

AC-DC Power Modules

**POWER
SOLVE**

TMP Series, 7 to 60 Watt

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Features

- Fully encapsulated low profile plastic casing
- PCB mount with solder pins
- Chassis mount with screw terminals
- Single, dual and triple output models
- Universal input 85-264Vac, 47-440Hz
- Safety class II
- Short circuit and overload protection



Electrical Specification

Input Voltage Range	85-264VAC (90-264VAC for TPM Models) / 120-370VDC (not for TMP60 Models)
Input Frequency Range	47-440Hz (47-63Hz for TMP60 Models)
Output Voltage	See tables
Output Current	See tables
Output Voltage set accuracy	±2% max.
Minimum Load Requirement	10% of rated max. current (single & dual output versions) 10% of rated max. current (triple output models, main output) 20% of rated max. current (triple output models, auxiliary outputs)
Output current limitation	>105% Inom. foldback, automatic recovery
Overvoltage Protection	120% of Vout typical
Efficiency	78% typical
EMI suppression	EN55011 class B, EN55022 class B, FCC level B
EMC immunity	EN61000-6-1
Isolation Voltage	3000VAC (input-output)
Isolation Resistance	100MΩ at 500VDC (input-output)
Operating Temperature Range	-25°C to +60°C (derate at 3.5%/°C above 50°C, 2.5%/°C above 40°C for TMP60105C)
Storage Temperature Range	-40°C to + 85°C
Temperature Coefficient	0.02%/K
Safety Approvals	cUL/UL 60950-1, IEC/EN 60950-1, CB report
Degree of protection	safety class II prepared
Casing	plastic (UL94V-0 rated)
Option	DIN rail mounting adapter

Output Voltage and Current Ratings (7 & 10W versions)

MODEL	OUTPUT POWER	OUTPUT 1	OUTPUT 2	OUTPUT 3	RIPPLE & NOISE	LINE REG.	LOAD REG.
TMP07103	7W	3.3VDC / 1400mA			1.8% (mV pk-pk)	1.0%	1.0%
TMP07105		5.0VDC / 1400mA			1.8% (mV pk-pk)	1.0%	1.0%
TMP07112		12VDC / 585mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP07115		15VDC / 465mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP07124		24VDC / 290mA			1.3% (mV pk-pk)	1.0%	1.0%
TPMP10103	10W	3.3VDC / 2500mA			1.8% (mV pk-pk)	1.0%	1.0%
TPMP10105		5VDC / 2000mA			1.8% (mV pk-pk)	1.0%	1.0%
TPMP10112		12VDC / 830mA			1.3% (mV pk-pk)	1.0%	1.0%
TPMP10115		15VDC / 665mA			1.3% (mV pk-pk)	1.0%	1.0%
TPMP10124		24VDC / 415mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP10103	10W	3.3VDC / 2000mA			1.8% (mV pk-pk)	1.0%	1.0%
TMP10105		5VDC / 2000mA			1.8% (mV pk-pk)	1.0%	1.0%
TMP10112		12VDC / 830mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP10115		15VDC / 665mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP10124		24VDC / 415mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP10212		+12VDC / 380mA	-12VDC / 380mA		1.3% (mV pk-pk)	1.0%	2.5%
TMP10215		+15VDC / 300mA	-15VDC / 300mA		1.3% (mV pk-pk)	1.0%	2.5%

AC-DC Power Modules



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Output Voltage and Current Ratings (15, 30 & 60W versions)

