

# **CZH-LABS**

## **Electronics-Salon**

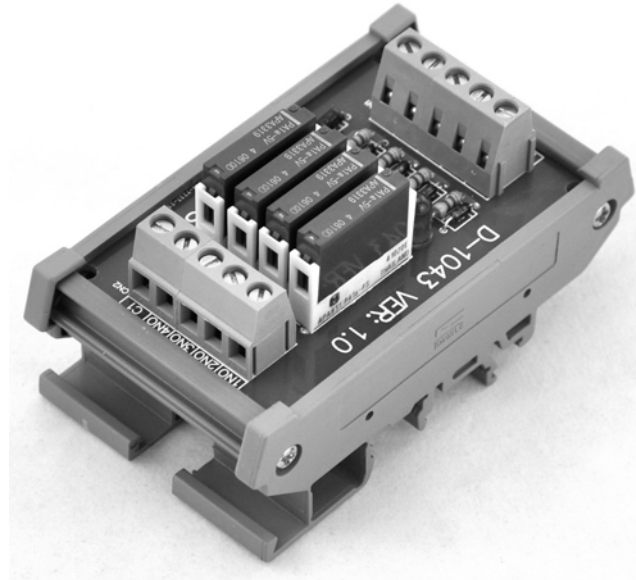
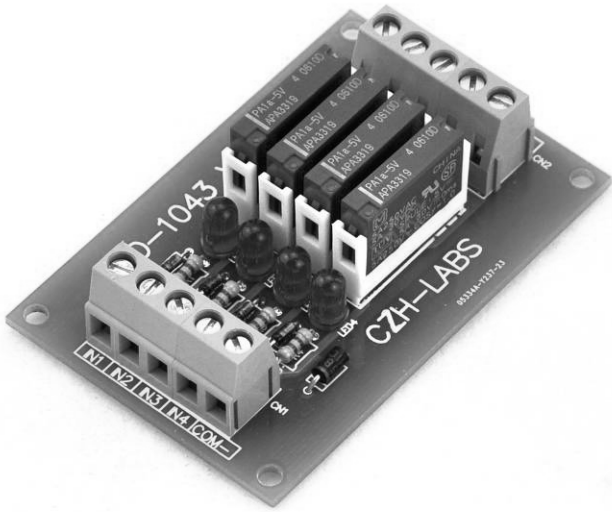
**Model: D-1043 ~ 1052 series**  
**Passive 5A SPST-NO Slim Power Relay Modules**

## Passive SPST-NO Slim Relay Module Version List

Relay Channel	Control Mode	Operating Voltage	Panel Mount	DIN Rail Mount
4	Source/PNP, Common -	DC5V	MD-D1043/5V	MD-D1043T/5V
		DC12V	MD-D1043/12V	MD-D1043T/12V
		DC24V	MD-D1043/24V	MD-D1043T/24V
	Sink/NPN, Common +	DC5V	MD-D1048/5V	MD-D1048T/5V
		DC12V	MD-D1048/12V	MD-D1048T/12V
		DC24V	MD-D1048/24V	MD-D1048T/24V
8	Source/PNP, Common -	DC5V	MD-D1044/5V	MD-D1044T/5V
		DC12V	MD-D1044/12V	MD-D1044T/12V
		DC24V	MD-D1044/24V	MD-D1044T/24V
	Sink/NPN, Common +	DC5V	MD-D1049/5V	MD-D1049T/5V
		DC12V	MD-D1049/12V	MD-D1049T/12V
		DC24V	MD-D1049/24V	MD-D1049T/24V
16	Source/PNP, Common -	DC5V	MD-D1045/5V	MD-D1045T/5V
		DC12V	MD-D1045/12V	MD-D1045T/12V
		DC24V	MD-D1045/24V	MD-D1045T/24V
	Sink/NPN, Common +	DC5V	MD-D1050/5V	MD-D1050T/5V
		DC12V	MD-D1050/12V	MD-D1050T/12V
		DC24V	MD-D1050/24V	MD-D1050T/24V
24	Source/PNP, Common -	DC5V	MD-D1046/5V	MD-D1046T/5V
		DC12V	MD-D1046/12V	MD-D1046T/12V
		DC24V	MD-D1046/24V	MD-D1046T/24V
	Sink/NPN, Common +	DC5V	MD-D1051/5V	MD-D1051T/5V
		DC12V	MD-D1051/12V	MD-D1051T/12V
		DC24V	MD-D1051/24V	MD-D1051T/24V
32	Source/PNP, Common -	DC5V	MD-D1047/5V	MD-D1047T/5V
		DC12V	MD-D1047/12V	MD-D1047T/12V
		DC24V	MD-D1047/24V	MD-D1047T/24V
	Sink/NPN, Common +	DC5V	MD-D1052/5V	MD-D1052T/5V
		DC12V	MD-D1052/12V	MD-D1052T/12V
		DC24V	MD-D1052/24V	MD-D1052T/24V

# MD-D1043 Series

- Control mode: Common negative, for Source/PNP output controllers.
- Relay/switch channel number: 4
- Relay switch type: SPST-NO (when the relay no action switch off).
- Switching current upto 5A at 250VAC (or 30VDC)
- Operating voltage: DC 5V / 12V / 24V version to choose.
- Panel mount or DIN rail mount version to choose.
- DIN rail mount version can support width 15mm/32mm/35mm rail.
- Original Panasonic PA1a series relay and relay terminal socket.
- Whit removal key, easy to replace pluggable relays.
- Relay Coil Protection by means of a Freewheeling diode
- LED indication to denote relay actuation.



- Electrical parameters:

Input:

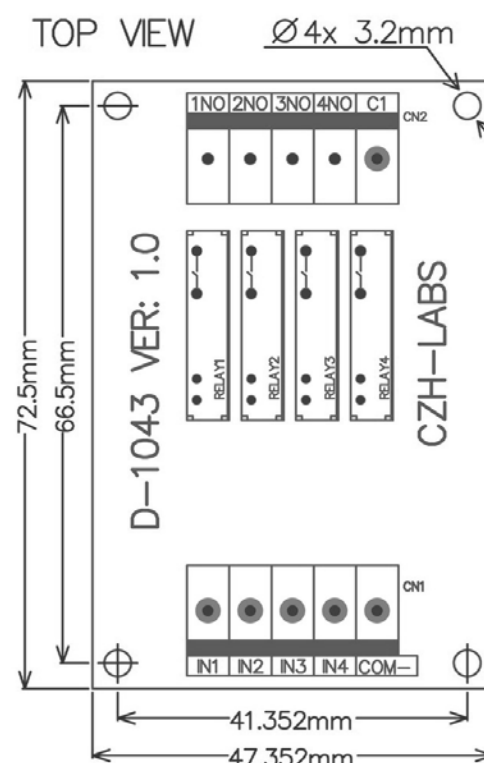
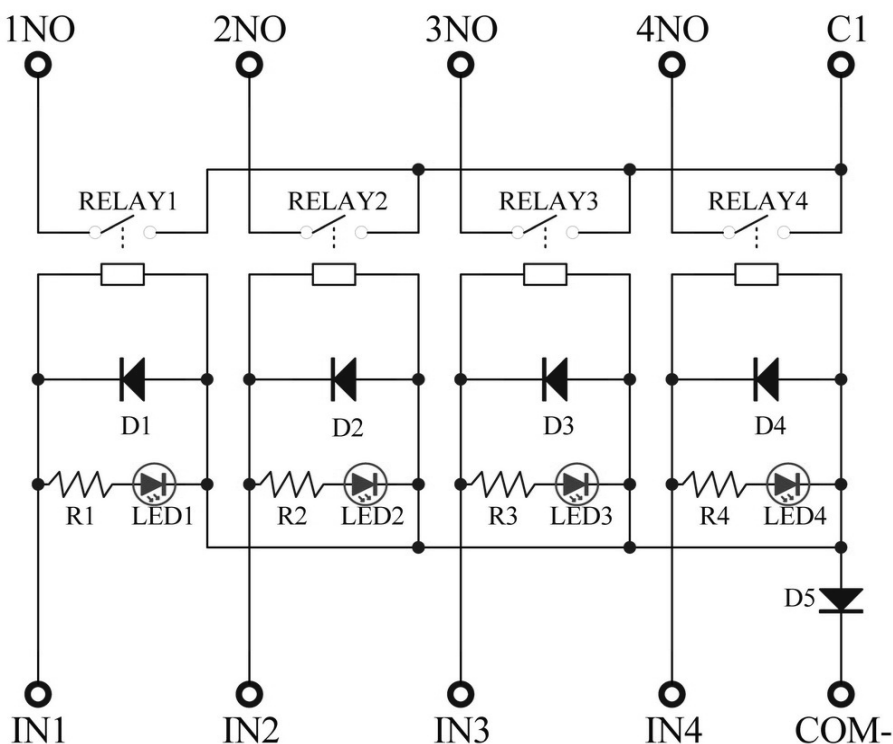
Relay Version	Action Voltage	Action Current(per channel)	Release Voltage
PA1a-5V	DC 4.5~6V	25mA	DC 0~0.7V
PA1a-12V	DC 9.7~15V	12mA	DC 0~1.0V
PA1a-24V	DC 18.7~29V	12mA	DC 0~1.5V

Note: Action -- relay switch connected, Release – relay switch disconnected.  
Com- terminal position connect to common negative.

Output:

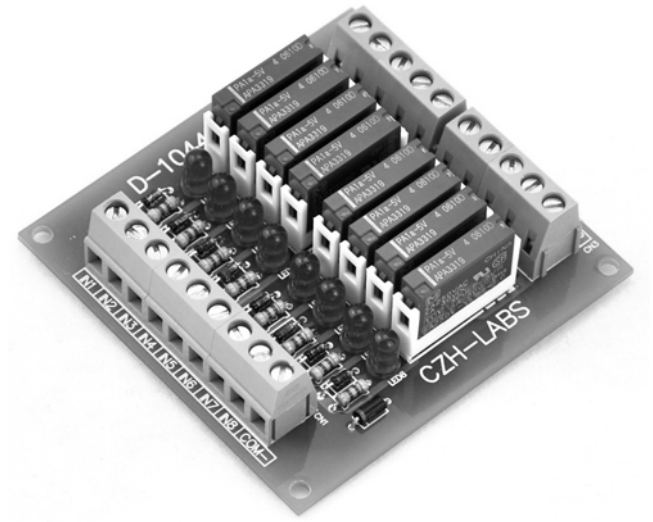
1NO ~ 4NO terminal position, each "NO" position maximum current: 5A, 250VAC/30VDC.  
C1 terminal position maximum current: 16A.

- Size:  
Panel mount --- W47.35mm x L72.5mm x H20mm  
DIN rail mount --- W50mm x L87mm x H44mm
- Terminal Block:  
Wire range: 26 ~ 12AWG / 2.5mm<sup>2</sup>, Strip length: 7mm, Screw: Metric slot M2.5
- Schematic and PCB Size:

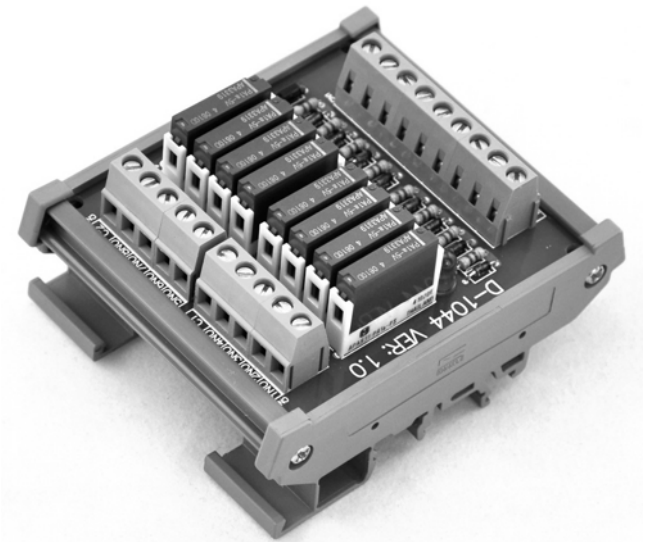


# MD-D1044 Series

- Control mode: Common negative, for Source/PNP output controllers.
- Relay/switch channel number: 8
- Relay switch type: SPST-NO (when the relay no action switch off).
- Switching current upto 5A at 250VAC (or 30VDC)
- Operating voltage: DC 5V / 12V / 24V version to choose.
- Panel mount or DIN rail mount version to choose.
- DIN rail mount version can support width 15mm/32mm/35mm rail.
- Original Panasonic PA1a series relay and relay terminal socket.
- Whit removal key, easy to replace pluggable relays.
- Relay Coil Protection by means of a Freewheeling diode
- LED indication to denote relay actuation.



