protection Level	IP40 for Casing IP20 for Terminals
Housing	
Housing Material	Polycarbonate
Colour	White
Dimension (H x D x W)	85 x 70.05 x 17.5 mm
Weight	70 gms
Mounting	TS 35 DIN Rail

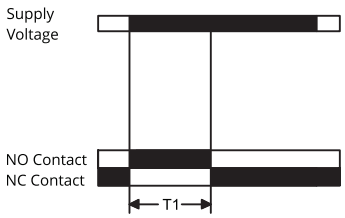
Functional Diagram

Mode : ON Delay (A)



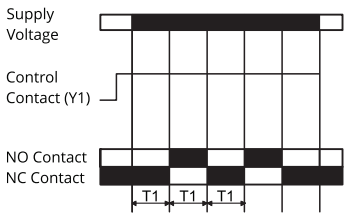
T1 = T x t (set time)

Mode : Interval (B)



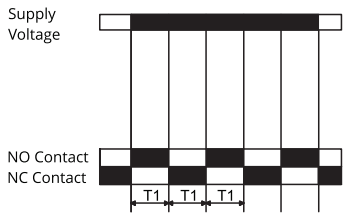
T1 = T x t (set time)

Mode : Cyclic Equal OFF First (C)



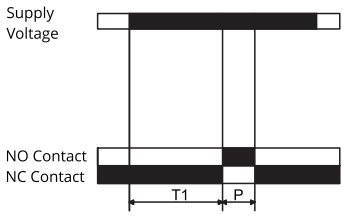
T1 = T x t (set time)

Mode : Cyclic Equal ON First (Ci)



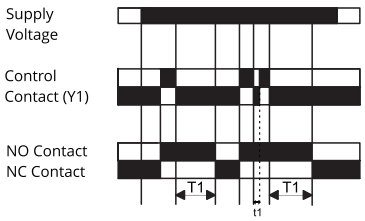
T1 = T x t (set time)

Mode : Pulse Output (D)



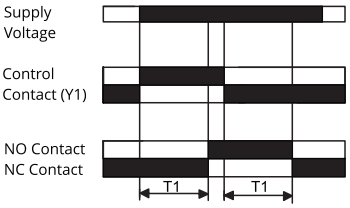
T1 = T x t (set time), P = 500msec.

Mode : Delay On Break (E)



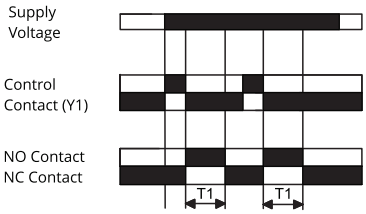
T1 = T x t (set time); t1<T1

Mode : Delay On Make / Break (F)



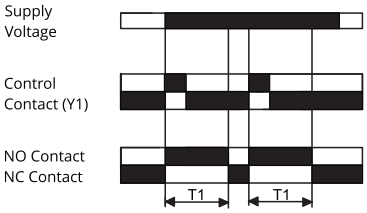
T1 = T x t (set time)

Mode : Interval After Break (H)



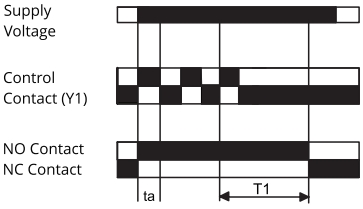
T1 = T x t (set time)

Mode : Single shot (I)



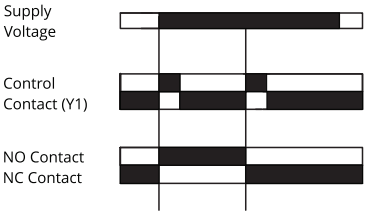
T1 = T x t (set time)

Mode : Retriggable Single shot (J)

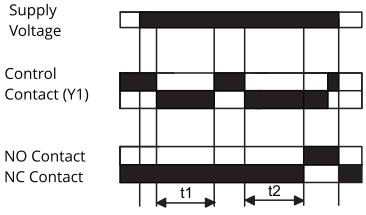


ta<T1; T1 = T x t (set time)

