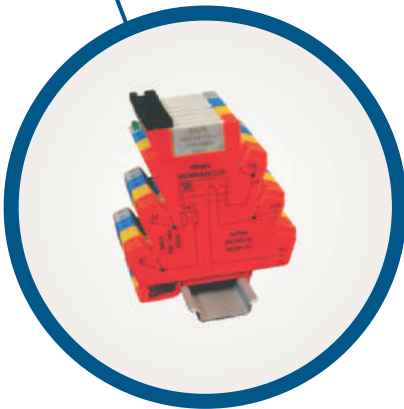
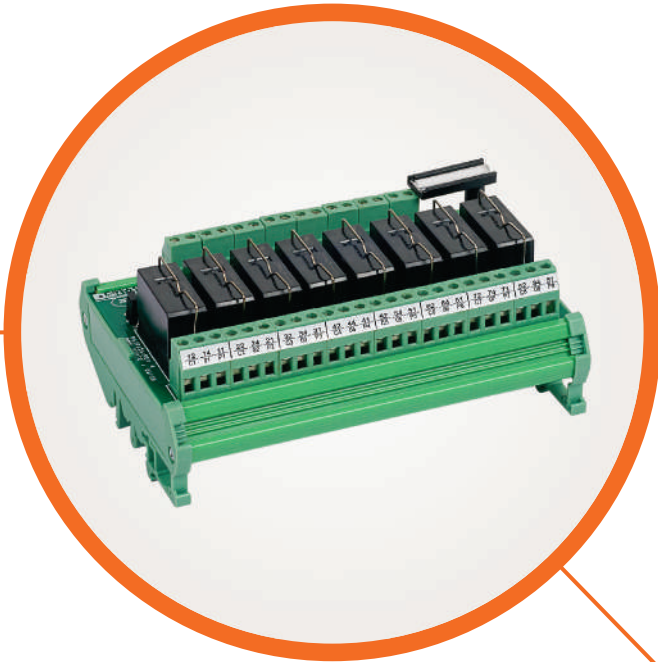


elmex

since 1963

Converging  
Innovations  Expanding  
Solutions



Solutions For  
Control & Instrumentation

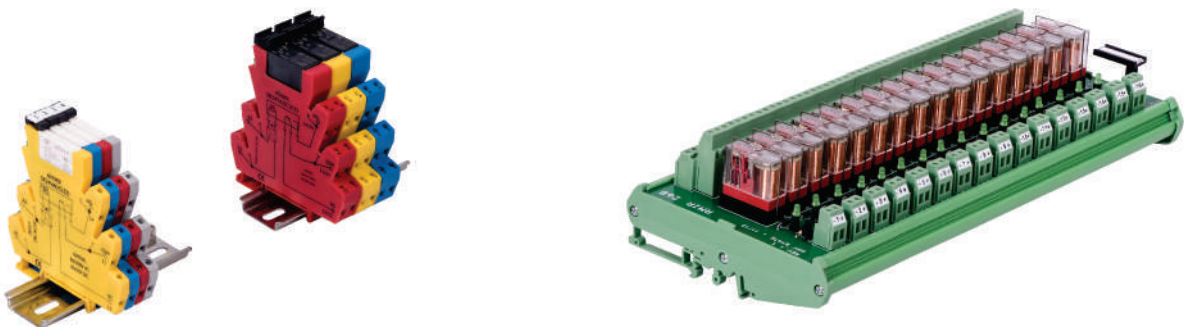
'elmex' is a pioneer in the field of Electrical wire Termination Technology in India. 'elmex' started its journey in 1963 as Manufacturer of Terminal Blocks (Din Rail Mounted Connectors) for the switchgear Industry. Steered on by the vision of our founder and chairman, Mr. J. D. Ray, Elmex has moved from strength to strength and is regarded as the leader in manufacturing terminal blocks in the country and further expanded their wings to overseas (more than 25 countries).

The steady and systematic growth coupled with the desire for incremental innovation, unfaltering customer service and steadily increasing manufacturing productivity has brought 'elmex' to its current level of competence, marked by a host of Global Approvals for the wide range of products. 'elmex' manufacturing plants are ISO 9001:2008 certified by TUV SUD South Asia Pvt. Ltd. 'elmex' techno - economic competitiveness has led many multinationals to choose 'elmex' as a global outsourcing partner. 'elmex' is regarded as trustworthy and reliable partner when it comes to product quality and efficient delivery schedules - all this is made possible because of the commitment and competence of Team 'elmex' and its desire for continuous improvement and innovations.

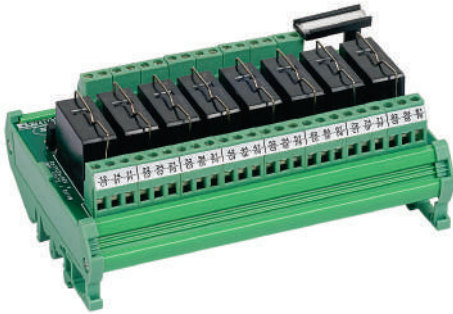
'elmex' brand equity is reflected by the fact that we serve most of the biggest names from national and multinational companies such as ABB, Alstom, Lucy Switchgear, Al Ahleia Switchgear, L & T, Siemens, Schneider, Honeywell, GE, BHEL, NTPC, RDSO, Reliance, NPC and many more.

'elmex' manufacturing operations supported by fully computerized Design and Development Department for product design and tool design, Testing Laboratory for conducting tests according to international specifications, a Quality Management System (ISO 9001:2008) and an Environment Management System (ISO 14001:2004) operating throughout various 'elmex' units. Our marketing network is supported by more than 20 Resident Engineers catering to all over the country, various parts of the world and State of the Art facilities established at multi-locations in Vadodara.

We are pleased to introduced range of Relay Interface Boards, Relay Terminal Units, Timers and Measurement and Protection Relays for all applications of control, measurement and protection systems. They are serving vast range of application like over voltage, under voltage, over current, under current, phase failure, phase indication and other various functions required to be operated in measurement, control and protection applications. The manufacturing and testing facilities have been established to meet the requirements of applicable international standards and they are calibrated by NABL approved laboratory.

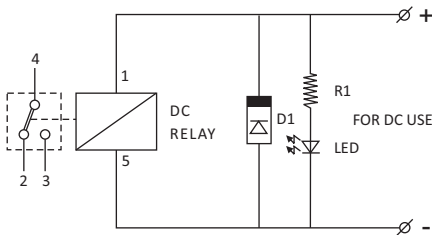


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### Connection Diagram

1 C/O Electrical Connection for DC Use.



### Application:

'elmex' Single Changeover Relay Interface Modules are used mainly for interfacing digital output devices in field. This module implements 1 Form C contact for Relay.

### Salient Features:

- Compact Relay-To-Wire assembly of relay units.
- Eliminate Wiring Errors.
- DIN Rail Mounted.
- PVC housing to hold PCB.
- FR4 Grade Double Sided Copper claded PCB.

Sr. No.	Product Code	No. of Relays	Configuration	Dimension LxWxH in mm
1	RMIR 122 TLOD1	1	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	23x77x59
2	RMIR 123 TLOD1	2	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	45x90x64
3	RMIR 124 TLOD1	4	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	90x90x64
4	RMIR 126 TLOD1	8	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	135x90x64
5	RMIR 247 TLOD1	16	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	268x90x64

### Input Data

Nominal Actuation Voltage	24 VDC
Nominal Actuation Current	25mA
Protection	Free Wheeling Diode across Coil of relay.
Indication	Voltage presence indication
Terminals	2.5 sq. mm Screw Clamp Connector

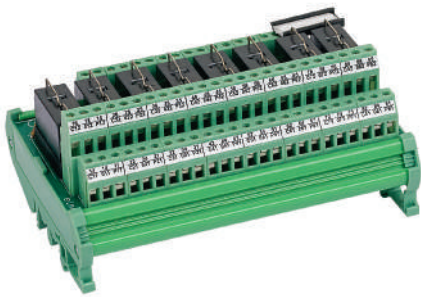
### General Data

Insulation Resistance	Minimum 1000 MΩ at 500 VDC between each channels
Dielectric Strength	1000 VAC for 1 Minute between channels
Ambient Operation Temperature	80°C
Tropicalisation	Lacquer Coating on both side of PCB
Identification Tag	Provided

### Output Data

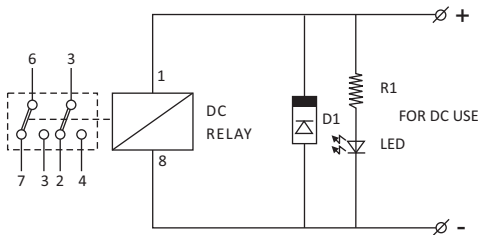
Contact Type	1 From C - SPDT
Maximum Switching Voltage	250 VAC / 24 VDC
Maximum Switching Current	12 Amp
Output Contact	Potential Free / Dry

\*W/o = Without



### Connection Diagram

2 C/O Electrical Connection for DC Use.



### Application:

'elmex' Two Changeover Relay Interface Modules are used mainly for interfacing digital output devices in field. This module implements 2 Form C contact for relay.

### Salient Features:

- Compact Relay-To-Wire assembly of relay units.
- Eliminate Wiring Errors.
- DIN Rail Mounted.
- PVC housing to hold PCB.
- FR4 Grade Double Sided Copper claded PCB.