- Size:  
Panel mount --- W70mm x L72.5mm x H20mm  
DIN rail mount --- W72.5mm x L87mm x H44mm



- Terminal Block:  
Wire range: 26 ~ 12AWG / 2.5mm<sup>2</sup>  
Strip length: 7mm,  
Screw: Metric slot M2.5

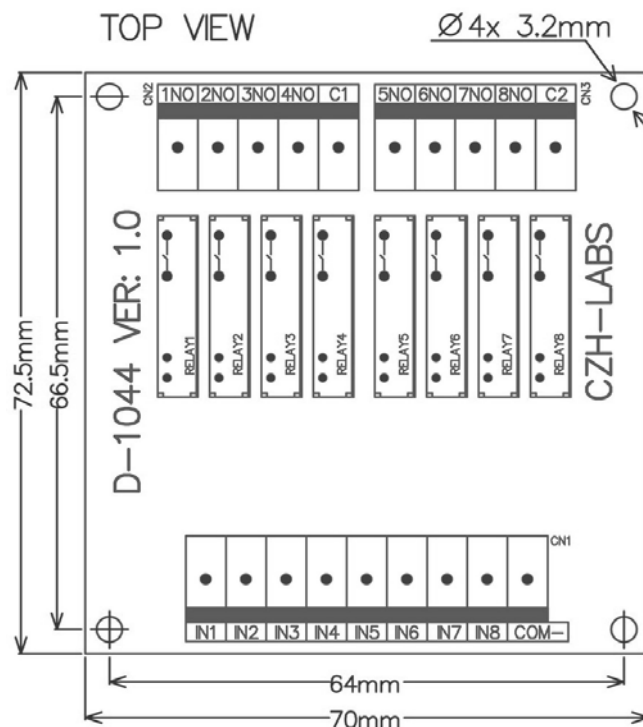
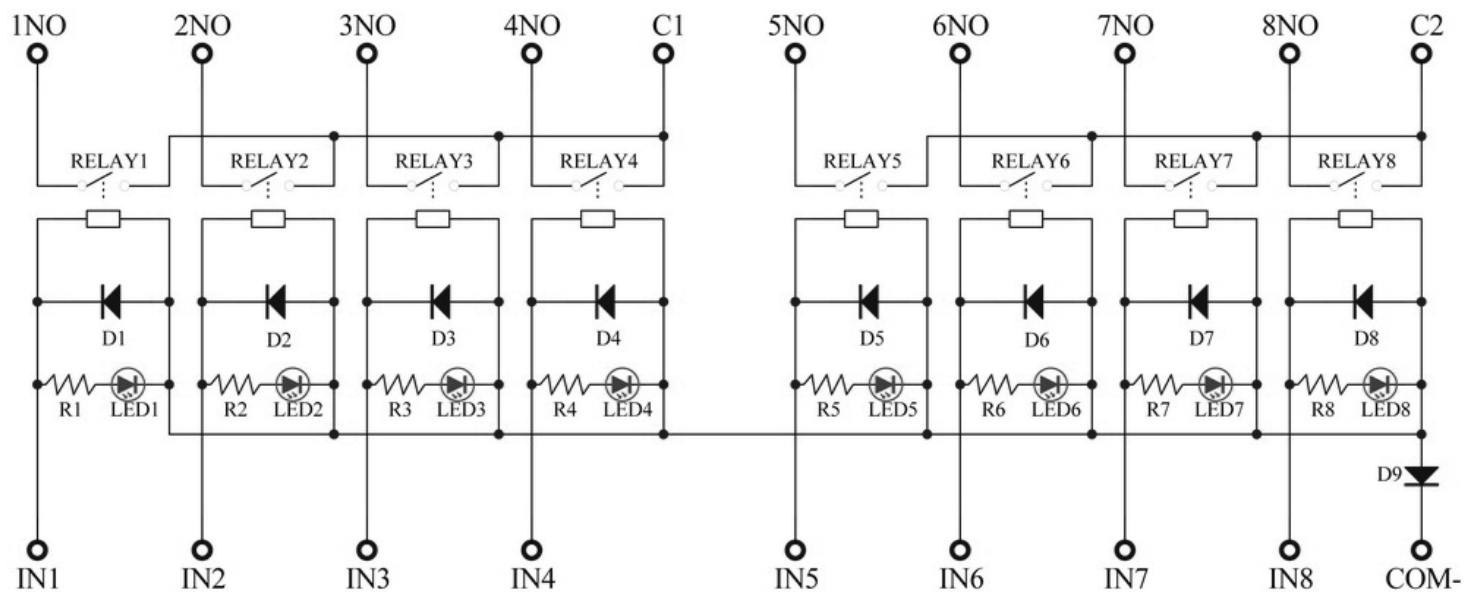
- Electrical parameters:  
Input:

Relay Version	Action Voltage	Action Current(per channel)	Release Voltage
PA1a-5V	DC 4.5~6V	25mA	DC 0~0.7V
PA1a-12V	DC 9.7~15V	12mA	DC 0~1.0V
PA1a-24V	DC 18.7~29V	12mA	DC 0~1.5V

Note: Action -- relay switch connected, Release – relay switch disconnected.  
Com- terminal position connect to common negative.

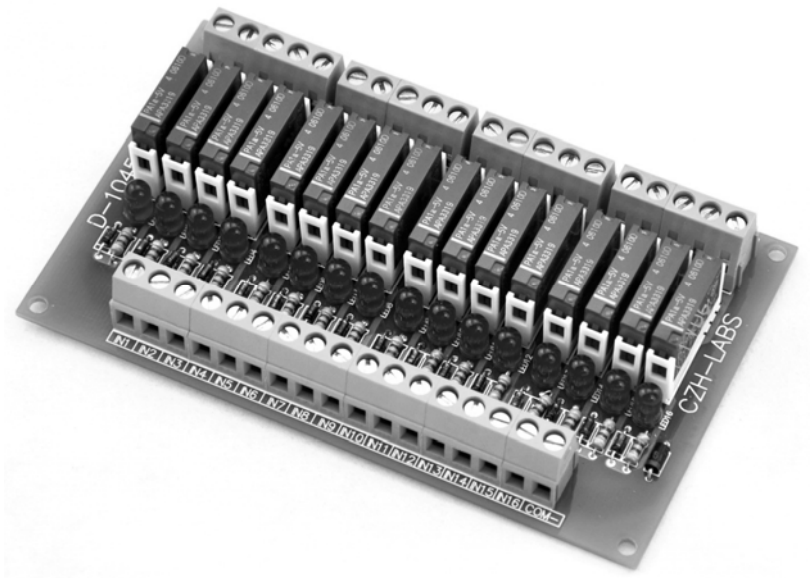
Output:  
1NO ~ 8NO terminal position, each "NO" position maximum current: 5A, 250VAC/30VDC.  
C1 ~ C2 terminal position, each "C" position maximum current: 16A.

- Schematic and PCB Size:

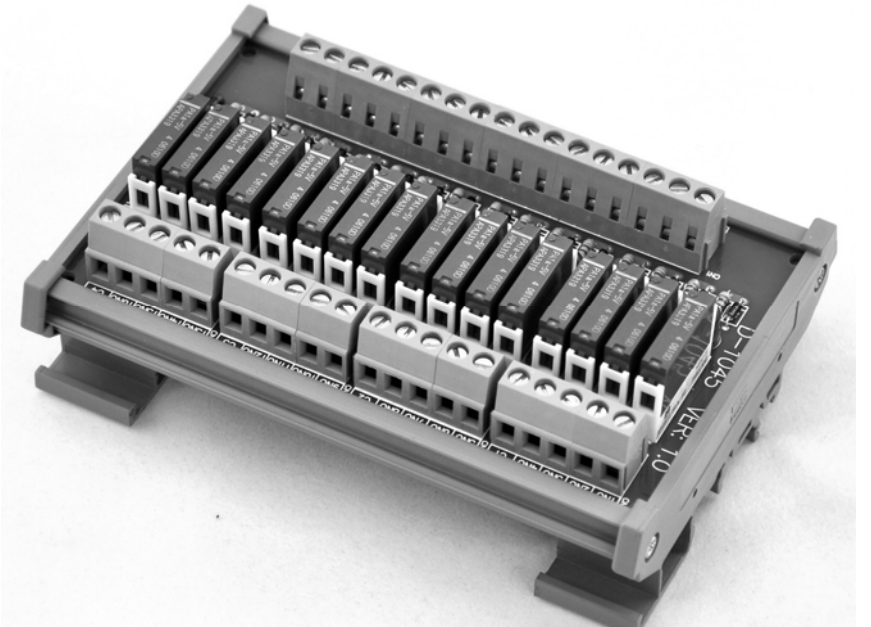


# MD-D1045 Series

- Control mode: Common negative, for Source/PNP output controllers.
- Relay/switch channel number: 16
- Relay switch type: SPST-NO (when the relay no action switch off).
- Switching current upto 5A at 250VAC (or 30VDC)
- Operating voltage: DC 5V / 12V / 24V version to choose.
- Panel mount or DIN rail mount version to choose.
- DIN rail mount version can support width 15mm/32mm/35mm rail.
- Original Panasonic PA1a series relay and relay terminal socket.
- Whit removal key, easy to replace pluggable relays.
- Relay Coil Protection by means of a Freewheeling diode
- LED indication to denote relay actuation.



- Size:  
Panel mount --- W120mm x L72.5mm x H20mm  
DIN rail mount --- W122.5mm x L87mm x H44mm



- Terminal Block:  
Wire range: 26 ~ 12AWG / 2.5mm<sup>2</sup>  
Strip length: 7mm,  
Screw: Metric slot M2.5

- Electrical parameters:  
Input:

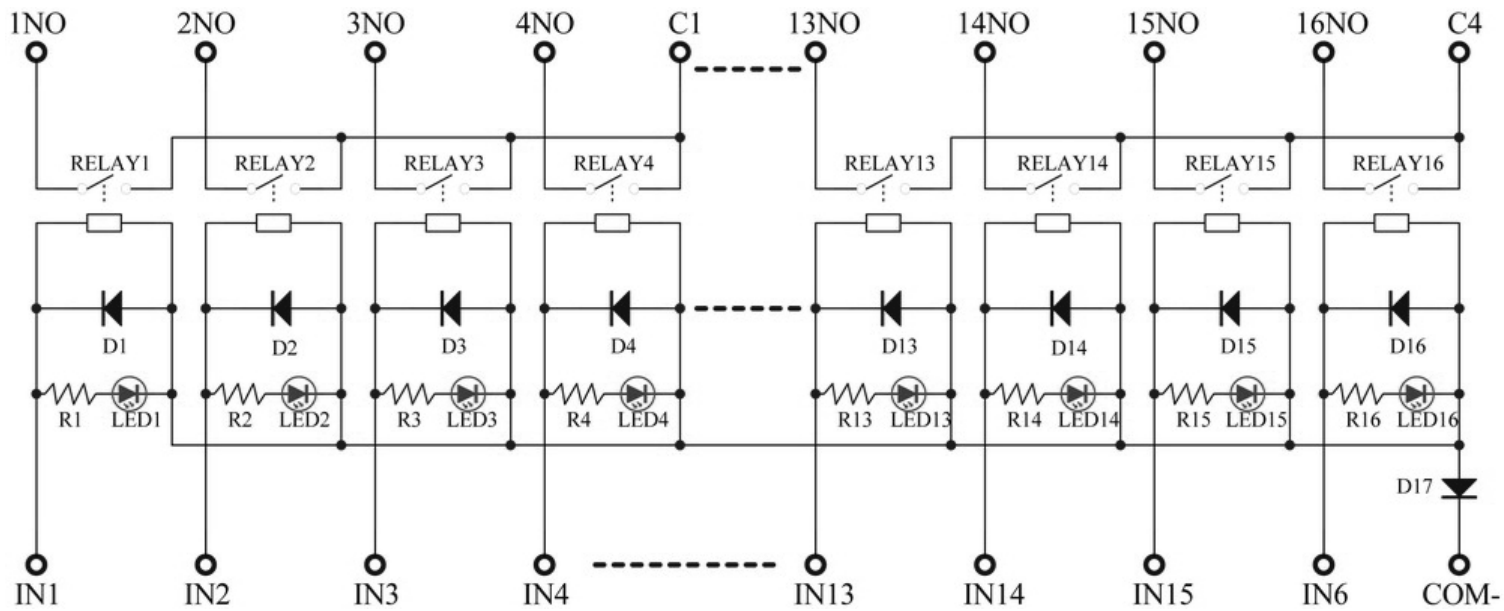
Relay Version	Action Voltage	Action Current(per channel)	Release Voltage
PA1a-5V	DC 4.5~6V	25mA	DC 0~0.7V
PA1a-12V	DC 9.7~15V	12mA	DC 0~1.0V
PA1a-24V	DC 18.7~29V	12mA	DC 0~1.5V

Note: Action -- relay switch connected, Release – relay switch disconnected.  
Com- terminal position connect to common negative.