MODEL	OUTPUT POWER	OUTPUT 1	OUTPUT 2	OUTPUT 3	RIPPLE & NOISE	LINE REG.	LOAD REG.
TMP15105		5.0VDC / 3000mA			1.8% (mV pk-pk)	1.0%	1.0%
TMP15112		12VDC / 1250mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP15115		15VDC / 1000mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP15124		24VDC / 625mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP15148		48VDC / 310mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP15212	15W	+12VDC / 650mA	-12VDC / 650mA		1.3% (mV pk-pk)	1.0%	2.5%
TMP15215		+15VDC / 500mA	-15VDC / 500mA		1.3% (mV pk-pk)	1.0%	2.5%
TMP15252		+5VDC / 1500mA	+12VDC / 625mA		1.3% (mV pk-pk)	1.0%	5.0%
TMP15512		+5VDC / 2000mA	+12VDC / 200mA	-12VDC / 200mA	1.3% (mV pk-pk)	1.0%	1.0%/4.0%
TMP15515		+5VDC / 2000mA	+15VDC / 150mA	-15VDC / 150mA	1.3% (mV pk-pk)	1.0%	1.0%/4.0%
TMP30105		5.0VDC / 6000mA			1.8% (mV pk-pk)	1.0%	1.0%
TMP30112		12VDC / 2500mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP30115		15VDC / 2000mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP30124		24VDC / 1250mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP30148		48VDC / 625mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP30212		+12VDC / 1300mA	-12VDC / 1300mA		1.3% (mV pk-pk)	1.0%	2.5%
TMP30215		+15VDC / 1000mA	-15VDC / 1000mA		1.3% (mV pk-pk)	1.0%	2.5%
TMP30252	30W	+5.0VDC / 3000mA	+12VDC / 1250mA		1.3% (mV pk-pk)	1.0%	5.0%
TMP30512		+5.0VDC / 3000mA	+12VDC / 600mA	-12VDC / 600mA	1.3% (mV pk-pk)	1.0%	1.0%/4.0%
TMP30515		+5.0VDC / 3000mA	+15VDC / 500mA	-15VDC / 500mA	1.3% (mV pk-pk)	1.0%	1.0%/4.0%
TMP30522		+5.0VDC / 1500mA	+12VDC / 1000mA	-12VDC / 250mA	1.3% (mV pk-pk)	1.0%	1.0%/4.0%
TMP30316		+3.3VDC / 4000mA	+5.0VDC / 1500mA	+12VDC / 250mA	1.3% (mV pk-pk)	1.0%	1.0%/4.0%
TMP30317		+5.0VDC / 4500mA	+3.3VDC / 1000mA	+12VDC / 250mA	1.3% (mV pk-pk)	1.0%	1.0%/4.0%
TMP60105		5.1VDC / 10,000mA			1.8% (mV pk-pk)	1.0%	1.0%
TMP60112		12VDC / 5000mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP60115	60W	15VDC / 4000mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP60124		24VDC / 2500mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP60136		36VDC / 1670mA			1.3% (mV pk-pk)	1.0%	1.0%
TMP60148		48VDC / 1250mA			1.3% (mV pk-pk)	1.0%	1.0%

* For chassis mount version add suffix C

Mechanical & Connection Details

Dimensions in mm (inches)

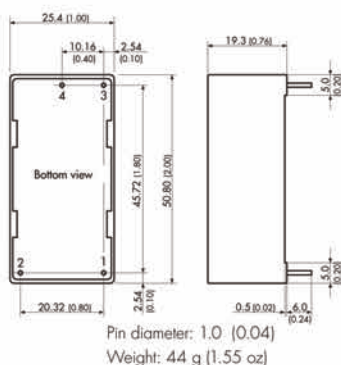
Case Tolerances: ± 0.5 (± 0.02)

Pin Pitch Tolerances: ± 0.25 (± 0.01)

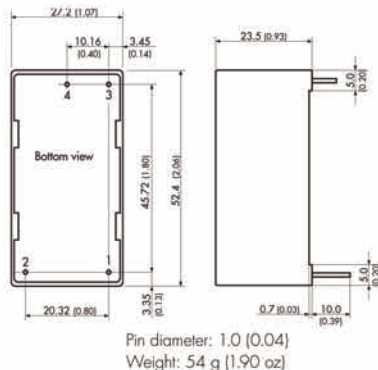
Mounting Hole Tolerance: ± 0.25 (± 0.02)

Pin	TMP07	TMPM10	TMP10	
			Single	Dual
1	AC(N)	AC(N)	AC(N)	AC(N)
2	AC(L)	AC(L)	AC(L)	AC(L)
3	+Vout	+Vout	-Vout	Vout2
4	-Vout	-Vout	N/C	Comm.
5	N/A	N/A	+Vout	Vout1