Mode : Latching Relay (K)

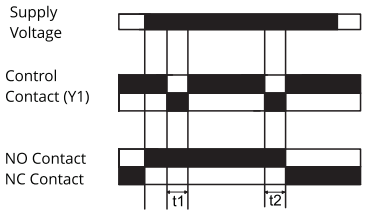


Mode : Delay with Totalise (Ai)



t1+t2=T1; T1 = T x t (set time)

Mode : Interval with Totalise (Bi)



t1+t2=T1; T1 = T x t (set time)

PROTECTION RELAYS
PHASE SEQUENCE RELAY
EM3PSR

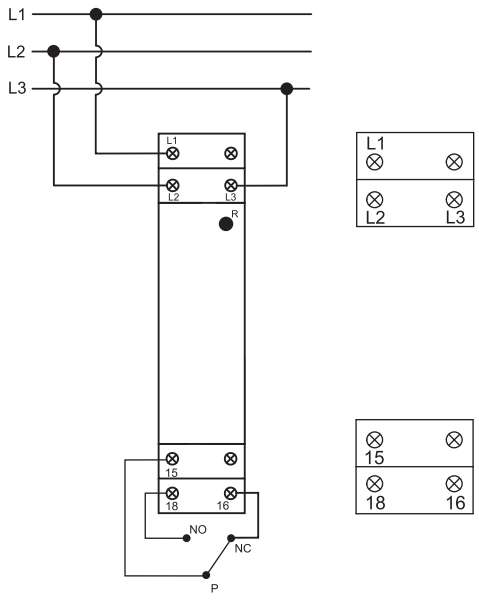
Application

'elmex' PSR is a protective relay. It protects 3 phase device against any potential damage due to change in phase sequence / phase asymmetries / fuse failure in 3 phase, 3 wire system.

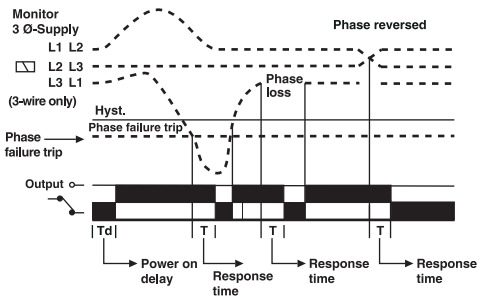
Salient Features

- 17.5 mm DIN Rail Housing.
- 3Ø - 3 Wire System.
- Monitors (Phase Sequence (PS), Phase Asymmetry (PA) & Phase Failure (PF)).
- 1 x SPDT Relay Output.
- Green LED for Relay on indication.
- Sealable Front Cover for Tamper Proofing.
- Provision of Multi-meter probe for parameters measurement.

Connection Diagram



Functional Diagram



Technical Specification

Input Specifications	
Operating Voltage (L-L)	154 to 500V AC
Frequency	50/60Hz
Power Consumption	20 VA Maximum
Accuracy	±3% of Full Scale
Reset	Auto reset on removal of fault condition
Functional Specifications	
Phase Failure Trip	Phase Voltage <154V AC (L-L)
Phase Sequence, Phase Failure	Yes
Phase Asymmetry	35V
Hysteresis	9V AC
Trip Accuracy	±10V
Response Time	PS, PA: <200 ms, PF <2 sec.
Delays	
Power On Delay	<200 msec.
Output Specifications	
Output Contact	SPDT Relays (1 C/O)
Contact Rating	5A@240V AC/ 28V DC (Resistive)
LED Indications	
Relay ON	3mm Green LED
Environmental Specifications	
Temperature	Operating: 0 to 50 °C(32 to 122 °F) Storage: -20 to 75 °C(-4 to 167 °F)
Humidity(non-condensing)	95% RH
Protection Level	IP40 for Casing IP20 for Terminals
Housing	
Material	Polycarbonate
Colour	White
Dimension (H x D x W)	85 X 70.05 X 17.5
Weight	62 gms
Mounting	TS 35 DIN Rail