Sr. No.	Product Code	No. of Relays	Configuration	Dimension LxWxH in mm
1	RMIR 104 TLOD1	1	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	23x77x65
2	RMIR 158 TLOD1	2	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	45x90x65
3	RMIR 105 TLOD1	4	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	90x90x65
4	RMIR 081 TLOD1	8	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	135x90x65
5	RMIR 268 TLOD1	16	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	268x90x65

### Input Data

Nominal Actuation Voltage	24 VDC
Nominal Actuation Current	25mA
Protection	Free Wheeling Diode across Coil of relay.
Indication	Voltage presence indication
Terminals	2.5 sq. mm Screw Clamp Connector

### General Data

Insulation Resistance	Minimum 1000 MΩ at 500 VDC between each channels
Dielectric Strength	1000 VAC for 1 Minute between channels
Ambient Operation Temperature	80°C
Tropicalisation	Lacquer Coating on both side of PCB
Identification Tag	Provided

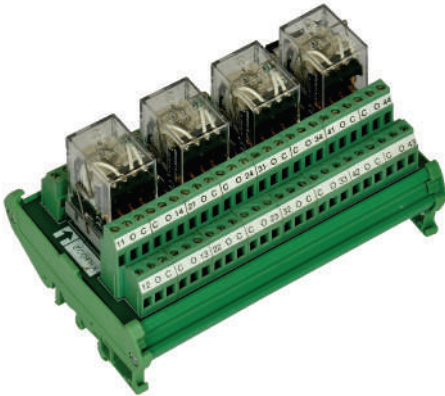
### Output Data

Contact Type	2 From C - DPDT
Maximum Switching Voltage	250 VAC / 30 VDC
Maximum Switching Current	8 Amp
Output Contact	Potential Free / Dry

\*W/o = Without

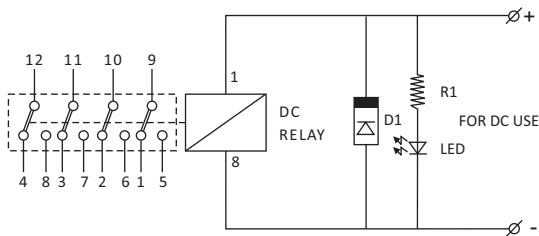
# Relay Interface Modules

Four Changeover Relay Interface Modules



## Connection Diagram

4 C/O Electrical Connection for DC Use.



## Application:

'elmex' Four Changeover Relay Interface Modules are used mainly for interfacing digital output devices in field. This module implements 4 Form C contact of relay.

## Salient Features:

- Compact Relay-To-Wire assembly of relay units.
- Eliminate Wiring Errors.
- DIN Rail Mounted.
- PVC housing to hold PCB.
- FR4 Grade Double Sided Copper claded PCB.

Sr. No.	Product Code	No. of Relays	Configuration	Dimension LxWxH in mm
1	RMIR 177 TLOD1	1	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	45x90x64
2	RMIR 367 TLOD1	2	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	68x90x64
3	RMIR 368 TLOD1	4	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	112x90x64
4	RMIR 370 TLOD1	8	<b>Coil Voltage:</b> 24 VDC W/o* Fuse Holder; Relay mounted on base	268x90x64

## Input Data

Nominal Actuation Voltage	24 VDC
Nominal Actuation Current	40mA
Protection	Free Wheeling Diode across Coil.
Indication	Voltage presence indication
Terminals	2.5 sq. mm Screw Clamp Connector

## General Data

Insulation Resistance	Minimum 1000 MΩ at 500 VDC between each channels
Dielectric Strength	1000 VAC for 1 Minute between channels
Ambient Operation Temperature	80°C
Tropicalisation	Lacquer Coating on both side of PCB
Identification Tag	Provided

## Output Data

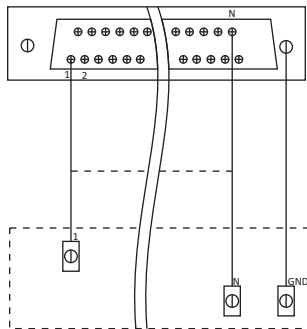
Contact Type	4 From C
Maximum Switching Voltage	220 VAC / 24 VDC
Maximum Switching Current	3 Amp
Output Contact	Potential Free / Dry

\*W/o = Without



### Connection Diagram

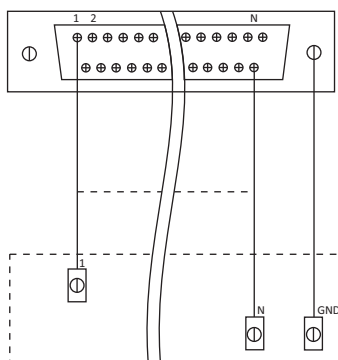
#### Female D-Sub Connector



PCB Connectors

N = No. of Pins

#### Male D-Sub Connector



PCB Connectors

N = No. of Pins

### Application:

'elmex' SUB D Plug/Socket Connector Interface Modules are used for facilitating high density connection to and from field to controller boards. It implements termination casting between field & controller. Normally used for Communication, Transmitting Process Control Parameters & Data.

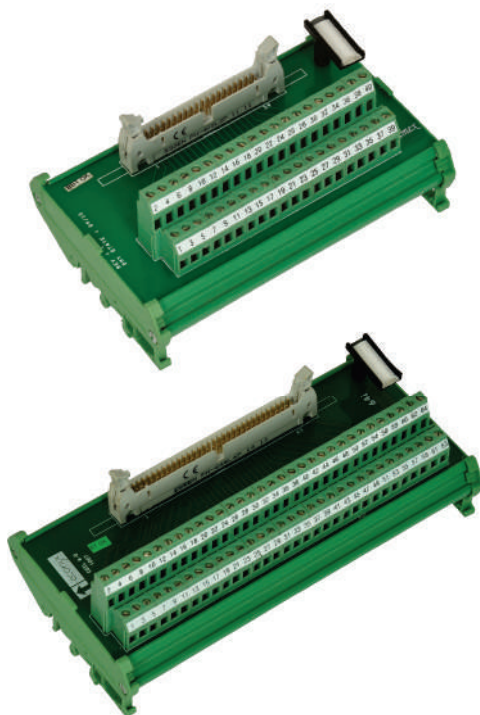
### Salient Features:

- Quick & Reliable interface between high density connectors and discrete wires.
- Eliminate Wiring Errors.
- DIN Rail Mounted.
- PVC housing to hold PCB.
- FR4 Grade Double Sided Copper claded PCB.

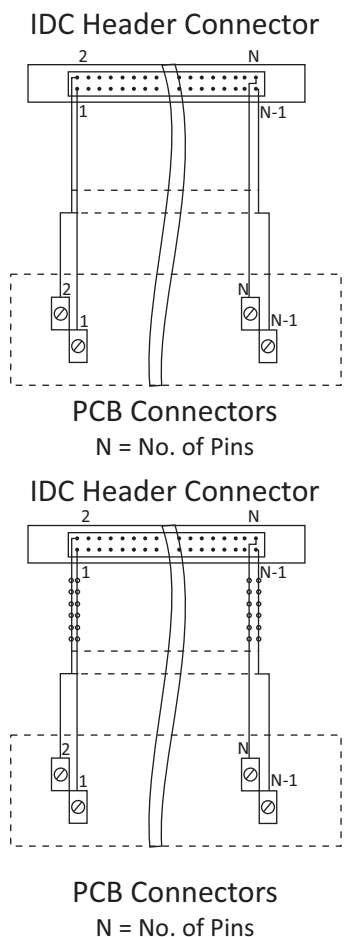
Sr. No.	Product Code	Configuration	Dimension LxWxH in mm
1	RMI 9 DM	9 Pin Plug Straight Connector	45x90x65
2	RMI 9 DF	9 Pin Socket Straight Connector	45x90x65
3	RMI 15 DM	15 Pin Plug Straight Connector	68x90x65
4	RMI 15 DF	15 Pin Socket Straight Connector	68x90x65
5	RMI 25 DM	25 Pin Plug Straight Connector	90x90x65
6	RMI 25 DF	25 Pin Socket Straight Connector	90x90x65
7	RMI 37 DM	37 Pin Plug Straight Connector	112x90x65
8	RMI 37 DF	37 Pin Socket Straight Connector	112x90x65
9	RMI 50 DM	50 Pin Plug Straight Connector	56x90x65
10	RMI 50 DF	50 Pin Socket Straight Connector	56x90x65

### General Data

Current Rating	1.5A @ 125V
Insulation Resistance	Minimum 100 MΩ at 500 VDC between each channels
Dielectric Strength	1000 VAC for 1 Minute between channels
Ambient Operating Temperature	80°C
Tropicalisation	Lacquer Coating on both side of PCB
Identification Tag	Provided



### Connection Diagram



### Application:

'elmex' Insulation Displacement Connector Interface Module are used for facilitating high density connection to and from field to controller boards. It implements termination casting between field & controller. Normally used for Communication, Transmitting Process Control Parameters & Data.

### Salient Features:

- Quick & Reliable interface between high density connectors and discrete wires.
- Eliminate Wiring Errors.
- DIN Rail Mounted.
- PVC housing to hold PCB.
- FR4 Grade Double Sided Copper claded PCB.