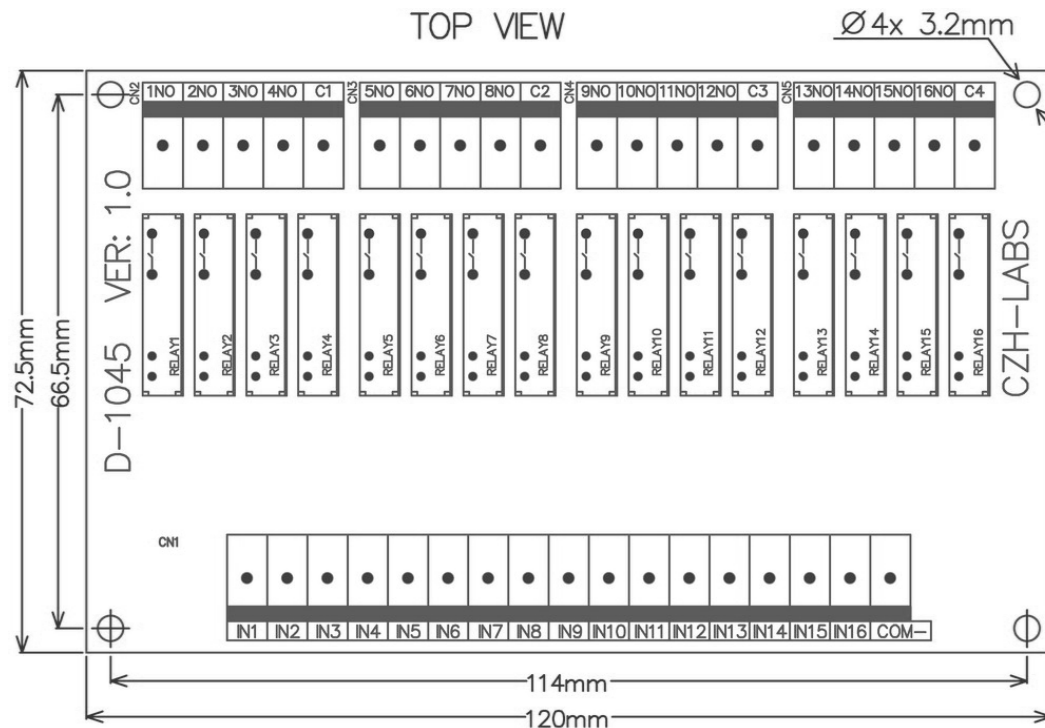
### Output:

1NO ~ 16NO terminal position, each "NO" position maximum current: 5A, 250VAC/30VDC.  
C1 ~ C4 terminal position, each "C" position maximum current: 16A.

- Schematic and PCB Size:

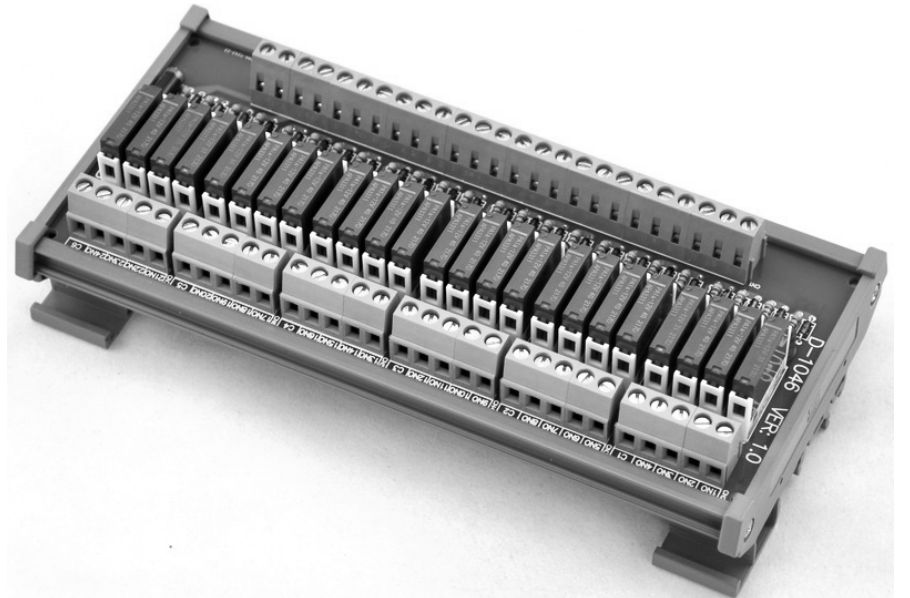
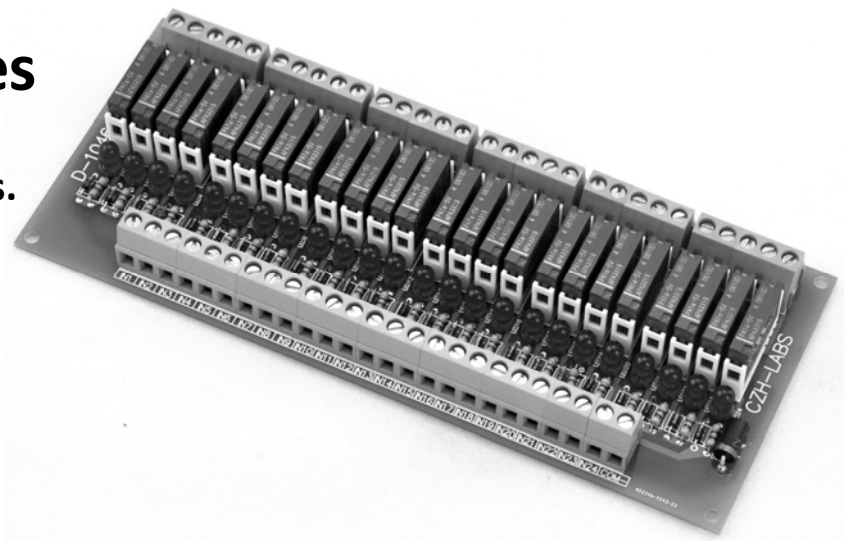


TOP VIEW



# MD-D1046 Series

- Control mode: Common negative, for Source/PNP output controllers.
- Relay/switch channel number: 24
- Relay switch type: SPST-NO (when the relay no action switch off).
- Switching current upto 5A at 250VAC (or 30VDC)
- Operating voltage: DC 5V / 12V / 24V version to choose.
- Panel mount or DIN rail mount version to choose.
- DIN rail mount version can support width 15mm/32mm/35mm rail.
- Original Panasonic PA1a series relay and relay terminal socket.
- Whit removal key, easy to replace pluggable relays.
- Relay Coil Protection by means of a Freewheeling diode
- LED indication to denote relay actuation.



- Size:  
Panel mount --- W175mm x L72.5mm x H20mm  
DIN rail mount --- W177.5mm x L87mm x H44mm

- Terminal Block:  
Wire range: 26 ~ 12AWG / 2.5mm<sup>2</sup>  
Strip length: 7mm,  
Screw: Metric slot M2.5

- Electrical parameters:

Input:

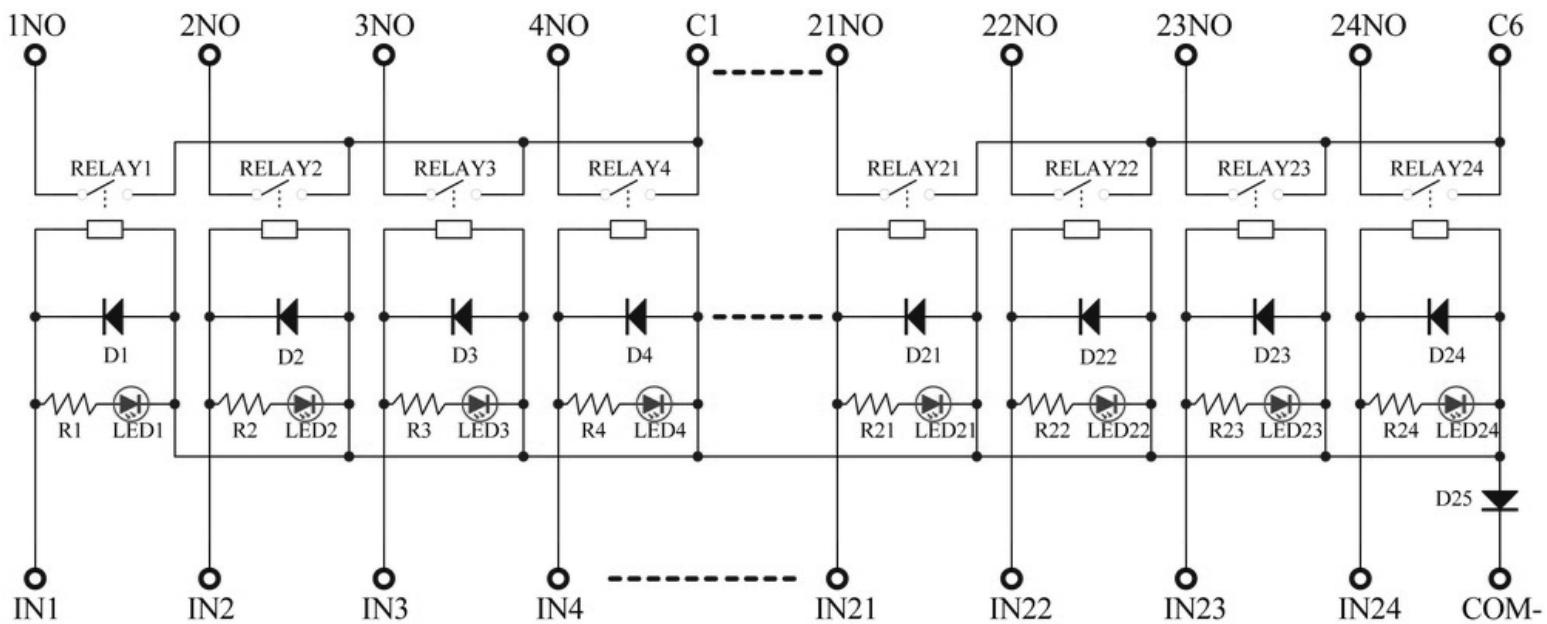
Relay Version	Action Voltage	Action Current(per channel)	Release Voltage
PA1a-5V	DC 4.5~6V	25mA	DC 0~0.7V
PA1a-12V	DC 9.7~15V	12mA	DC 0~1.0V
PA1a-24V	DC 18.7~29V	12mA	DC 0~1.5V

Note: Action -- relay switch connected, Release – relay switch disconnected.  
Com- terminal position connect to common negative.

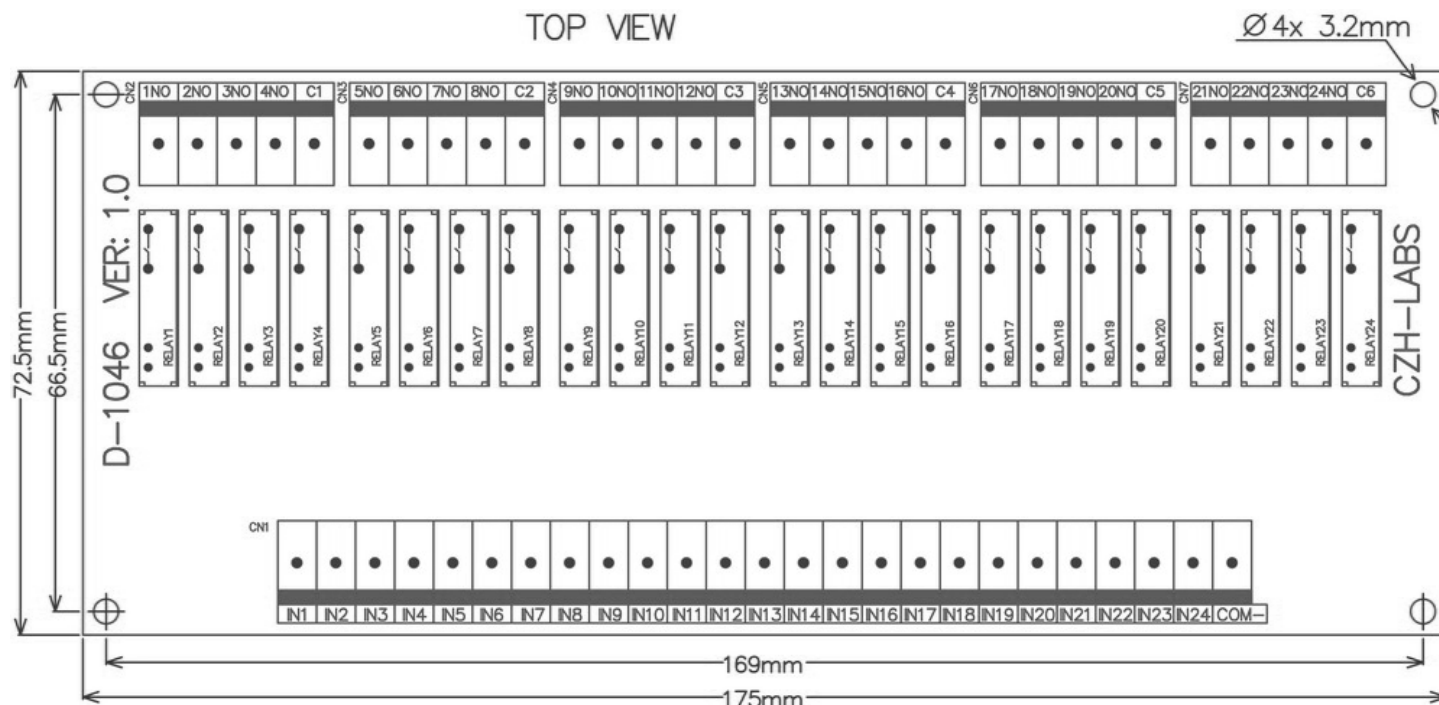
Output:

1NO ~ 24NO terminal position, each "NO" position maximum current: 5A, 250VAC/30VDC.  
C1 ~ C6 terminal position, each "C" position maximum current: 16A.