ELMU-U
EARTH LEAKAGE MONITORING UNIT

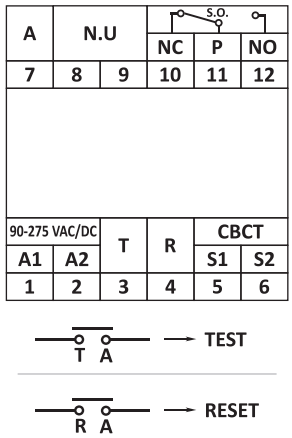
Application

'elmex' make Earth Leakage monitoring Relay facilitates measuring of Earth Leakage Current and used with 'elmex' make Core Balance Current Transformers.

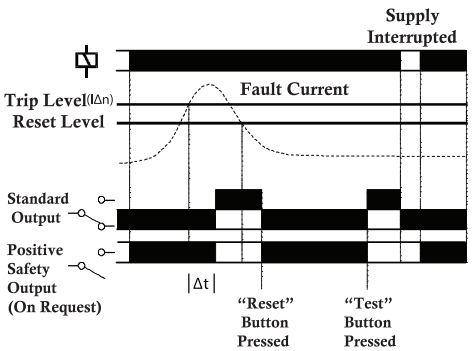
Salient Features

- Universal power supply.
- 35 mm wide DIN Rail Housing.
- Designed to monitor & detect true RMS earth fault currents in conjunction with separate toroid.
- LED bar-graph provides constant indication of any leakage current.
- Microprocessor controlled with internal monitoring(Self - checking).
- Adjustable sensitivity (IΔn) and Time Delay (Δt) - 0 (Instantaneous) to 10 seconds.
- Separate "Test" and "Reset" push buttons.
- Connection facility for remote "Test" and "Rest" push buttons or N.O contacts.
- 1 Relay Output - Standard output (S.O) & Positive safety output relay on request.
- LED indication of supply status and fault condition after unit has tripped.

Connection Diagram



Functional Diagram



Technical Specification

Supply voltage - A1 - A2	90-275Vac/dc
Frequency Range	50/60Hz
Power Consumption	< 5VA
Monitoring Mode	Leakage current
Monitored leakage current	Up to 30A
Trip Level limits	80 - 90% of IΔn
Reset Value	= 85 % of tripped level
Delays	
Time delay Δt	0, 60, 150, 250, 500, 800mS, 1, 2.5, 5, 10 sec. (user selectable)
Output Specifications	
Output	1 x SPDT relay (1 FORM C)
Output rating	S.O. (NO: 10A@277VAC/ 28VDC) (NC: 5A@250VAC)
LED Indications	
Power ON	3mm Green LED
Bargraph	3x3mm Green LED (25, 50 and 75% of actual trip level)
Tripped	3mm Red LED
ELMU healthy	3mm Red LED (Blinking)
Housing	
Material	ABS UL - 94 V0
Colour	Light Gray
Dimension (L X W X H)	59 X 35X 91mm
Din rail enclosure component	Poly carbonate
Mounting	TS 35 DIN Rail

TRANSDUCER
Instrument Current Transducer
ICT

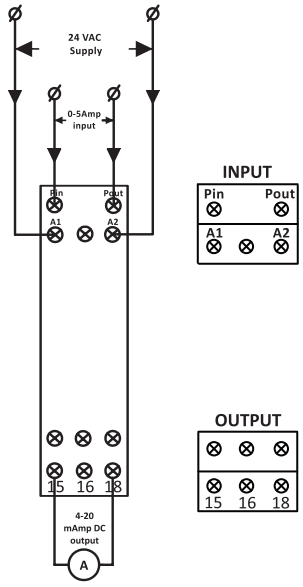
Application

'elmex' make instrument current transducer sense CT secondary current and provide linear 4-20 mA DC signal for PLC/SCADA application.