Sr. No.	Product Code	Configuration	Dimension LxWxH in mm
1	RMI 10 I	10 Pin IDC Connector	45x90x64
2	RMI 14 I	14 Pin IDC Connector	68x90x64
3	RMI 16 I	16 Pin IDC Connector	68x90x64
4	RMI 20 I	20 Pin IDC Connector	90x90x64
5	RMI 26 I	26 Pin IDC Connector	90x90x64
6	RMI 34 I	34 Pin IDC Connector	112x90x64
7	RMI 40 I	40 Pin IDC Connector	135x90x64
8	RMI 50 I	50 Pin IDC Connector	156x90x64
9	RMI 64 I	64 Pin IDC Connector	179x90x64

### General Data

Current Rating	1A @ 125V
Insulation Resistance	Minimum 1000 MΩ at 500 VDC between each channels
Dielectric Strength	1000 VAC for 1 Minute between channels
Ambient Operating Temperature	80°C
Tropicalisation	Lacquer Coating on both side of PCB
Identification Tag	Provided





### Application:

'elmex' Cable Harnesses are ideal solutions to be used with Sub-D and Insulation Displacement Connectors for automation applications.

### Salient Features:

- To connect computer based systems.
- Duplication of input signals.

### EWPDGL

#### Elmex Wire Harness for D-Sub connector with Male / Female at Both Ends

- Available in 9,15,25,37,50 Pin D-sub connector configuration.
- Available in both male / female configuration.
- Available in standard lengths.
- Ordering Code.

E	W	P	D	G	L
Elmex	Wire Harness	Select Pin From 9,15,25,37,50	D-Sub Connector	Male / Female Input & Output	Specify Length X.0

Elmex Wire Harness 15 Pin D-Sub Male Input Female Output with 2.0 meters length can be ordered as EW15DMF2.0.

### EWPIIL

#### Elmex Wire Harness for IDC Connectors

- Available in 10, 14, 16, 20, 26, 34, 40, 50, 64 Pin IDC Connector
- Available in standard lengths
- Ordering Code

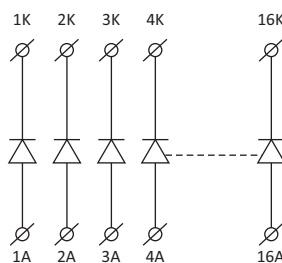
E	W	P	I	L
Elmex	Wire Harness	Select Pin From 10,14,16,20,26,34,40,50,64	IDC Connector	Specify Length X.0

Elmex Wire Harness 20 Pin IDC Connector with 2.0 meters can be ordered as EW20I2.0



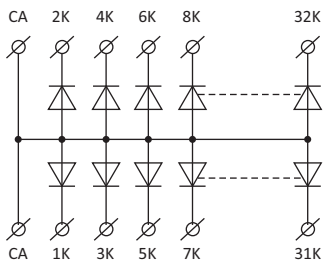
### Connection Diagram

#### INDIVIDUAL DIODE MODULE



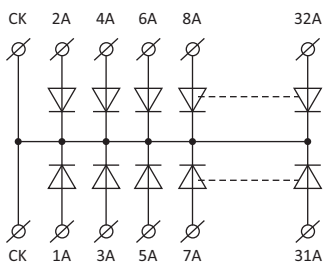
INDIVIDUAL DIODE CONNECTED BETWEEN TWO PCB TERMINAL BLOCKS

#### COMMON ANODE DIODE MODULE



DIODE NETWORK WITH COMMON ANODE AND INDIVIDUAL CATHODE

#### COMMON CATHODE DIODE MODULE



DIODE NETWORK WITH COMMON CATHODE AND INDIVIDUAL ANODE

### Application:

'elmex' Diode Modules come as handy solution for application like reverse blocking using PIV characteristics of diodes. Common place of application are Lamp Test circuits.

### Salient Features:

- Housed in fire retardant grade mounting track.
- Ease of connection with the use of standard screw connection PCB Terminal Blocks.
- Available with individual, common anode and common cathode standard diode configurations.
- DIN Rail Mounted.

Sr. No.	Product Code	Configuration	Dimension LxWxH in mm
1	3RMI-IDM16	16 Channel Individual Diode	95x90x52
2	3RMI-IDM16CK	32 Channel Common Cathode	95x90x52
3	3RMI-IDM16CA	32 Channel Common Anode	95x90x52

### General Specification

Ambient Operating Temperature	-20 to 50°C
Housing Colour	Green
Housing Material	PVC
Mounting Possibility	DIN35

### Diode Specifications

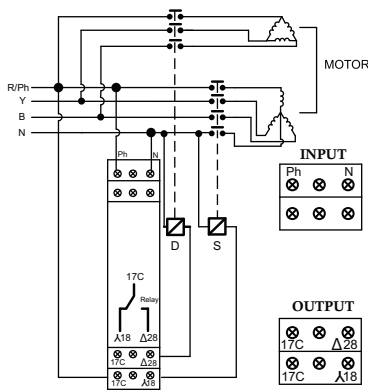
Diode Type	1N4007
Maximum Average Forward Rectified Current	1 A
Maximum DC Blocking Voltage (VDC)	1000 V
Maximum DC Reverse Current at Rated DC Blocking Voltage (TA=100°C)	50 µA
Maximum Instantaneous Forward Voltage @ 1 ADC	1.1 V
Maximum Repetitive Peak Reverse Voltage	1000 V

### Output Data

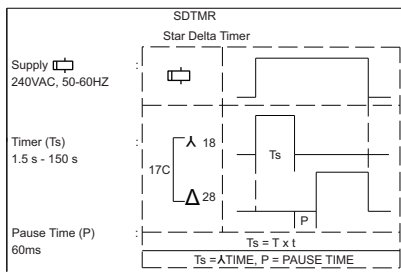
Type of Connection	Screw Connection
Min. Wire Size	0.5 mm <sup>2</sup>
Max. Wire Size	2.5 mm <sup>2</sup>
Min. Wire Size (AWG)	24 AWG
Max. Wire Size (AWG)	12 AWG
Wire Stripping Length	8 mm
Torque	0.5 Nm
Torque	4.5 lb-in



### Connection Diagram



### Functional Diagram



### Application:

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

### Salient Features:

- 17.5 mm DIN Rail Mount.
- SPDT Relay Output.
- Green LED for Star mode Indication.
- Red LED for Delta mode Indication.

### Technical Specification

#### Supply Voltage

Supply Voltage Ph-N 220 / 230 / 240 V

Frequency Range 50 - 60 Hz

Power Consumption 15 VA Maximum

#### Delays

Delta mode on time delay (Ts) 1.5 sec to 150 sec

Pause Timing (P) 60 ms

#### Output Specifications

Output Contact SPDT

Contact Detail 1A @ 125VAC / 2A @ 30VDC

#### LED Indications For Functional Specifications

Star mode indication 3 mm Green LED

Delta mode indication 3 mm Red LED

#### Housing

Material Polyamide 6,6

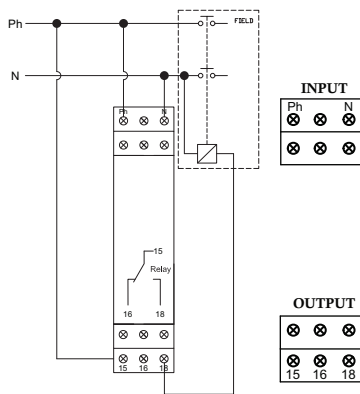
Colour Grey

Dimension 90 x 56.4 x 17.5

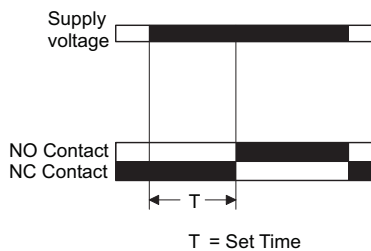
Mounting TS 35 DIN Rail



### Connection Diagram



### Functional Diagram



### 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.

### Technical Specification

#### Supply Voltage

Supply Voltage Ph-N	240V AC
Frequency Range	50 - 60 Hz
Power Consumption	12VA max

#### Output Specifications

Output Contact	SPDT (1C/O)
Contact Rating	NO/5A, NC/3A @ 250V AC

#### Input Specifications

Accuracy	Settings: $\pm 5\%$ of F.S. Repeat: $\pm 0.5\%$ (F.S.=FullScale)
Reset	Reset time < 100msec

#### Functional Specifications

Mode	On Delay
Time Ranges	0.1 - 1sec, 0.3 - 3sec, 1 - 10sec, 3 - 30sec, 0.1 - 1min, 0.3 - 3 min, 1 - 10min 3 - 30 min, 0.1 - 1 hr, 0.3 - 3hr

#### Environmental Specifications

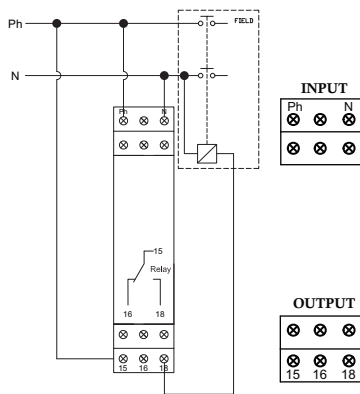
Temperature	Operating: 0 to 50°C (32 to 122 °F) Storage: -20 to 75 °C (-4 to 167 °F)
Humidity (non-condensing)	95% RH