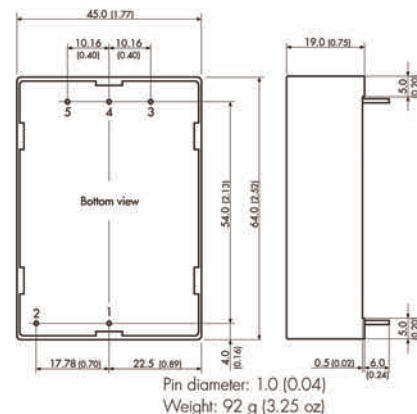
TMP07 Models



TMPM10 Models



TMP10 Models



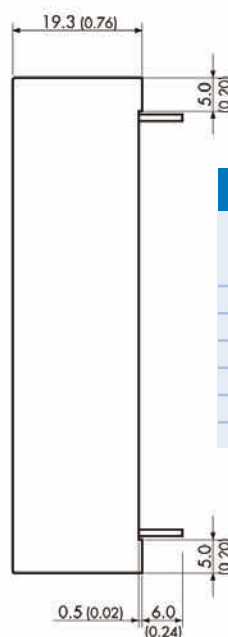
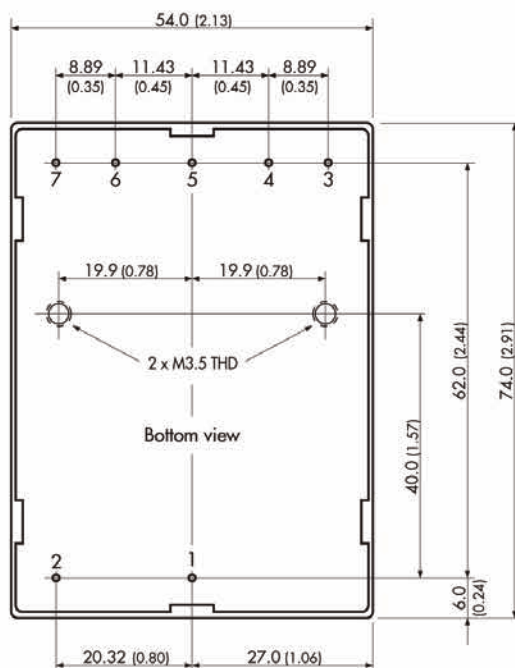
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Mechanical & Connection Details (cont.)

TMP15 Models for PCB Mount

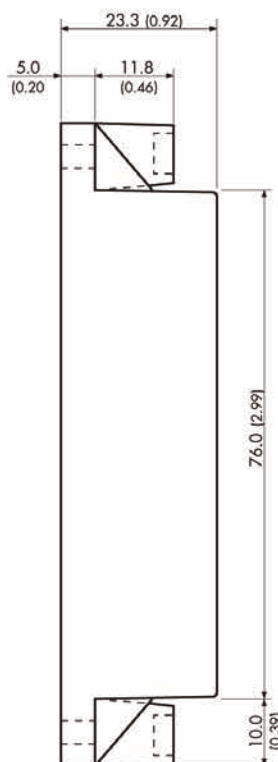
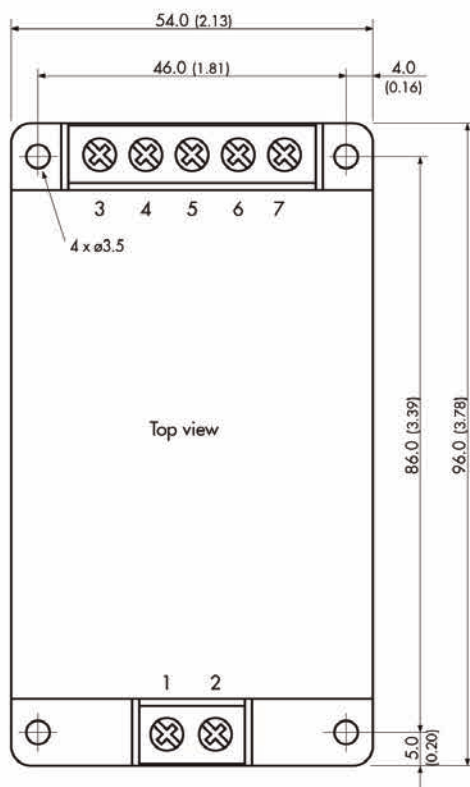