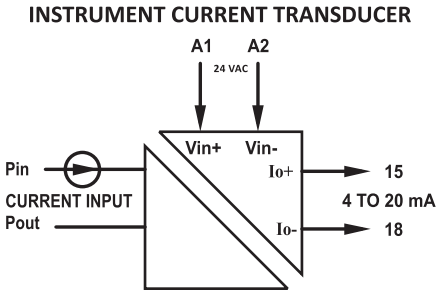
Salient Features

- 17.5 mm DIN Rail Housing.
- Inrush current protection.
- Green LED for supply indication.
- Galvanic Isolation between current input and output.

Connection Diagram



Functional Diagram



Technical Specification

Supply Voltage	
Supply voltage (A1-A2)	24 V AC
Current input / Sensing current (Pin - Pout)	0-5 Amp
Frequency Range	50 / 60 Hz
Power Consumption	4 VA Maximum
Output Specifications	
Output between terminal No. 15 and 18	4 to 20 mA
Setting accuracy	± 2.5%
LED Indications	
Power ON / Healthy	3mm Green LED
Environmental Specifications	
Temperature	Operating: 0 to 50 °C (32 to 122 °F) Storage: -20 to 75 °C (-4 to 167 °F)
Humidity (Non-Condensing)	95% RH
Protection Level	IP40 for Casing IP20 for Terminals
Housing	
Material	Polyamide 6,6
Colour	Grey
Dimension (H x D x W)	90 X 56.4 X 17.5
Mounting	TS 35 DIN Rail

TRANSDUCER
VOLTAGE TRANSDUCER
VT

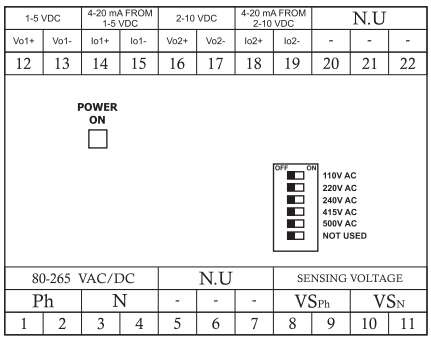
Application

'elmex' make instrument voltage transducer sense PT secondary voltage and provide linear 1-5VDC and 4-20 mA DC signal for PLC/SCADA application.

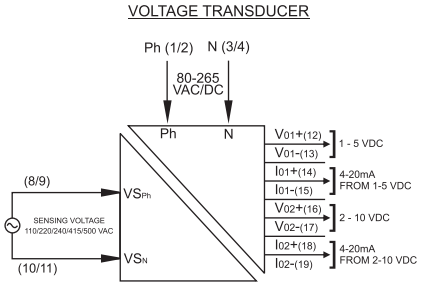
Salient Features

- 70mm wide DIN Rail / Panel Mount Housing.
- Inrush Current Protection.
- Galvanic Isolation between input voltage signal and output voltage & current signals.
- User Selectable Voltage Range.

Connection Diagram



Functional Diagram



Technical Specification

Input Specifications	
Auxiliary Supply Voltage (Ph - N)	80-265 VAC/DC
Sensing Voltage (VS_{Ph} - VS_N)	110 / 220 / 240 / 415 / 500 VAC
Frequency Range	50 / 60 Hz
Power Consumption (For Auxiliary Supply Voltage)	< 4 VA
Output	
Output between terminal No. 12 & 13	1 - 5 VDC
Output between terminal No. 14 & 15	4 - 20 mA @ 1 - 5 VDC
Output between terminal No. 16 & 17	2 - 10 VDC
Output between terminal No. 18 & 19	4 - 20 mA @ 2 - 10 VDC
Output Accuracy	± 3%
LED Indications	
Power ON	Red LED
Housing	
Material	ABS UL-94-V0
Colour	Light Grey
Dimension (H x D x W) mm	58.4 x 70 x 91 mm
Din Rail Enclosure Component	Polycarbonate
Mounting	TS 35 DIN Rail

***Note:** Voltage Range has to be selected before energizing the unit.

since 1963

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TECHNICAL SPECIFICATIONS MAY CHANGE IN LINE WITH TECHNICAL ADVANCES AND INDUSTRY STANDARDS.