#### Housing

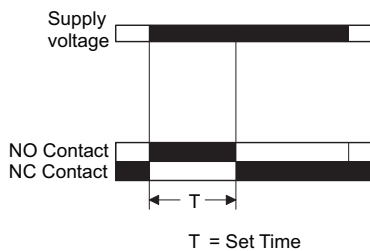
Material	Polyamide 6,6
Colour	Grey
Dimension	90x56.4x17.5
Mounting	TS 35 DIN Rail



### Connection Diagram



### Functional Diagram



### 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.

### Technical Specification

#### Supply Voltage

Supply Voltage Ph-N	240V AC
Frequency Range	50 - 60 Hz
Power Consumption	12VA max

#### Output Specifications

Output Contact	SPDT (1C/O)
Contact Rating	NO/5A, NC/3A @ 250V AC

#### Input Specifications

Accuracy	Settings: $\pm 5\%$ of F.S. Repeat: $\pm 0.5\%$ (F.S.=FullScale)
Reset	Reset time < 100msec

#### Functional Specifications

Mode	Off Delay
Time Ranges	0.1 - 1sec, 0.3 - 3sec, 1 - 10sec, 3 - 30sec, 0.1 - 1min, 0.3 - 3 min, 1 - 10min 3 - 30 min, 0.1 - 1 hr, 0.3 - 3hr

#### Environmental Specifications

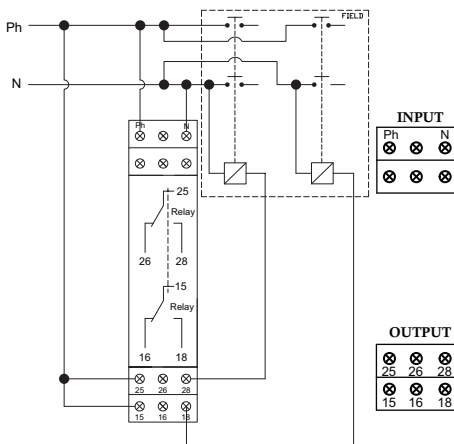
Temperature	Operating: 0 to 50°C (32 to 122 °F) Storage: -20 to 75 °C (-4 to 167 °F)
Humidity (non-condensing)	95% RH

#### Housing

Material	Polyamide 6,6
Colour	Grey
Dimension	90x56.4x17.5
Mounting	TS 35 DIN Rail



### 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.

### Technical Specification

#### Supply Voltage

Supply Voltage 240V AC

Frequency Range 50 - 60 Hz

Power consumption 12 VA max

#### Output Specifications

Output Contact DPDT (2 C/O)

Contact Rating NO/5A,NC/3A@250V AC

#### Input Specifications

Accuracy Settings:  $\pm 5\%$  of F.S.

Repeat:  $\pm 0.5\%$ (F.S.=FullScale)

Reset Reset time < 100msec

#### Functional Specifications

Modes On Delay (A)

Interval (B)

Cyclic equal OFF first (C)

Cyclic equal ON first (Ci)

Pulse output (D)

Time Ranges 0.1 - 1sec, 0.3 - 3sec,

1 - 10sec, 3 - 30sec, 0.1 - 1min,

0.3 - 3 min, 1 - 10min

3 - 30 min, 0.1 - 1 hr, 0.3 - 3hr

#### 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

#### Housing

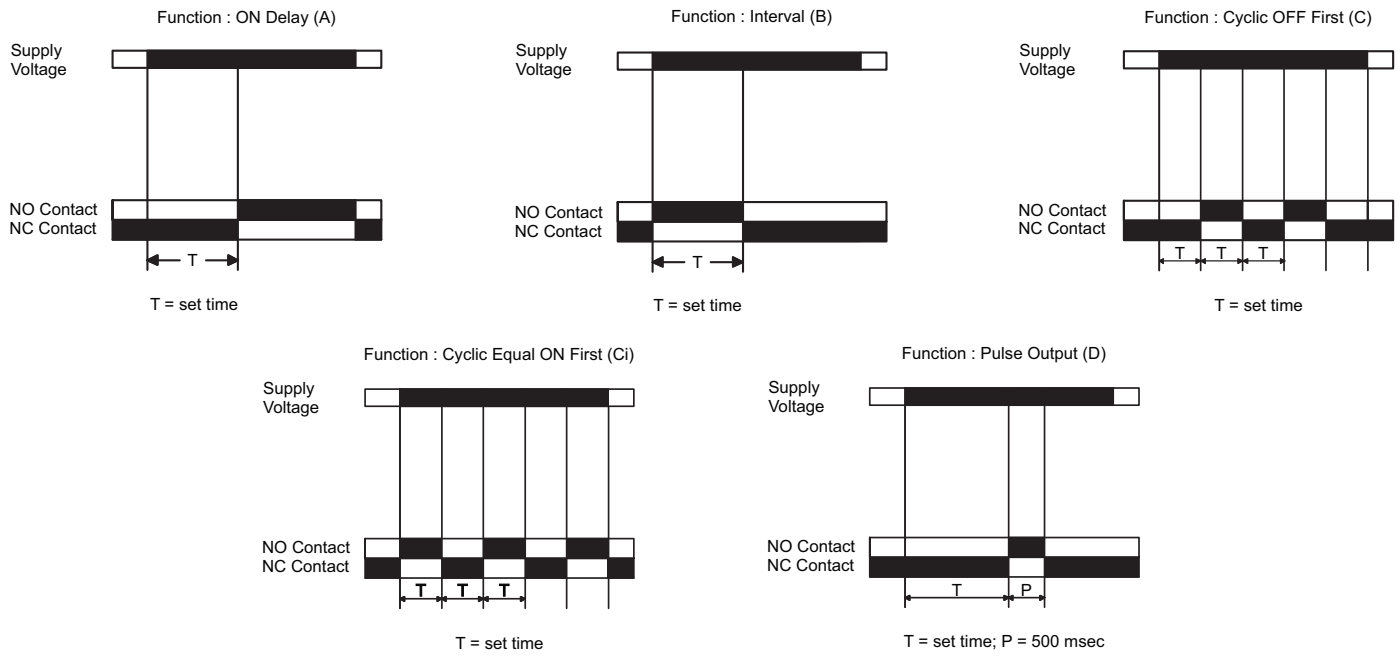
Material Polyamide 6,6

Colour Grey

Dimension 90x56.4x17.5

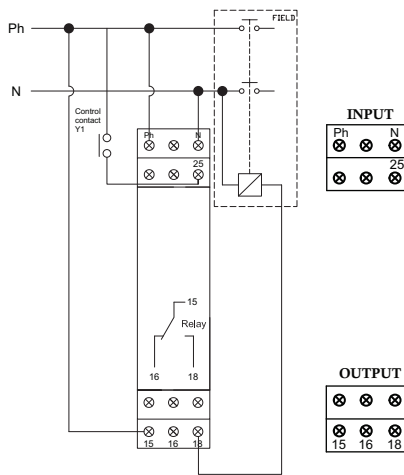
Mounting TS 35 DIN Rail

### Functional Diagram





### 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.
- 13 Function.
- 10 Time Ranges.
- Front knobs for Time Range & Time Scale & Mode Setting.
- Slim, Space Saving Design.

### Technical Specification

#### Supply Voltage

Supply Voltage 240V AC

Frequency Range 50 - 60 Hz

Power consumption 12 VA max

#### Output Specifications

Output Contact SPDT(1C/O)

Contact Rating NO/5A, NC/3A@250V AC

#### Input Specifications

Accuracy Settings:  $\pm 5\%$  of F.S.

Repeat:  $\pm 0.5\%$ (F.S.=FullScale)

Reset Reset time < 100msec

#### Functional Specifications

Modes

- On Delay (A)
- Interval (B)
- Cyclic equal OFF first (C)
- Cyclic equal ON first (CI)
- Pulse output (D)
- Delay on break (E)
- Delay on make / Break (F)
- Interval after break (H)
- Single Shot (I)
- Retriggerable Single shot(J)
- Latching Relay (K)
- Delay with Totalise (Ai)
- Interval with Totalise (Bi)

Time Ranges

- 0.1 - 1sec, 0.3 - 3sec,
- 1 - 10sec, 3 - 30sec, 0.1 - 1min,
- 0.3 - 3 min, 1 - 10min
- 3 - 30 min, 0.1 - 1 hr, 0.3 - 3hr