Pin-out				
Pin	Single	Dual sym.	Dual asym.	Triple
1	AC(N)	AC(N)	AC(N)	AC(N)
2	AC(L)	AC(L)	AC(L)	AC(L)
3	No pin	No pin	No pin	Vout3
4	-Vout	Vout2	-Vout2	Comm.
5	No pin	Comm.	+Vout2	Vout2
6	+Vout	Vout1	-Vout1	-Vout1
7	No pin	No pin	+Vout1	+Vout1

Pin diameter: 1.0 (0.04)

Weight: 114 g (4.02 oz)

TMP15 Models for Chassis Mount



Connections				
Pin	Single	Dual sym.	Dual asym.	Triple
1	AC(N)	AC(N)	AC(N)	AC(N)
2	AC(L)	AC(L)	AC(L)	AC(L)
3	N/C	N/C	N/C	Vout3
4	-Vout	Vout2	-Vout2	Comm.
5	N/C	Comm.	+Vout2	Vout2
6	+Vout	Vout1	-Vout1	-Vout1
7	N/C	N/C	+Vout1	+Vout1

Weight: 162 g (5.71 oz)

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Mechanical & Connection Details (cont.)

Technical drawing showing the bottom view of a rectangular plate. The overall dimensions are 63.5 (2.50) in width and 88.9 (3.50) in height. The width is divided into four equal segments of 15.24 (0.60) each, with center-to-center distances of 12.70 (0.50) between the four vertical centerlines. The height is divided into three segments: 27.5 (1.08) for the top section, 27.65 (1.09) for the middle section, and 3.8 (0.15) for the bottom section. There are four holes, numbered 3, 4, 5, and 6, arranged in a horizontal row near the top edge. There are two holes, numbered 1 and 2, arranged in a horizontal row near the bottom edge. Two additional holes are indicated by arrows and labeled "2 x M3.5 THD", located in the center of the plate. The distance between the centerlines of these two central holes is 5.0 (0.20). The distance from the left edge to the centerline of the leftmost central hole is 27.94 (1.10). The distance from the right edge to the centerline of the rightmost central hole is 27.94 (1.10). The total distance between the centerlines of the two central holes is 31.75 (1.25). The distance from the bottom edge to the centerline of the bottommost central hole is 3.8 (0.15).



Weight: 177 g (6.24 oz)

Pin-out				
Pin	Single	Dual sym.	Dual asym.	Triple
1	AC(N)	AC(N)	AC(N)	AC(N)
2	AC(L)	AC(L)	AC(L)	AC(L)
3	+Vout	Vout1	+Vout2	Vout2
4	No pin	No pin	+Vout1	+Vout1
5	-Vout	Comm.	-Vout2	Comm.
6	No pin	No pin	-Vout1	-Vout1
7	N/C	Vout2	N/C	Vout3

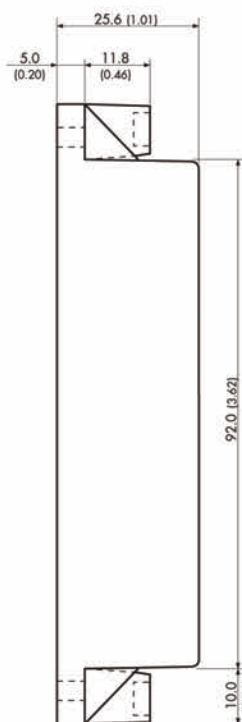
Top view

Dimensions:

- Overall width: 63.8 (2.51)
- Inner width: 50.0 (1.97)
- Right edge offset: 6.9 (0.27)
- Left edge offset: 6.9 (0.27)
- Bottom edge offset: 6.0 (0.24)
- Overall height: 112.0 (4.41)
- Inner height: 100.0 (3.94)