- Schematic and PCB Size:

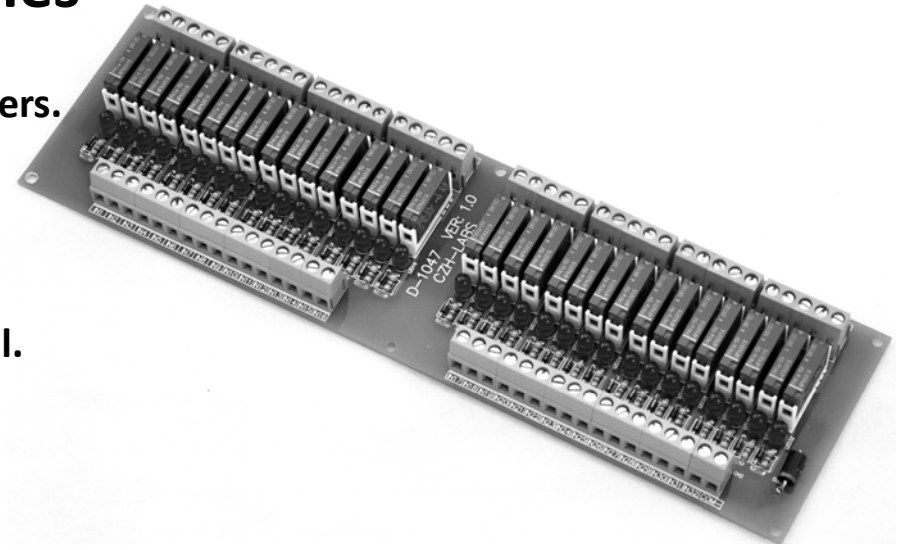


TOP VIEW

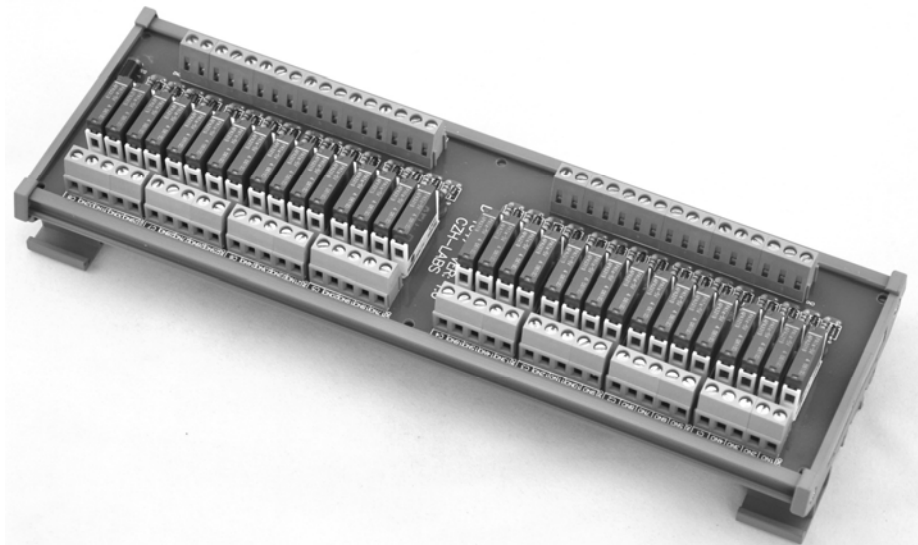


# MD-D1047 Series

- Control mode: Common negative, for Source/PNP output controllers.
- Relay/switch channel number: 32
- Relay switch type: SPST-NO (when the relay no action switch off).
- Switching current upto 5A at 250VAC (or 30VDC)
- Operating voltage: DC 5V / 12V / 24V version to choose.
- Panel mount or DIN rail mount version to choose.
- DIN rail mount version can support width 15mm/32mm/35mm rail.
- Original Panasonic PA1a series relay and relay terminal socket.
- Whit removal key, easy to replace pluggable relays.
- Relay Coil Protection by means of a Freewheeling diode
- LED indication to denote relay actuation.



- Size:  
Panel mount --- W250mm x L72.5mm x H20mm  
DIN rail mount --- W252.5mm x L87mm x H44mm



- Terminal Block:  
Wire range: 26 ~ 12AWG / 2.5mm<sup>2</sup>  
Strip length: 7mm,  
Screw: Metric slot M2.5

- Electrical parameters:

Input:

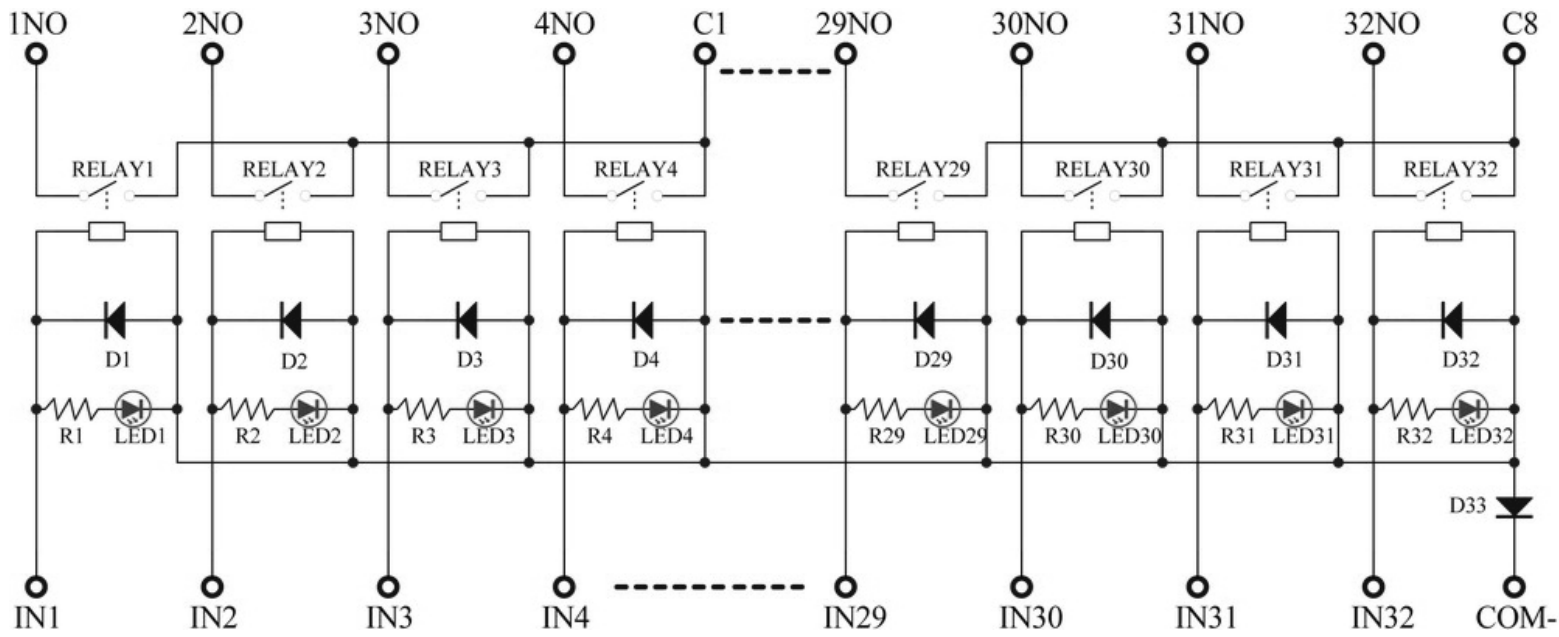
Relay Version	Action Voltage	Action Current(per channel)	Release Voltage
PA1a-5V	DC 4.5~6V	25mA	DC 0~0.7V
PA1a-12V	DC 9.7~15V	12mA	DC 0~1.0V
PA1a-24V	DC 18.7~29V	12mA	DC 0~1.5V

Note: Action -- relay switch connected, Release – relay switch disconnected.  
Com- terminal position connect to common negative.

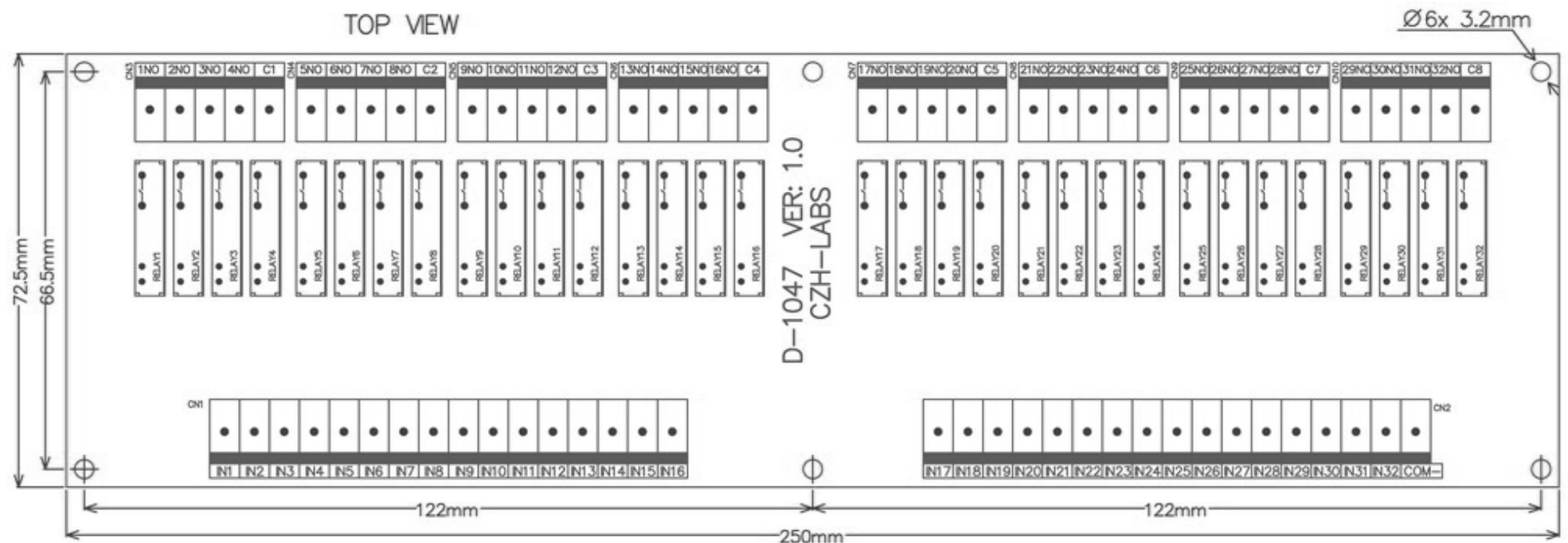
Output:

1NO ~ 32NO terminal position, each "NO" position maximum current: 5A, 250VAC/30VDC.  
C1 ~ C8 terminal position, each "C" position maximum current: 16A.