#### 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

#### Housing

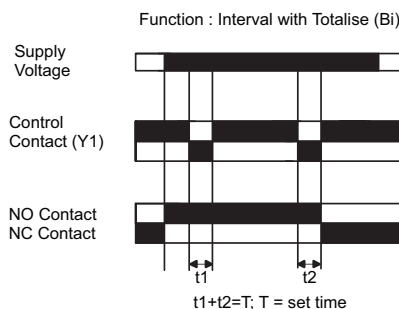
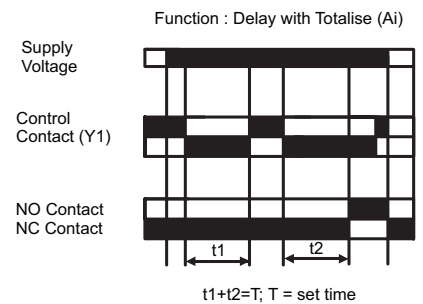
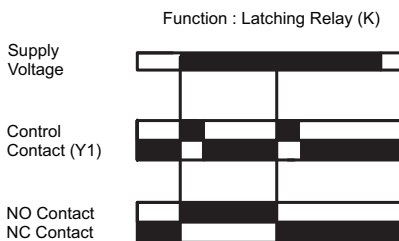
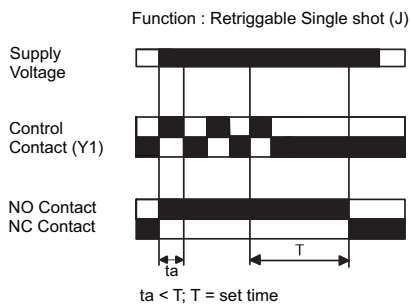
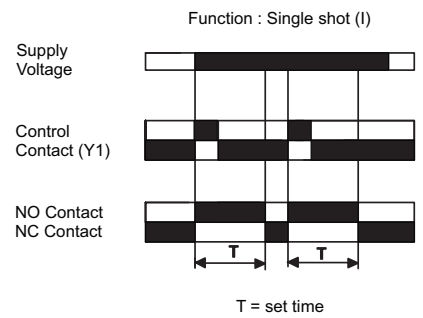
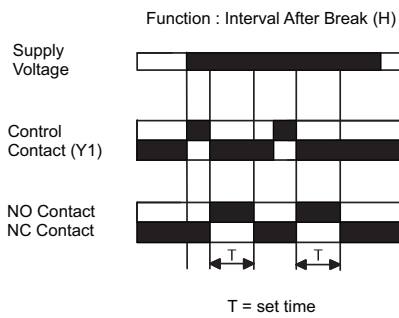
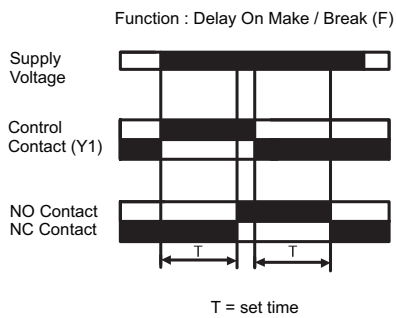
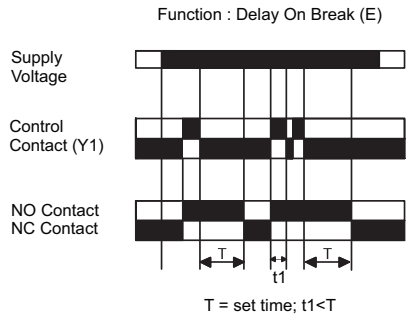
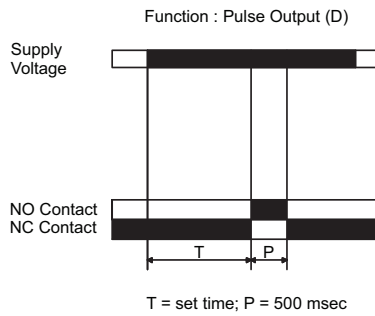
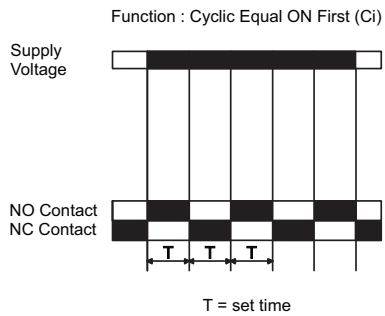
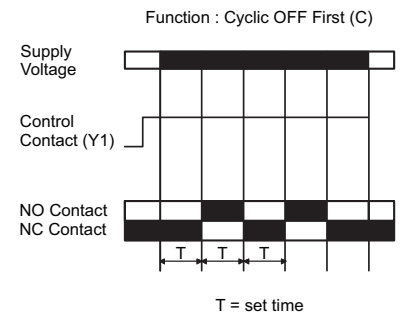
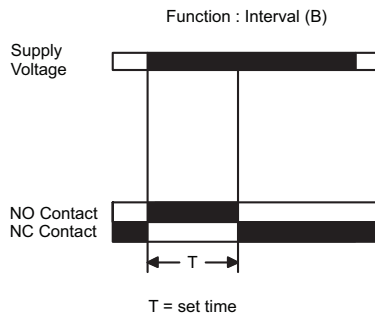
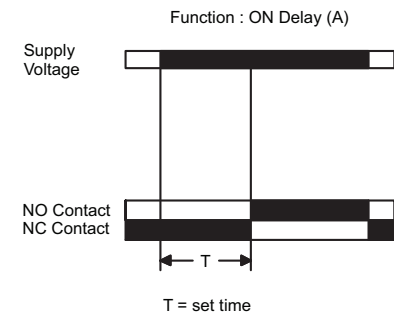
Material Polyamide 6,6

Colour Grey

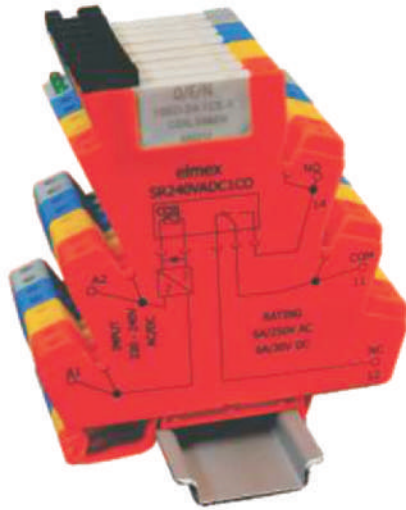
Dimension 90x56.4x17.5

Mounting TS 35 DIN Rail

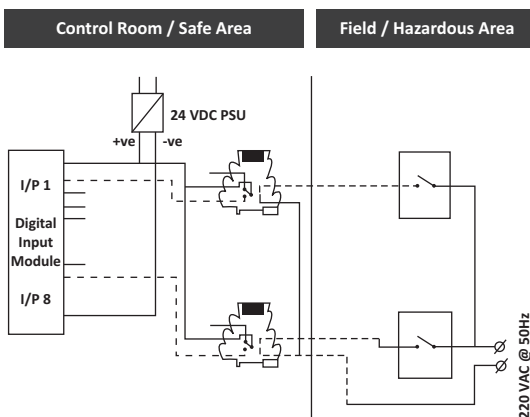
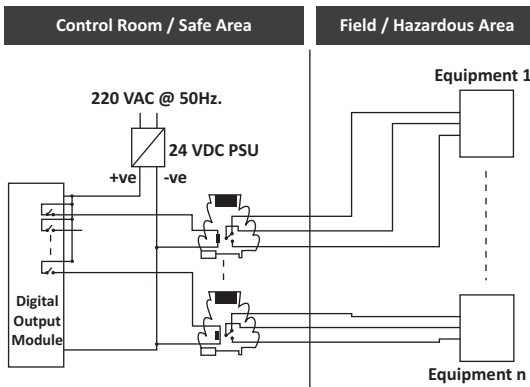




# 1 Changeover Electromechanical 6.2mm Relay Terminal Unit

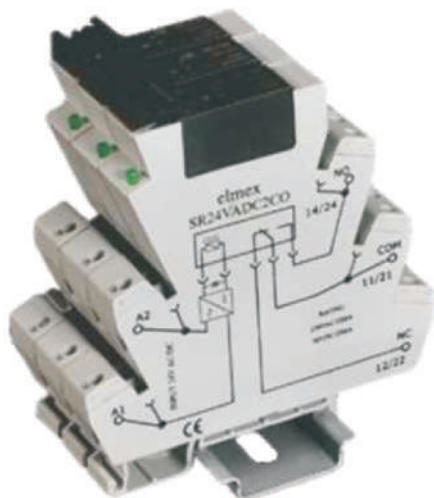


## Applications



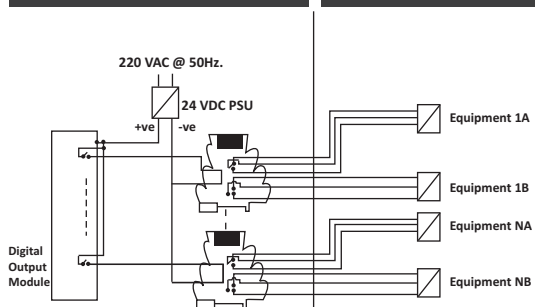
			Versions	
			SR 24 V ADC 1 CO	SR 240 V ADC 1 CO
<b>Base Unit</b>				
Pitch (in mm)	6.2			
Dimension (Height x width) (in mm)	91.50 x 88.20			
Connection Poles	2 Coil Side			
	3 Contact Side			
Connection Possibility	2.5 Sq. mm.			
Screw Size	M 2.6			
Torque	0.4 Nm			
<b>Relay Actuation Data</b>				
Nominal Voltage (Vn) to actuate	24 V DC / AC	220 V DC / AC		
Must Pick up Voltage	18 V DC / AC	190 V DC / AC		
Must Drop Voltage	4 V DC / AC	35 V DC / AC		
Nominal Current (In) to actuate	10 mA	15 mA		
<b>Contact Data</b>				
Contact Rating	6 A, 250 VAC / 30 VDC			
Compatible Contact Arrangement	1 From C			
Contact Material	AgNi / AgSnO <sub>2</sub>			
Contact Resistance	100 mΩ @ 6 VDC, 1 A			
Maximum Switching Power	1500 VA / 144 W			
<b>Relay Endurance Data</b>				
Mechanical	6 x 10 <sup>4</sup> for Normal Open Contact			
Electrical (Ohmic)	3 x 10 <sup>4</sup> for Normal Open Contact			
<b>Insulation of Relay</b>				
Resistance (Initial)	Minimum 1000 MΩ at 500 VDC			
Dielectric Strength	1000 VAC (50Hz.) for 1 Minute			
<b>Others</b>				
Operating Temperature	-20°C to 55°C			