Component locations:

- 4 x $\phi 3.5$ (4 holes)
- 3, 4, 5, 6, 7 (5 holes)
- 1, 2 (2 holes)



Weight: 191 g (6.74 oz)

Connections				
Pin	Single	Dual sym.	Dual asym.	Triple
1	AC(N)	AC(N)	AC(N)	AC(N)
2	AC(L)	AC(L)	AC(L)	AC(L)
3	+Vout	Vout1	+Vout2	Vout2
4	N/C	N/C	+Vout1	+Vout1
5	-Vout	Comm.	-Vout2	Comm.
6	N/C	N/C	-Vout1	-Vout1
7	N/C	Vout2	N/C	Vout3

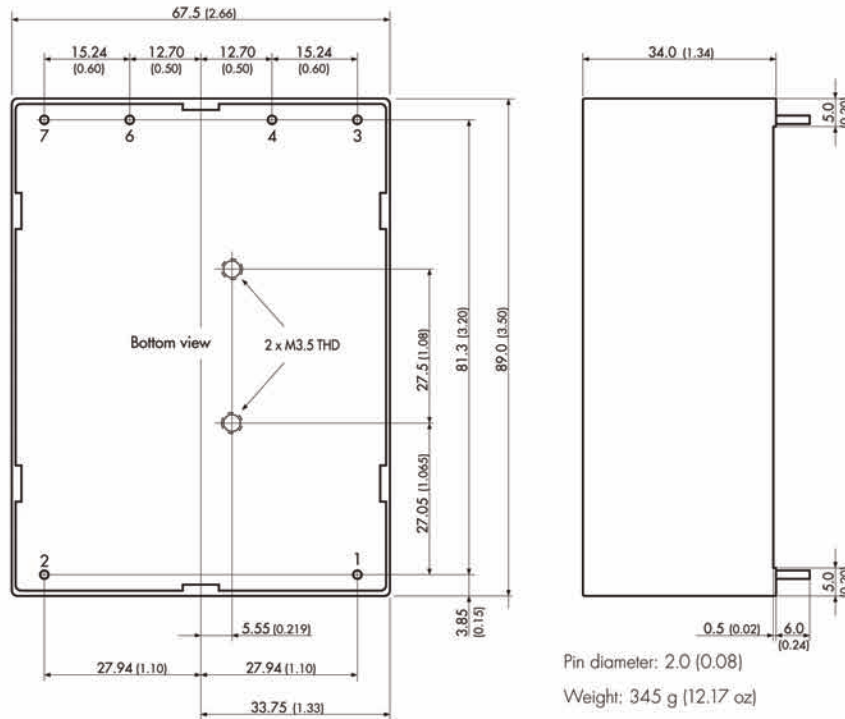
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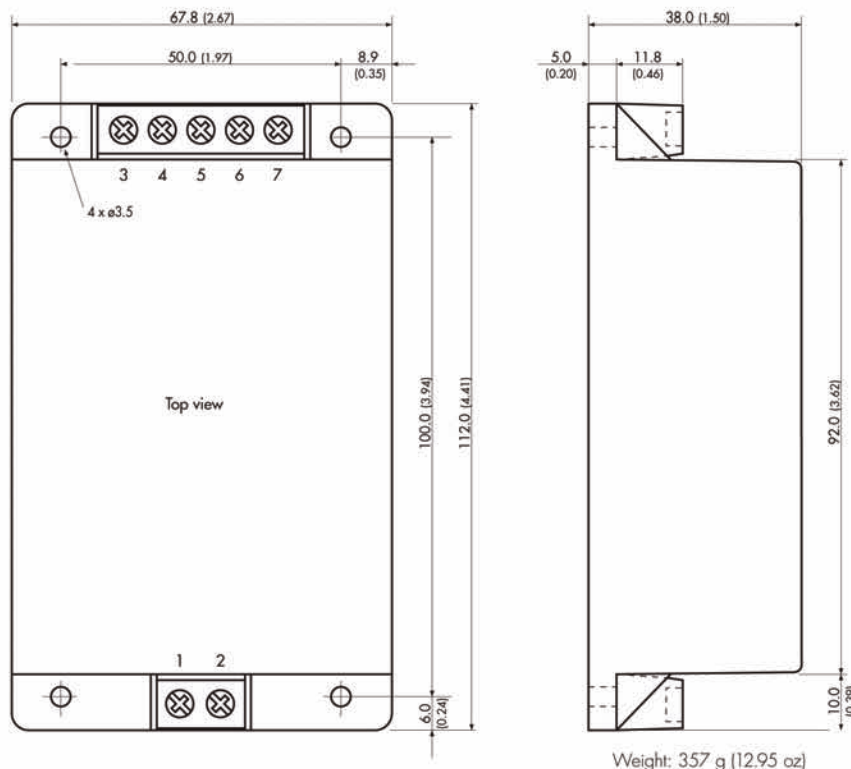
Mechanical & Connection Details (cont.)