- Schematic and PCB Size:

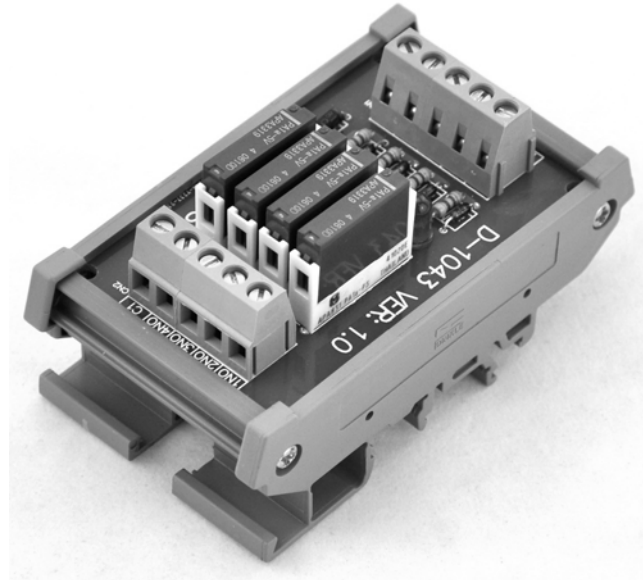
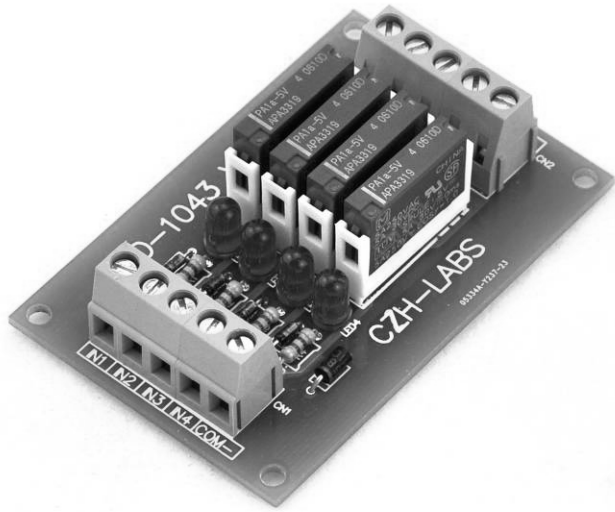


TOP VIEW



# MD-D1048 Series

- Control mode: Common positive, for Sink/NPN output controllers.
- Relay/switch channel number: 4
- Relay switch type: SPST-NO (when the relay no action switch off).
- Switching current upto 5A at 250VAC (or 30VDC)
- Operating voltage: DC 5V / 12V / 24V version to choose.
- Panel mount or DIN rail mount version to choose.
- DIN rail mount version can support width 15mm/32mm/35mm rail.
- Original Panasonic PA1a series relay and relay terminal socket.
- Whit removal key, easy to replace pluggable relays.
- Relay Coil Protection by means of a Freewheeling diode
- LED indication to denote relay actuation.



- Electrical parameters:

### Input:

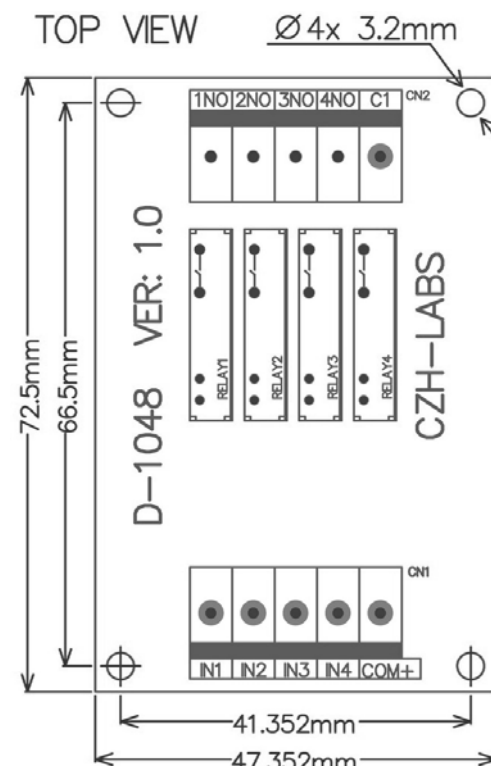
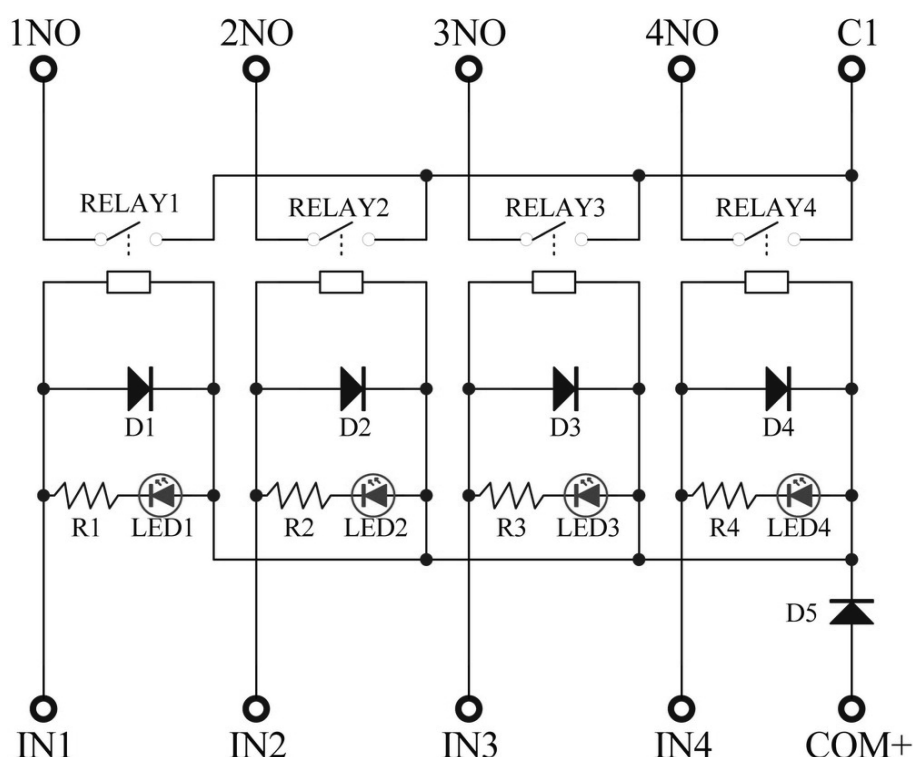
Relay Version	Action Voltage	Action Current(per channel)	Release Voltage
PA1a-5V	DC 0~0.5V	-25mA	DC 4.3~5V
PA1a-12V	DC 0~2.0V	-12mA	DC 11~12V
PA1a-24V	DC 0~3.0V	-12mA	DC 22.5~24V

Note: Action -- relay switch connected, Release – relay switch disconnected.  
Com+ terminal position connect to common positive, 5V, 12V or 24V.

### Output:

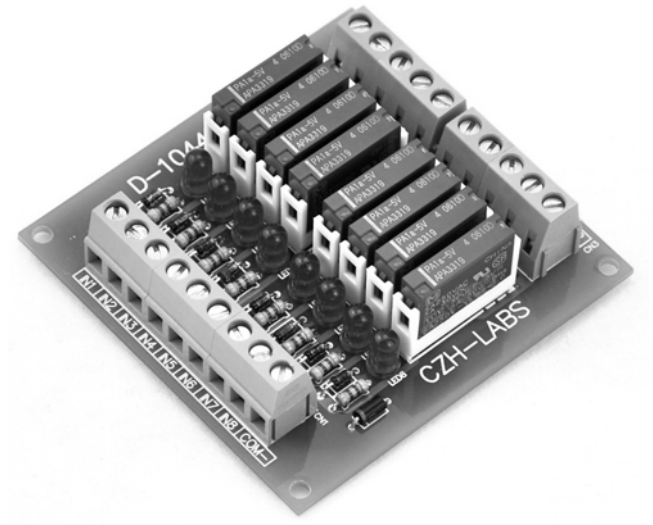
1NO ~ 4NO terminal position, each "NO" position maximum current: 5A, 250VAC/30VDC.  
C1 terminal position maximum current: 16A.

- Size:  
Panel mount --- W47.35mm x L72.5mm x H20mm  
DIN rail mount --- W50mm x L87mm x H44mm
- Terminal Block:  
Wire range: 26 ~ 12AWG / 2.5mm<sup>2</sup>, Strip length: 7mm, Screw: Metric slot M2.5
- Schematic and PCB Size:

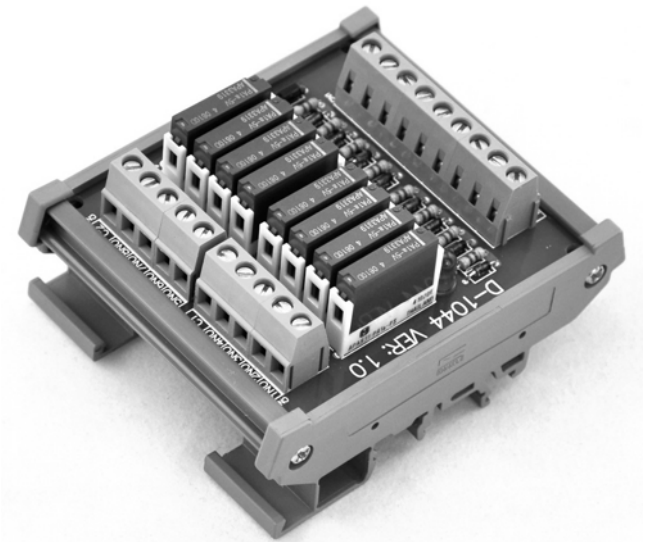


# MD-D1049 Series

- Control mode: Common positive, for Sink/NPN output controllers.
- Relay/switch channel number: 8
- Relay switch type: SPST-NO (when the relay no action switch off).
- Switching current upto 5A at 250VAC (or 30VDC)
- Operating voltage: DC 5V / 12V / 24V version to choose.
- Panel mount or DIN rail mount version to choose.
- DIN rail mount version can support width 15mm/32mm/35mm rail.
- Original Panasonic PA1a series relay and relay terminal socket.
- Whit removal key, easy to replace pluggable relays.
- Relay Coil Protection by means of a Freewheeling diode
- LED indication to denote relay actuation.



- Size:  
Panel mount --- W70mm x L72.5mm x H20mm  
DIN rail mount --- W72.5mm x L87mm x H44mm



- Terminal Block:  
Wire range: 26 ~ 12AWG / 2.5mm<sup>2</sup>  
Strip length: 7mm,  
Screw: Metric slot M2.5

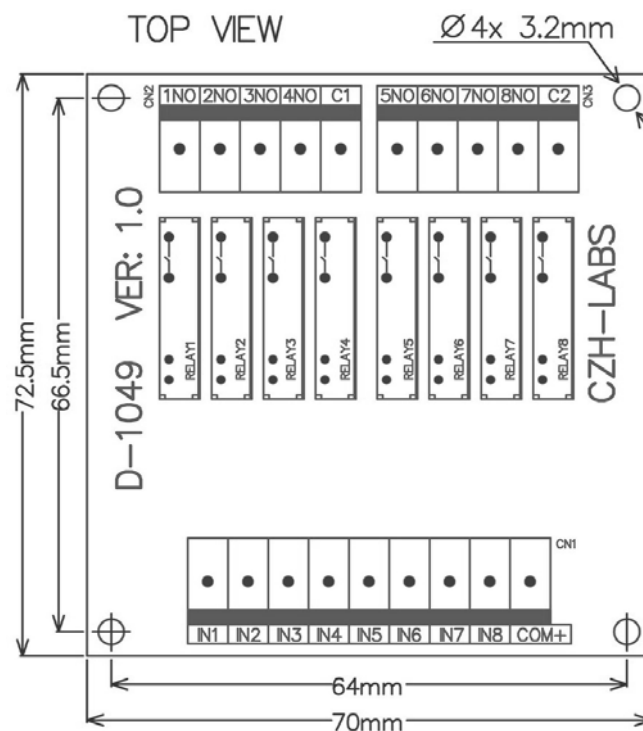
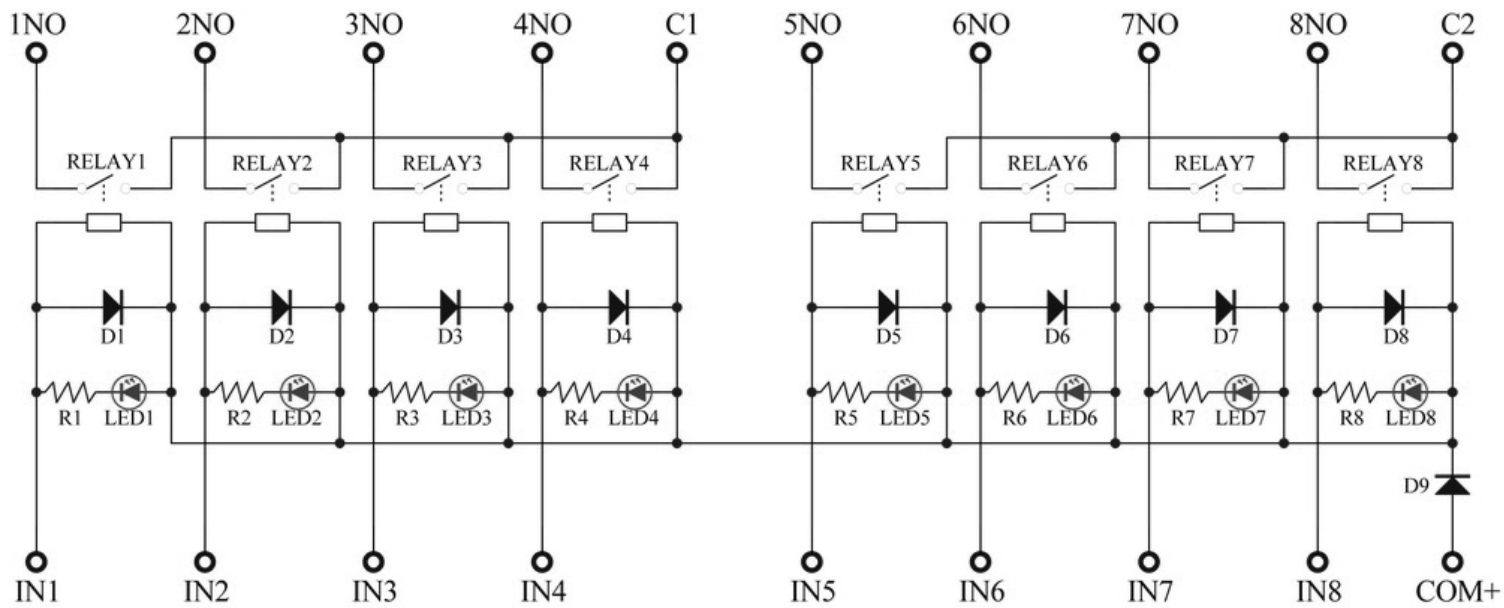
- Electrical parameters:  
Input:

Relay Version	Action Voltage	Action Current(per channel)	Release Voltage
PA1a-5V	DC 0~0.5V	-25mA	DC 4.3~5V
PA1a-12V	DC 0~2.0V	-12mA	DC 11~12V
PA1a-24V	DC 0~3.0V	-12mA	DC 22.5~24V

Note: Action -- relay switch connected, Release – relay switch disconnected.  
Com+ terminal position connect to common positive, 5V, 12V or 24V.

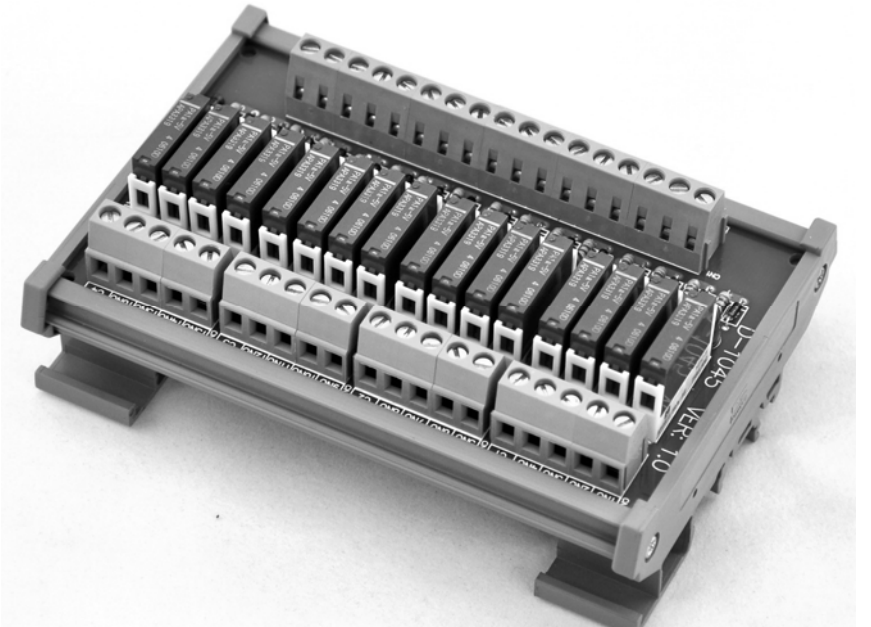
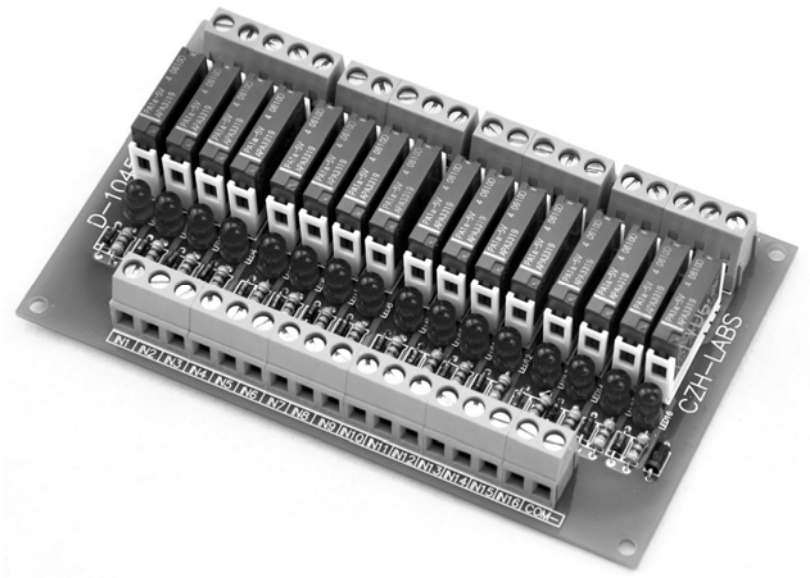
Output:  
1NO ~ 8NO terminal position, each "NO" position maximum current: 5A, 250VAC/30VDC.  
C1 ~ C2 terminal position, each "C" position maximum current: 16A.

- Schematic and PCB Size:



# MD-D1050 Series

- Control mode: Common positive, for Sink/NPN output controllers.
- Relay/switch channel number: 16
- Relay switch type: SPST-NO (when the relay no action switch off).
- Switching current upto 5A at 250VAC (or 30VDC)
- Operating voltage: DC 5V / 12V / 24V version to choose.
- Panel mount or DIN rail mount version to choose.
- DIN rail mount version can support width 15mm/32mm/35mm rail.
- Original Panasonic PA1a series relay and relay terminal socket.
- Whit removal key, easy to replace pluggable relays.
- Relay Coil Protection by means of a Freewheeling diode
- LED indication to denote relay actuation.



- Size:  
Panel mount --- W120mm x L72.5mm x H20mm  
DIN rail mount --- W122.5mm x L87mm x H44mm

- Terminal Block:  
Wire range: 26 ~ 12AWG / 2.5mm<sup>2</sup>  
Strip length: 7mm,  
Screw: Metric slot M2.5

- Electrical parameters:

Input:

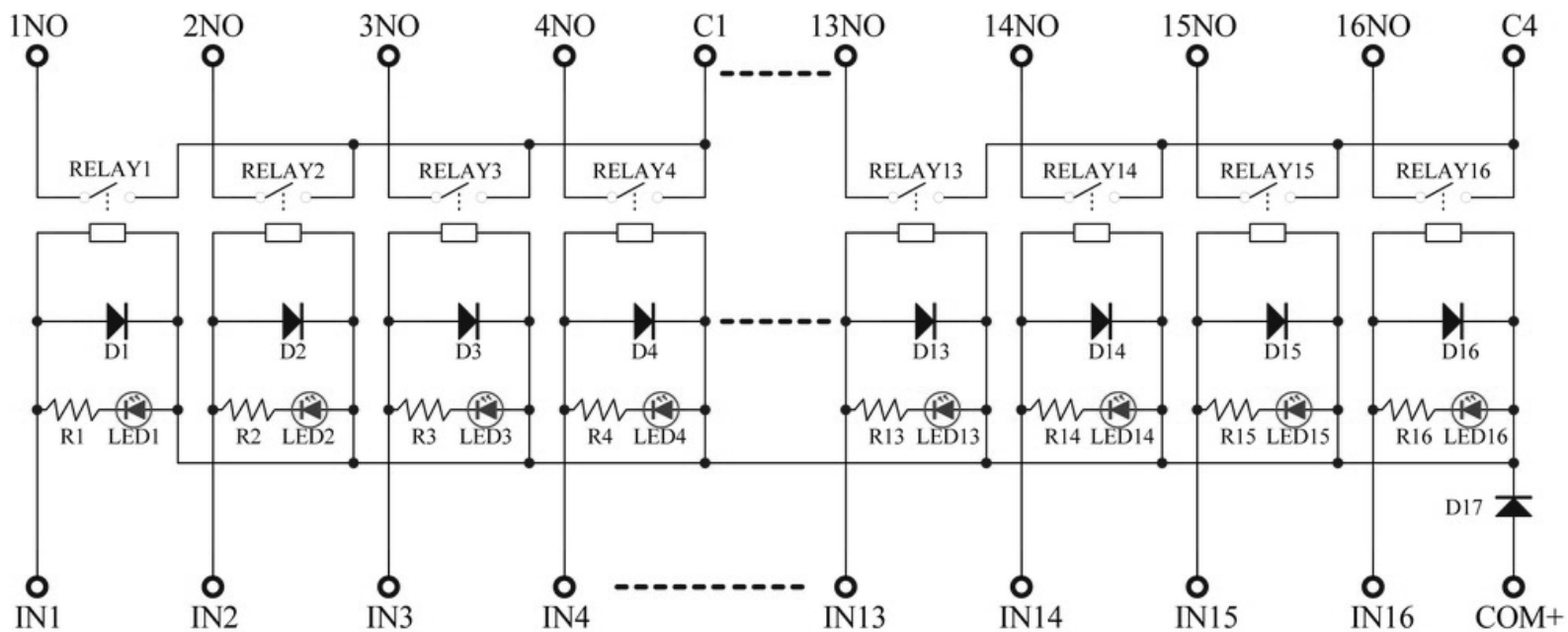
Relay Version	Action Voltage	Action Current(per channel)	Release Voltage
PA1a-5V	DC 0~0.5V	-25mA	DC 4.3~5V
PA1a-12V	DC 0~2.0V	-12mA	DC 11~12V
PA1a-24V	DC 0~3.0V	-12mA	DC 22.5~24V

Note: Action -- relay switch connected, Release – relay switch disconnected.  
Com+ terminal position connect to common positive, 5V, 12V or 24V.

Output:

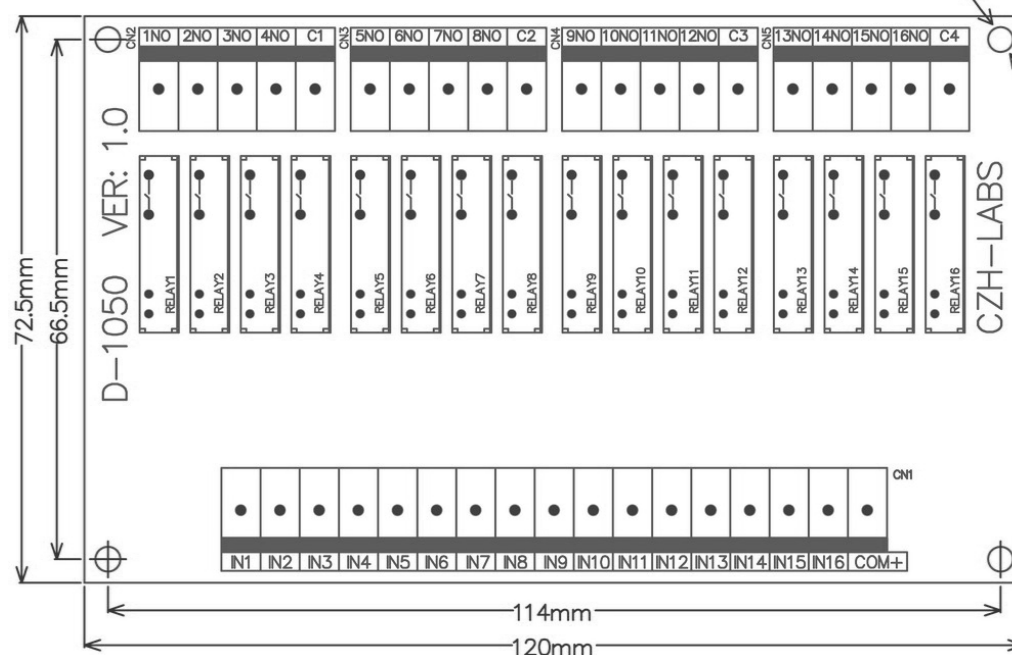
1NO ~ 16NO terminal position, each "NO" position maximum current: 5A, 250VAC/30VDC.  
C1 ~ C4 terminal position, each "C" position maximum current: 16A.