# 2 Changeover Electromechanical 14.5mm Relay Terminal Unit

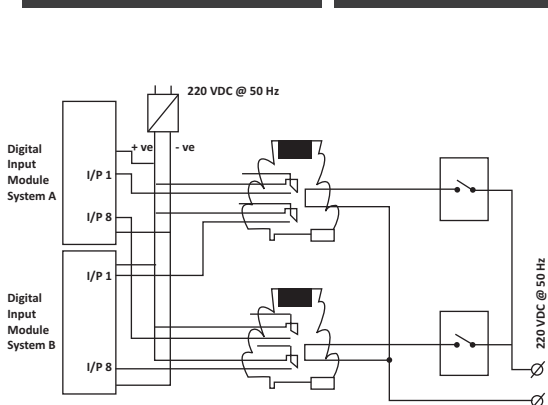


## Applications

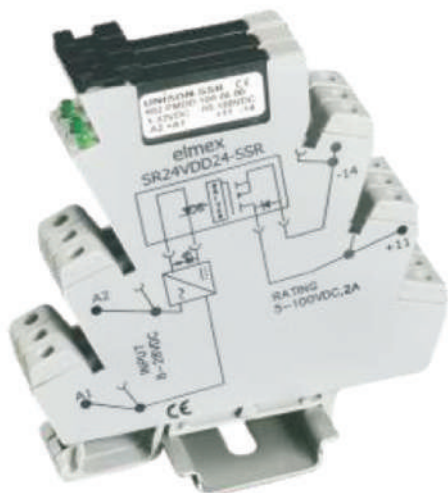
**Control Room / Safe Area**      **Field / Hazardous Area**



**Control Room / Safe Area**      **Field / Hazardous Area**



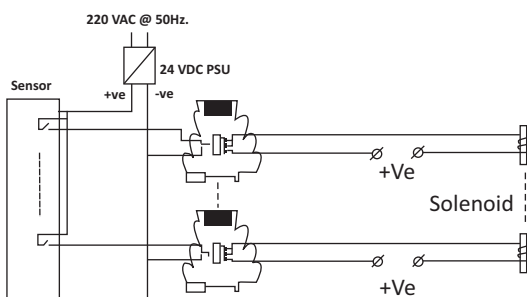
Versions		
	SR 24 V ADC 2 CO	SR 240 V ADC 2 CO
<b>Base Unit</b>		
Pitch (in mm)	14.5	
Dimension (Height x width) (in mm)	91.50 x 88.20	
Connection Poles	2 Coil Side	
	3 Contact Side	
Connection Possibility	2.5 Sq. mm.	
Screw Size	M 2.6	
Torque	0.4 Nm	
<b>Relay Actuation Data</b>		
Nominal Voltage (Vn) to actuate	24 V DC / AC	220 V DC / AC
Must Pick up Voltage	19 V DC / AC	200 V DC / AC
Must Drop Voltage	4 V DC / AC	50 V DC / AC
Nominal Current (In) to actuate	25 mA	10 mA
<b>Contact Data</b>		
Contact Rating	2x6 A, 250 VAC / 30 VDC	
Compatible Contact Arrangement	2 From C	
Contact Material	AgCdO	
Contact Resistance	100 mΩ @ 6 VDC, 1 A	
Maximum Switching Power	1500 VA (per contact)	
<b>Relay Endurance Data</b>		
Mechanical	1 x 10 <sup>7</sup>	
Electrical (Ohmic)	1 x 10 <sup>5</sup>	
<b>Insulation of Relay</b>		
Resistance (Initial)	Minimum 1000 MΩ at 500 VDC	
Dielectric Strength	1000 VAC (50Hz.) for 1 Minute	
<b>Others</b>		
Operating Temperature	-20°C to 55°C	



## Applications

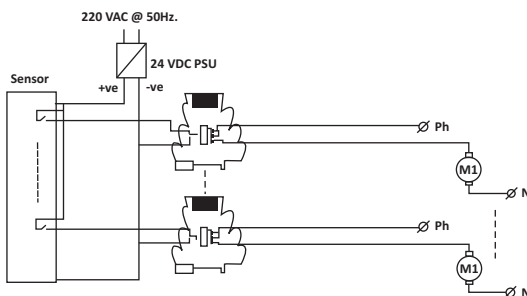
Control Room / Safe Area

Field / Hazardous Area



Control Room / Safe Area

Field / Hazardous Area



## Versions

SR 24 V DD 24 SSR

SR 24 V DA 24 SSR

### Base Unit

Pitch (in mm)	6.2	
Dimension (Height x width) (in mm)	91.50 x 88.20	
Connection Poles	2 Coil Side	
	3 Contact Side	
Connection Possibility	2.5 Sq. mm.	
Screw Size	M 2.6	
Torque	0.4 Nm	

### Relay Actuation Data

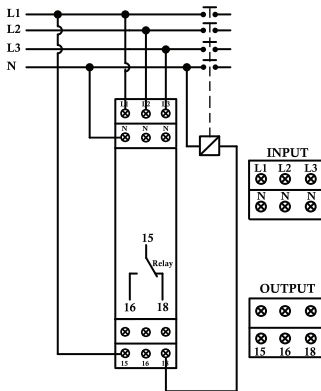
Input Control Voltage	5-28 VDC	5-28VDC
Input Control Supply Current	12 mA	12 mA

### Relay Output Specification

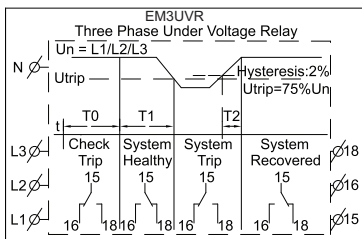
Contact Configuration	1 NO	1 NO
Relay Voltage	5 - 100 VDC	24 - 280 VAC
Rated Current	2 A @55°C	2 A @55°C
Other Technical Data		
ON Time	2.5 m Secs	Zero Crossing Detector Based
OFF Time	2.5 μ Secs	Zero Crossing Detector Based
Operating Temperature	-20°C to 55°C	



### Connection Diagram



### Functional Diagram



### Application:

'elmex' UVR is used for highly fluctuating inductive load such as Air Conditioning system in Industrial and commercial establishments. It protects the system equipment and load from sudden over voltage fluctuations.

### Salient Features:

- 17.5 mm DIN Rail Mount.
- Self - Powered Protection Relay.
- 1x SPDT Relay Output.
- Robust Universal power supply.
- Green LED for supply healthy indication.
- Red LED for healthy sensing indication.
- 12 bit sensing.

### Technical Specification

#### Supply Voltage

Supply / Monitoring Voltage 220 / 230 / 240\*  
(Un) L1 / L2 / L3 - N

Frequency Range 48-63 Hz

Power consumption 5 VA Maximum

Monitoring Mode Under Voltage

Trip Level (U trip) 75% of Un (Factory Set)

Hysteresis 2% (Factory Set)

Setting Accuracy + 4%

#### Delays

Power On Delay (t) 5 Mins (Min) to 15 mins (Max)

From Trip to recovery Time Delay (T2) 5 Mins (Min) to 15 mins (Max)  
(Settable by linear potentiometer)

#### Output Specifications

Output Contact SPDT

Contact Rating 1A @125VAC / 2A @30 VDC

#### LED Indications

Power On 3mm Green LED

Healthy Indications 3mm Red LED

#### Housing

Material Polyamide 6,6

Colour Grey

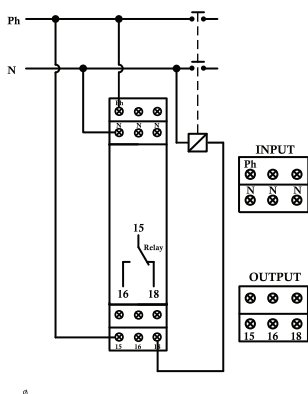
Dimension 90x56.4x17.5

Mounting TS 35 DIN Rail

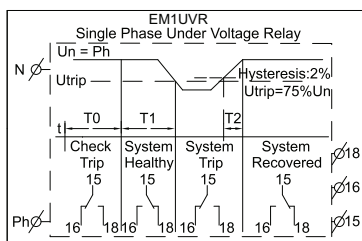
\*Supply / Mounting Voltage (Un) Refers to The Phase to Neutral Nominal Voltage For Product and It's Variants. Product Needs 3Ø, 4 - Wire Connections System. Hence For Reference Purpose Phase to Phase Voltage Can be Calculated by Multiplying Stated Values by  $\sqrt{3}$ .



### Connection Diagram



### Functional Diagram



### Application:

'elmex' UVR is used for highly fluctuating inductive load such as Air Conditioning system in Industrial and commercial establishments. It protects the system equipment and load from sudden over voltage fluctuations.