TMP60 Models for PCB Mount



Pin-out	
Pin	Single
1	AC(N)
2	AC(L)
3	No pin
4	+Vout
5	No pin
6	-Vout
7	No pin

TMP60 Models for Chassis Mount



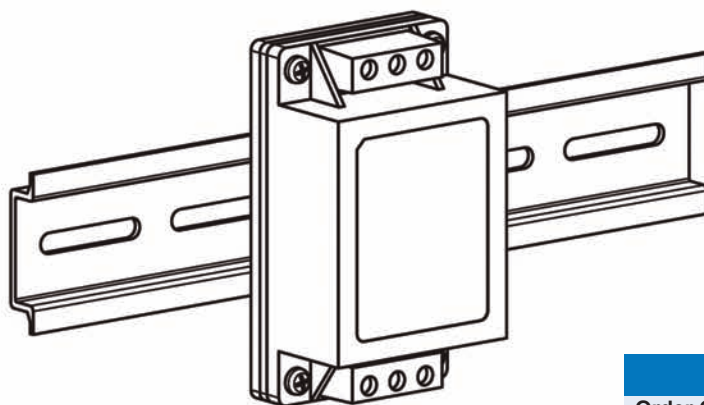
Connections	
Pin	Single
1	AC(N)
2	AC(L)
3	N/C
4	+Vout
5	N/C
6	-Vout
7	N/C

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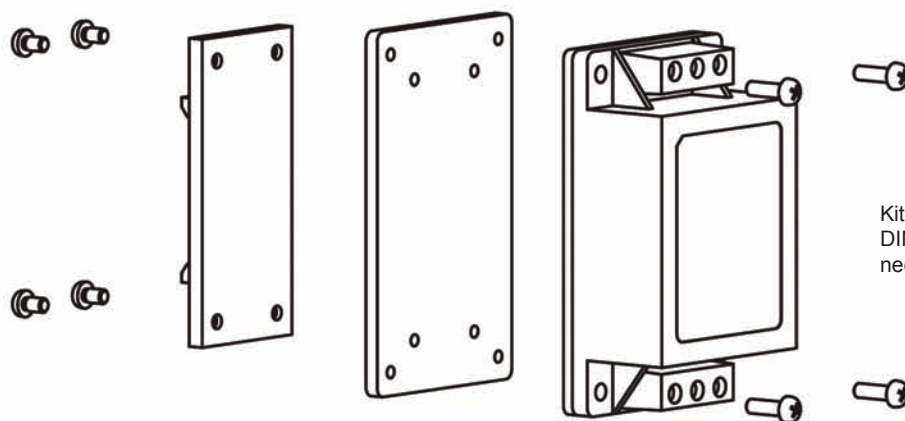
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DIN-Rail Mounting Kit



DIN-Rail Mounting Kit

Order Code	For Models
TMP-MK1	TMP15xxxC
TMP-MK2	TMP30xxxC & TMP60xxxC



Kit contains interface plate,
DIN-rail clip and all
necessary screws