- Schematic and PCB Size:



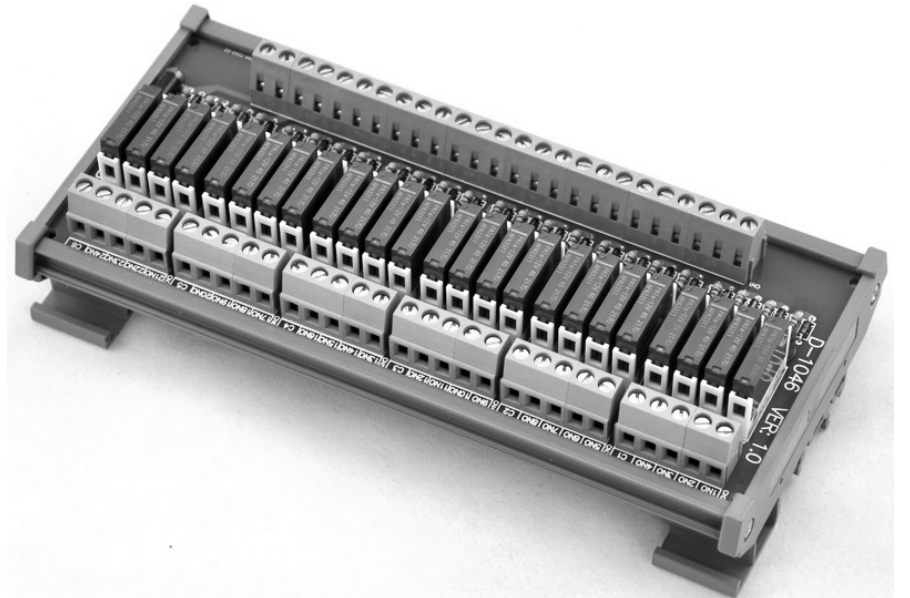
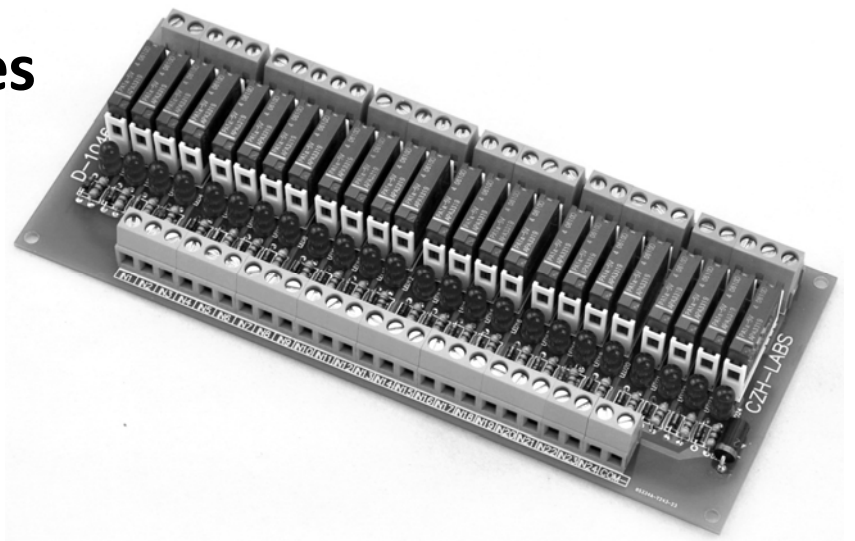
TOP VIEW

Ø4x 3.2mm



# MD-D1051 Series

- Control mode: Common positive, for Sink/NPN output controllers.
- Relay/switch channel number: 24
- Relay switch type: SPST-NO (when the relay no action switch off).
- Switching current upto 5A at 250VAC (or 30VDC)
- Operating voltage: DC 5V / 12V / 24V version to choose.
- Panel mount or DIN rail mount version to choose.
- DIN rail mount version can support width 15mm/32mm/35mm rail.
- Original Panasonic PA1a series relay and relay terminal socket.
- Whit removal key, easy to replace pluggable relays.
- Relay Coil Protection by means of a Freewheeling diode
- LED indication to denote relay actuation.



- Size:  
Panel mount --- W175mm x L72.5mm x H20mm  
DIN rail mount --- W177.5mm x L87mm x H44mm

- Terminal Block:  
Wire range: 26 ~ 12AWG / 2.5mm<sup>2</sup>  
Strip length: 7mm,  
Screw: Metric slot M2.5

- Electrical parameters:

Input:

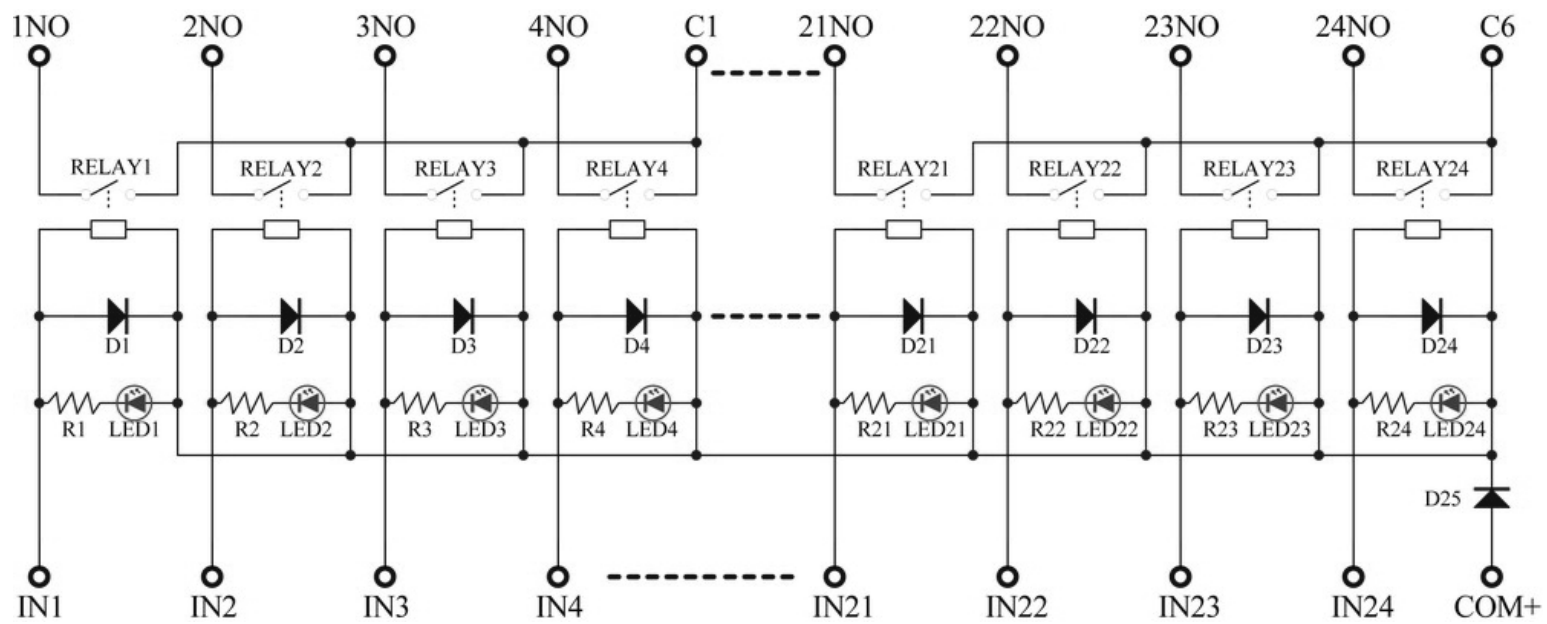
Relay Version	Action Voltage	Action Current(per channel)	Release Voltage
PA1a-5V	DC 0~0.5V	-25mA	DC 4.3~5V
PA1a-12V	DC 0~2.0V	-12mA	DC 11~12V
PA1a-24V	DC 0~3.0V	-12mA	DC 22.5~24V

Note: Action -- relay switch connected, Release – relay switch disconnected.  
Com+ terminal position connect to common positive, 5V, 12V or 24V.

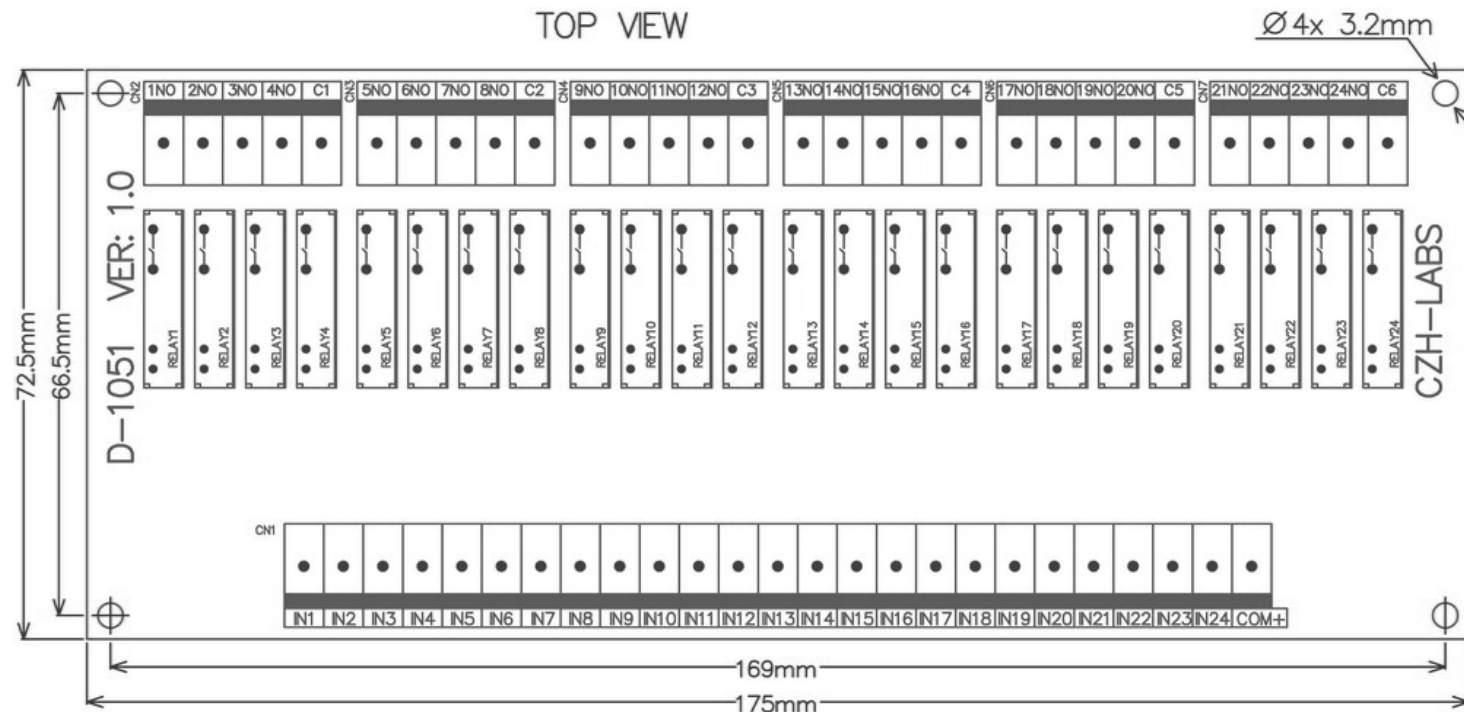
Output:

1NO ~ 24NO terminal position, each "NO" position maximum current: 5A, 250VAC/30VDC.  
C1 ~ C6 terminal position, each "C" position maximum current: 16A.