### Salient Features:

- 17.5 mm wide DIN Rail Housing.
- Self - Powered Protection Relay.
- 1x SPDT Relay Output.
- Robust Universal power supply.
- Green LED for supply healthy indication.
- Red LED for healthy sensing indication.
- 12 bit sensing.

### Technical Specification

#### Supply Voltage

Supply / Monitoring Voltage 220 / 230 / 240\*

(Un) Ph - N

Frequency Range 48-63 Hz

Power consumption 5 VA Maximum

Monitoring Mode Under Voltage

Trip Level ( $U_{trip}$ ) 75% of  $U_n$  (Factory Set)

Hysteresis 2% (Factory Set)

Setting Accuracy + 4%

#### Delays

Power On Delay (t) 5 Mins (Min) to 15 mins (Max)

From Trip to recovery Time Delay (T2) 5 Mins (Min) to 15 mins (Max)

(Settable by linear potentiometer)

#### Output Specifications

Output Contact SPDT

Contact Rating 1A @125VAC / 2A @30 VDC

#### LED Indications

Power On 3mm Green LED

Healthy Indications 3mm Red LED

#### Housing

Material Polyamide 6,6

Colour Grey

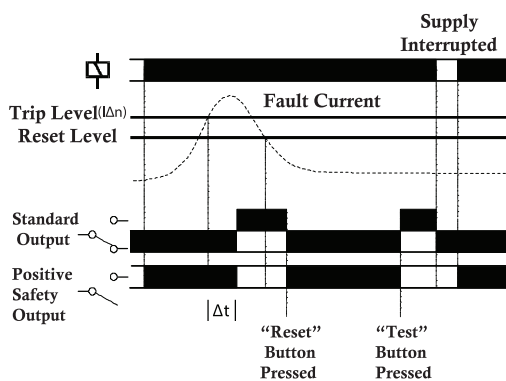
Dimension 90x56.4x17.5

Mounting TS 35 DIN Rail

\*Supply / Mounting Voltage ( $U_n$ ) Refers to The Phase to Neutral Nominal Voltage For Product and It's Variants. Product Needs 1 $\emptyset$ , 2 - Wire Connections System.



### Connection Diagram



### Functional Diagram

	S.O.			N.U.		CBCT			N.U.		
	NO	P	NC	-	-	S1	S2	-	-	-	-
	12	13	14	15	16	17	18	19	20	21	22
	A1	-	A2	-	TEST	RESET	-	-	-	-	-
	1	2	3	4	5	6	7	8	9	10	11

### Application:

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

### Salient Features:

- 70 mm wide DIN Rail / Panel mount 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 ( $I_{\Delta n}$ ) and Time Delay ( $\Delta t$ ) - 0 (Instantaneous) to 10 seconds.
- Separate "Test" and "Reset" push buttons.
- Connection facility for remote "Test" and "Rest" push buttons or N.O contacts.
- 2 Relay Outputs - Standard output (S.O) and positive safe output (P.S.O)
- Led indication of supply status and fault condition after unit has tripped.

### Technical Specification

#### Supply Voltage

Supply voltage - (A1 - A2) 230V AC Tolerance:  $\pm 15\%$

Frequency Range 50 - 60 Hz

Power Consumption 5 VA Maximum

Monitoring Mode Leakage current

Monitored Leakage Current Up to 30A

Trip Level Limits 80-90% of  $I_{\Delta n}$

Reset Value =85% of tripped level

#### Delays

Timer delay ( $\Delta t$ ) 0, 60, 150, 250, 500, 800 ms

1, 2.5, 5, 10 sec. (user selectable)

#### Output

Output 1 x SPNO, 1 x SPDT relays

Output rating P.S.O (1A @125VAC / 2A @30VDC.), S.O. (12A @250VAC)

#### LED Indications

Power On 3mm Green LED

Bar-Graph 3x3mm Green LED3 (25, 50 and 75% of actual trip level)

Tripped 3mm Red LED

ELMU healthy 3mm Red LED (Blinking)

#### Housing

Material ABS UL - 94 -H B

Colour Light Grey

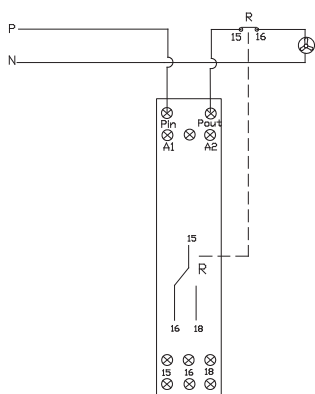
Dimension 70x91x58.4 mm

Din rail enclosure component Poly carbonate

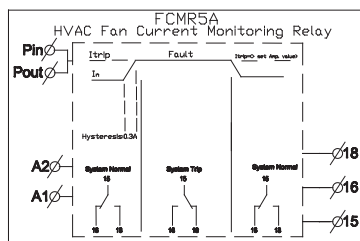
Mounting TS 35 DIN Rail



### Connection Diagram



### Functional Diagram



### Application:

'elmex' Fan Current Monitoring Relay is used for instant acknowledgment of errors within the system to improve operational efficiency isolating the erroneous equipment from the system. This way it is useful in decreasing downtime of the system.

### Salient Features:

- 17.5 mm DIN Rail Housing.
- 1x SPDT Relay Output.
- Inrush current protection.
- Green LED for supply indication
- Red LED for trip indication.
- Sensing with hysteresis.

### Technical Specification

#### Supply Voltage

Supply voltage / Control signal 24 VAC

(A1-A2)

Frequency Range 50 - 60 Hz

Power Consumption 4 VA Maximum

Current Sensing Range 0-5 Amp

Trip Level (I trip) > Set ampere value

Hysteresis 4%

Setting Accuracy +/- 7%

#### Output Specifications

Output Contact SPDT

Contact Rating 1A @125VAC / 2A @30VDC

#### LED Indications

Power On 3mm Green LED

Healthy Indication 3mm Red LED

#### Housing

Material Polyamide 6,6

Colour Grey

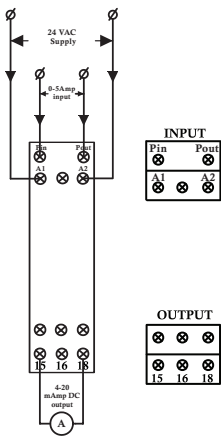
Dimension 90x56.4x17.5

Mounting TS 35 DIN Rail

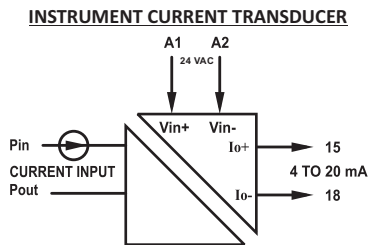




### Connection Diagram



### Functional Diagram



### Application:

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

### Salient Features:

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

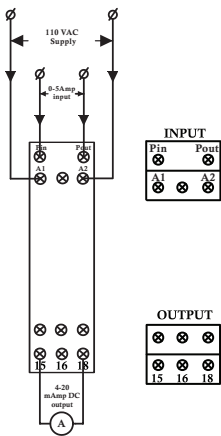
### Technical Specification

#### Supply Voltage

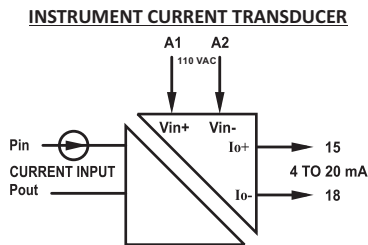
Supply voltage (A1-A2)	24 V AC
Current input / Sensing current (Pin - Pout)	0-5 Amp
Frequency Range	50 - 60 Hz
Power Consumption	4 VA Maximum
Output between terminal No. 15 and 18	4 to 20 mA
Setting accuracy	± 2.5%
Indication Power On / Healthy	3mm Green LED
Housing Material	Polyamide 6,6
Colour	Grey
Dimension	90x56.4x17.5
Mounting	TS 35 DIN Rail



### Connection Diagram



### Functional Diagram



### Application:

'elmex' make instrument current transducer sense CT secondary current and provide liner 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.

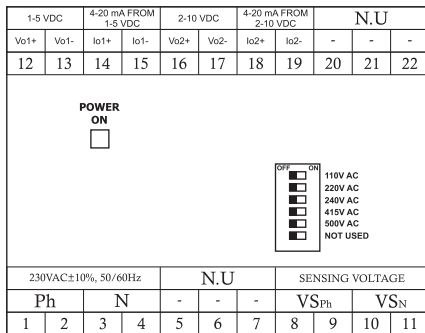
### Technical Specification

#### Supply Voltage

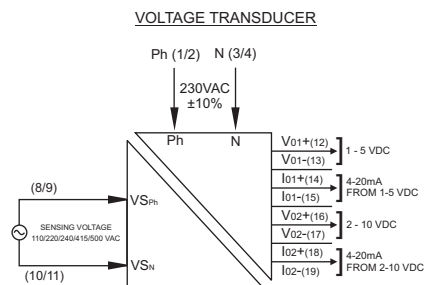
Supply voltage (A1-A2)	110V AC
Current input / Sensing current (Pin - Pout)	0-5 Amp
Frequency Range	50 - 60 Hz
Power Consumption	4 VA Maximum
Output between terminal No. 15 and 18	4 to 20 mA
Setting accuracy	± 2.5%
Indication Power On / Healthy	3mm Green LED
Housing Material	Polyamide 6,6
Colour	Grey
Dimension	90x56.4x17.5
Mounting	TS 35 DIN Rail



### Connection Diagram



### Functional Diagram



### Application:

'elmex' make instrument voltage transducer sense PT secondary voltage and provide liner 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.

### Technical Specification

#### Input Specifications

Auxiliary Supply Voltage (Ph - N)	230 VAC (±10%)
Sensing Voltage (VS <sub>Ph</sub> - VS <sub>N</sub> )	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%

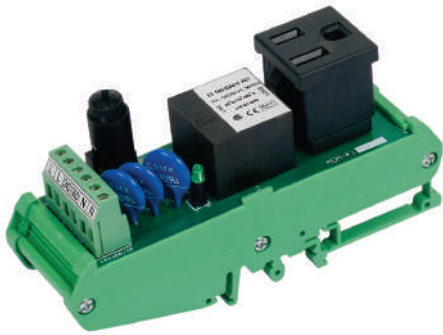
#### Indications

Power On	Red LED
----------	---------

#### Housing

Housing Material	ABS UL-94-HB
Colour	Light Grey
Dimension (L x W x H) in mm	70 x 60 x 91mm
Din Rail Enclosure Component	Polycarbonate
Mounting	TS 35 DIN Rail

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



## Salient Features:

- Universal Din rail mounting.
- Modules with US power outlet socket. Supplied with AC power through PCB terminals.
- Module with integrated 5 X 20 mm fuse (except version MOM-ECO). The fuse can easily be removed by turning the fuse holder knob, thus provides the function of a circuit breaker (breaks the "L" path).
- LED indicates (except MOM-ECO) when power is present at the outlet socket. Two input terminals are connected in parallel for each path. Makes it easy to loop to other units.
- Economy version available with only terminals and socket (MOM-ECO).
- Versions available with surge protection as well as common mode Referred to earth and differential mode (between L and N) are protected except economy version (MOM-ECO) and current protection version available (MOM-C).
- Versions available with current protection except economy version (MOM-ECO).
- The current is limited to 6.3A except economy version(MOM-ECO).
- Version available with an EMC suppression filter added on module(MOM-Fi).
- Version available with two sockets added on module (MOM-TW).

## Technical Specification

Max. AC voltage	125 VAC
Max. current for MOM-C, MOM-SC, MOM-TW, MOM-Fi	6.3A ( Fuse 6.3 A lag*)
Max. current for MOM-ECO (without fuse)	6.3A ( must be externally fused )
LED	Green: power on output socket
<b>PCB Screw clamp connectors</b>	
Type	ECD2/ ECD3
Make	"elmex"
Housing	Polyamide 6,6 nylon, Grade: UL 94 V2
Colour	Green
<b>PCB Carrier &amp; Moulded parts</b>	
Housing	Polyamide 6,6 nylon, Grade: UL 94 V2
Colour	Green

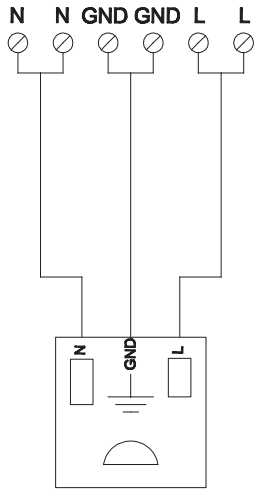
## Ordering Information And Dimensiond Of Module

	MOM - ECO	MOM - C	MOM - SC	MOM - TW	MOM - Fi
LED		✓	✓	✓	✓
ONE US POWER OUTLET SOCKET	✓	✓	✓		✓
TWO US POWER OUTLET SOCKET				✓	
SHORT CIRCUIT PROTECTION		✓	✓	✓	✓
SURGE PROECTION			✓	✓	✓
EMC SUPPRESSION FILTER					✓
DIMENSION (L x W x H) IN mm	40x90x68	40x90x78	40x90x78	40x126x78	40x126x78

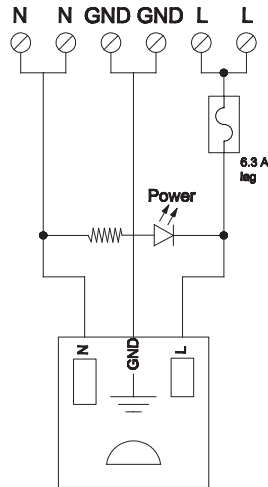
1) \*Lag Fuse - A built-in delay that allows temporary and harmless inrush currents to pass the fuse or circuit breaker without operating, but is so designed to open on sustained overloads and short circuits. 2) LED Not available in MOM-ECO Module.

## Connection Diagram

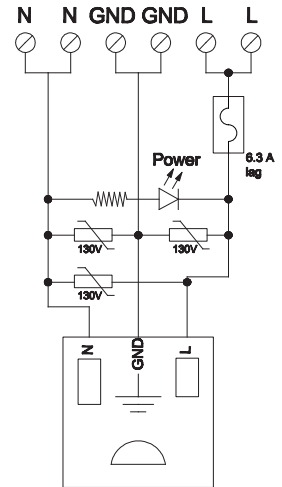
MOM-ECO



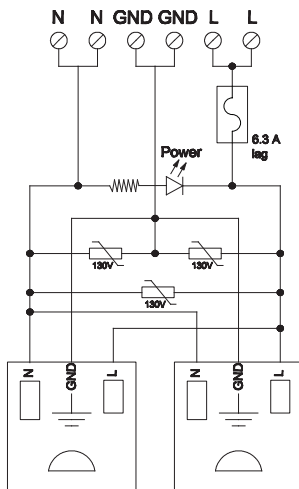
MOM-C



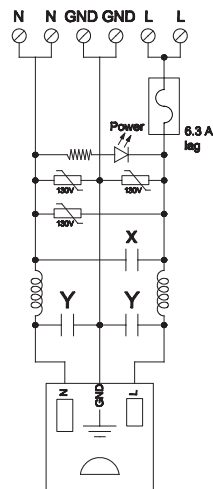
MOM-SC

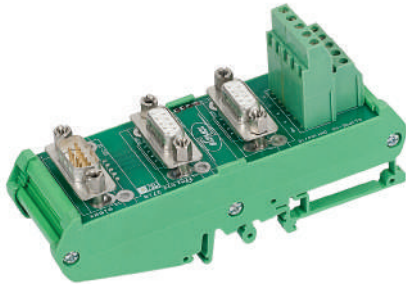


MOM-TW

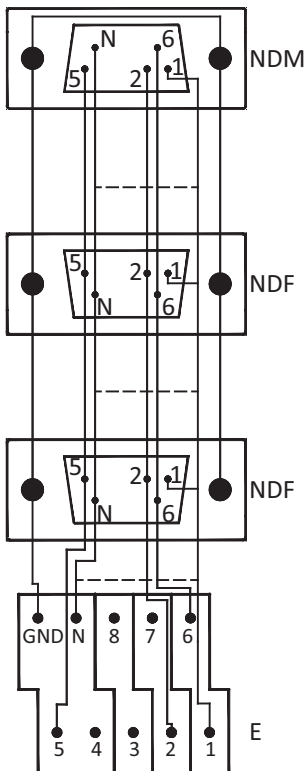


MOM-Fi





## Connection Diagram



## Salient Features:

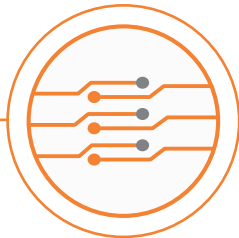
- Universal Din rail mount.
- One or several D-Sub and / or flat cable connectors are placed in parallel on a module with PCB terminals.
- The modules can be used for parallel connection of different cables.
- Facilitating high density connection to and from field to controller boards.
- Used for adding easy test points or junctions to cables through the PCB terminals.
- Connectors of different types can be mixed.
- If both flat cable and D-Sub are mixed, the last pin of the flat cable is connected to the shield and the module is labeled according to the D-Sub connectors. The pin numbers of the flat cable is going zig-zag and in that case do not correspond to the terminal labels.

## Technical Specification

Max. voltage	125 V
Max. current for flat cable connector	1A
Max. current for D-Sub connector	3A
Contact finish	Gold-plated
<b>PCB Screw Clamp Connectors</b>	
Type	ECDD2/ ECDD3
Make	“elmex”
Housing	Polyamide 6,6 nylon Grade: UL 94 V2
Colour	Green
<b>PCB Carrier &amp; Moulded Parts</b>	
Housing	Polyamide 6,6 nylon Grade: UL 94 V2
Colour	Green
<b>Ordering Information</b>	
	HPM - 9 _____*
	HPM - 15 _____*
	HPM - 25 _____*
	HPM - 37 _____*
	_____ :
	I = Flat cable,
	F = Female D-Sub,
	M = Male D-Sub,
	E = PCB mount terminals.

DIMENSIONS (LxWxH) In mm	HPM - 9	HPM - 15	HPM - 25	HPM - 37
With E	40x126x68	50x126x68	75x126x68	105x126x68
Without E	40x126x64	50x126x64	75x126x64	105x126x64

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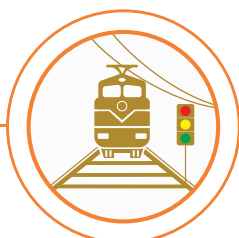
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