- Schematic and PCB Size:



TOP VIEW

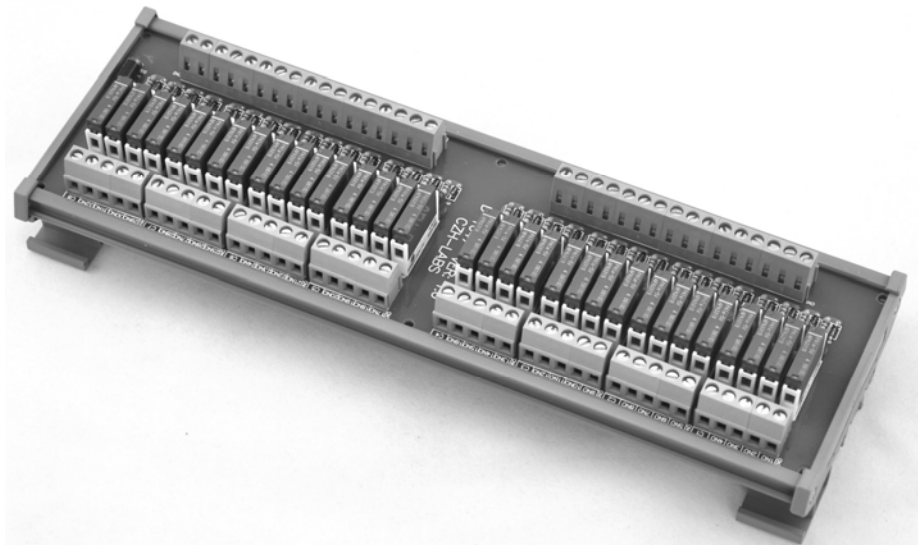


# MD-D1052 Series

- Control mode: Common positive, for Sink/NPN output controllers.
- Relay/switch channel number: 32
- Relay switch type: SPST-NO (when the relay no action switch off).
- Switching current upto 5A at 250VAC (or 30VDC)
- Operating voltage: DC 5V / 12V / 24V version to choose.
- Panel mount or DIN rail mount version to choose.
- DIN rail mount version can support width 15mm/32mm/35mm rail.
- Original Panasonic PA1a series relay and relay terminal socket.
- Whit removal key, easy to replace pluggable relays.
- Relay Coil Protection by means of a Freewheeling diode
- LED indication to denote relay actuation.



- Size:  
Panel mount --- W250mm x L72.5mm x H20mm  
DIN rail mount --- W252.5mm x L87mm x H44mm



- Terminal Block:  
Wire range: 26 ~ 12AWG / 2.5mm<sup>2</sup>  
Strip length: 7mm,  
Screw: Metric slot M2.5

- Electrical parameters:

Input:

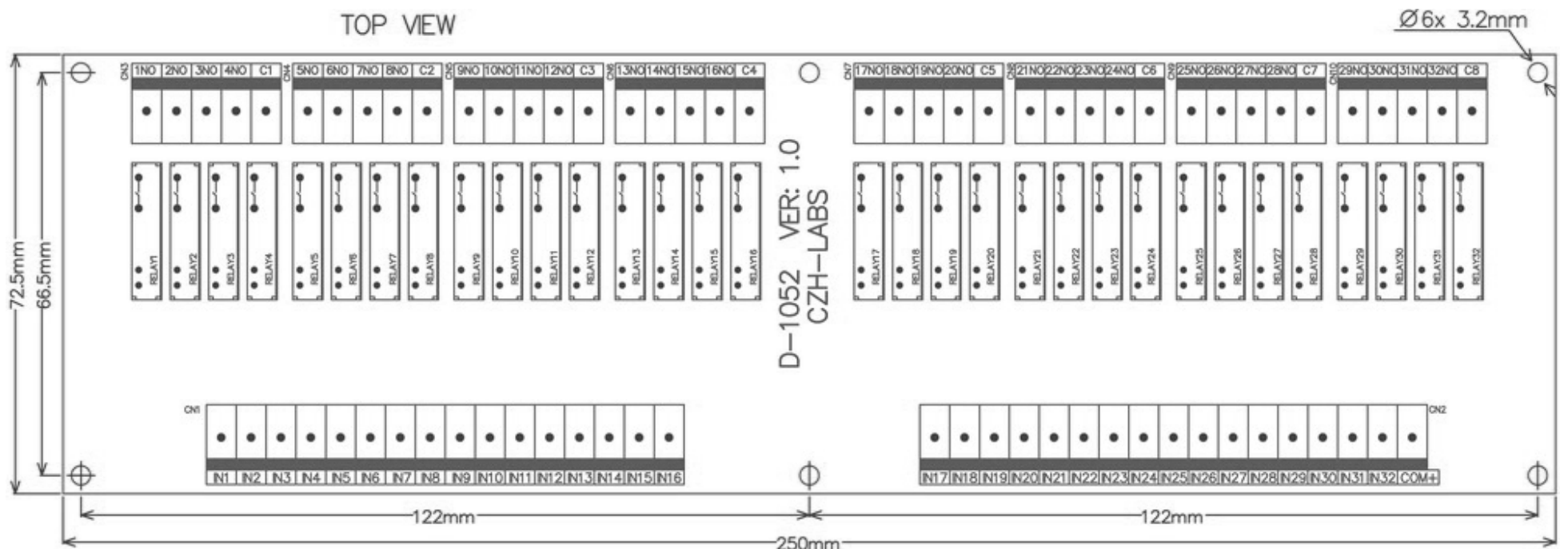
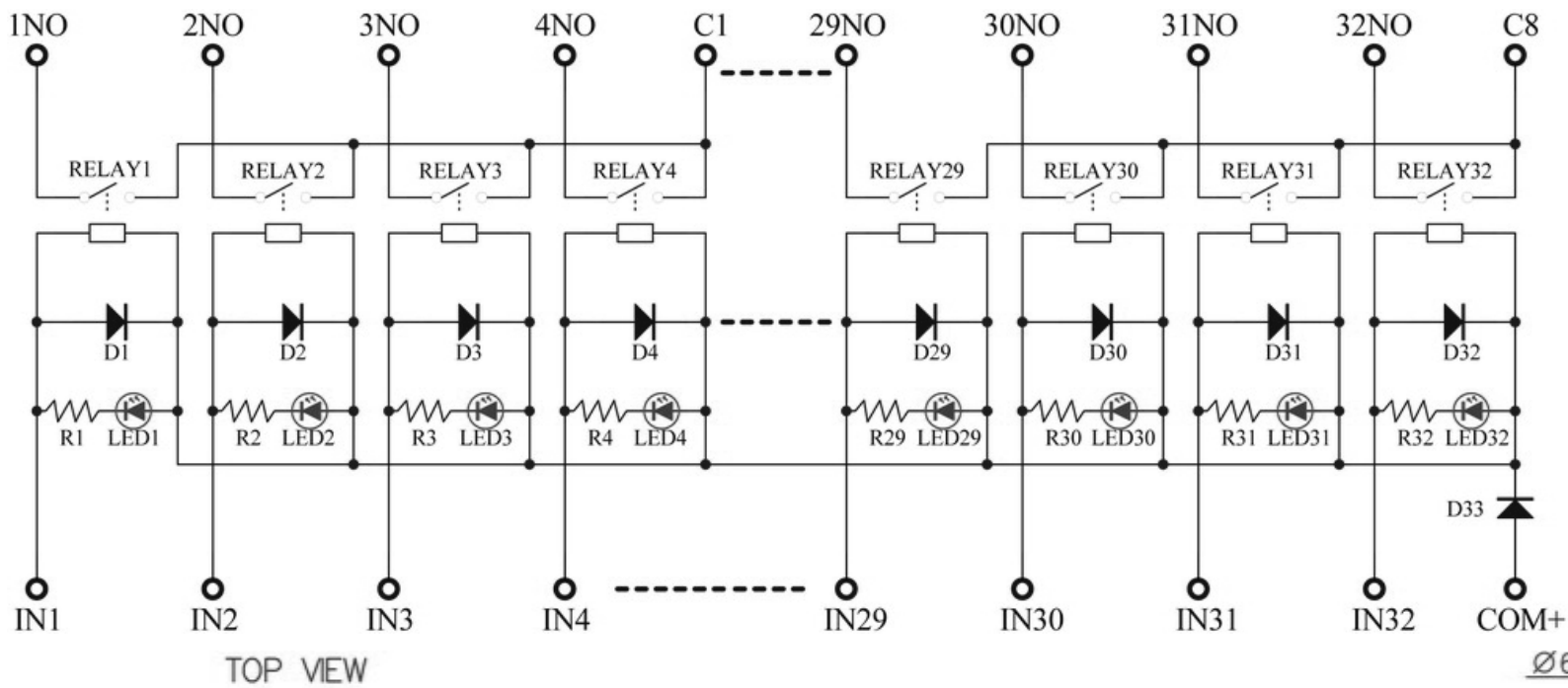
Relay Version	Action Voltage	Action Current(per channel)	Release Voltage
PA1a-5V	DC 0~0.5V	-25mA	DC 4.3~5V
PA1a-12V	DC 0~2.0V	-12mA	DC 11~12V
PA1a-24V	DC 0~3.0V	-12mA	DC 22.5~24V

Note: Action -- relay switch connected, Release – relay switch disconnected.  
Com+ terminal position connect to common positive, 5V, 12V or 24V.

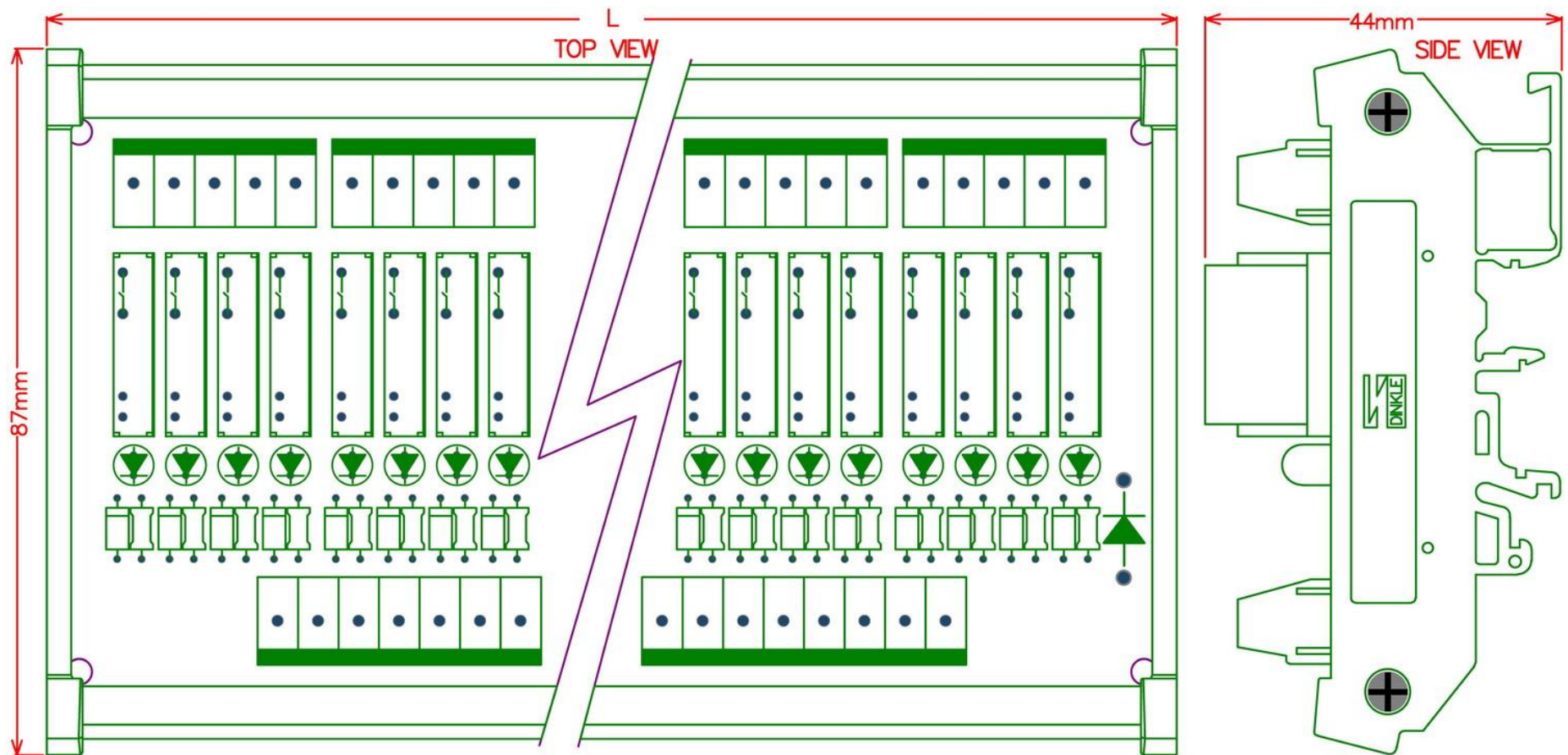
Output:

1NO ~ 32NO terminal position, each "NO" position maximum current: 5A, 250VAC/30VDC.  
C1 ~ C8 terminal position, each "C" position maximum current: 16A.

- Schematic and PCB Size:



## DIN Rail Version Size



**L:**

**MD-D1043 MD-D1048, 49.5mm.**

**MD-D1044 MD-D1049, 72.0mm.**

**MD-D1045 MD-D1050, 122mm.**

**MD-D1046 MD-D1051, 177mm.**

**MD-D1047 MD-D1052, 252mm.**