Power Supplies

FMP, FMP-B Series

AC Input

Single Output, General-Purpose

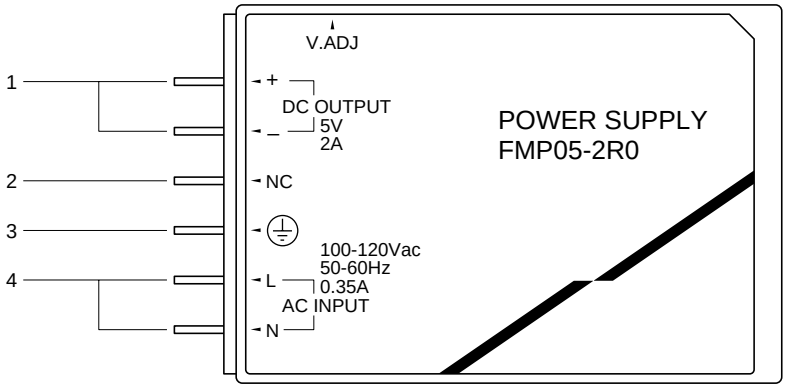
FEATURES

- Economical due to plastic case.
- FMP-B has pin terminals for board mounting.
- These low noise power supplies are FCC class B compliant.

PART NUMBERS AND RATINGS

Output voltage(V)	3W type		10W type	
	Current(A)	Part No.	Current(A)	Part No.
5	0.06 to 0.6	FMP05-R60	0.2 to 2	FMP05-2R0
		FMP05-R60B		FMP05-2R0B
12	0.02 to 0.25	FMP12-R25	0.08 to 0.85	FMP12-R85
		FMP12-R25B		FMP12-R85B
15	0.02 to 0.2	FMP15-R20	0.07 to 0.7	FMP15-R70
		FMP15-R20B		FMP15-R70B
24	0.01 to 0.13	FMP24-R13	0.04 to 0.45	FMP24-R45
		FMP24-R13B		FMP24-R45B

TERMINAL DESIGNATIONS AND FUNCTIONS

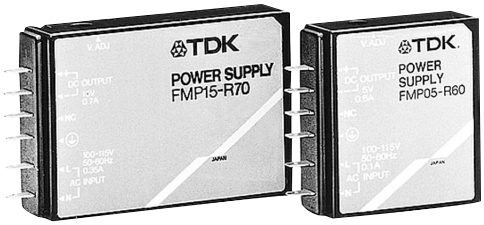


Terminal No. 1: DC output terminals(+, –)
Connect to load.

Terminal No. 2: No connection(NC)
Unconnected terminal. This should not be connected.

Terminal No. 3: Ground terminal(⏚)
For input line.

Terminal No. 4: AC input terminals(L, N, AC INPUT)
Connect to AC.100 to 120V single phase power supply.



⚠ Specifications which provide more details for the proper and safe use of the described product are available upon request.
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SPECIFICATIONS

3W TYPE

Part No.			FMP05-R60*1 FMP05-R60B*1	FMP12-R25 FMP12-R25B	FMP15-R20 FMP15-R20B	FMP24-R13 FMP24-R13B
Output voltage, current *2			5V • 0.6A	12V • 0.25A	15V • 0.2A	24V • 0.13A
Maximum output power		W	3	3	3	3.1
Input requirements						
Input voltage Eac		V	85 to 132[Rating: 100-120]			
Input frequency		Hz	47 to 440[Single phase]			
Input current		A	0.08typ.[85V, 25°C, input and output ratings](Output rating: 0.1max.)			
Surge current		A	16max.[25°C, input and output ratings, cold start]			
Leakage current		mA	0.5max.[25°C, input and output ratings]			
Efficiency		%	68typ.	70typ.	70typ.	74typ.
Output characteristics						
Output voltage		V	5	12	15	24
Voltage variable range		V	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4
Maximum output current*2		A	0.6	0.25	0.2	0.13
Minimum output current*3		A	0.06	0.02	0.02	0.01
Overcurrent threshold		A	0.7 to 1.2	0.3 to 0.5	0.25 to 0.4	0.15 to 0.3
Voltage stability	Input variation	%	0.1typ.[Within the input voltage range]		Total variation ±3max.(±1typ.)	
	Load variation	%	0.8typ.[10 to 100% load]			
	Temperature variation	%	1typ.[0 to +50°C]			
	Drift	%	1max.[25°C, input and output ratings, after input voltage ON for 30min to 8h]			
	Dynamic load	%/ms	±4max./1max.[50 to 100% sudden load change]			
Ripple Ep-p		mV	50max.	80max.	80max.	100max.
Ripple noise Ep-p		mV	100max.	150max.	150max.	150max.
Start up time		ms	100max.			
Hold up time		ms	20min.			
Accessory equipment						
Operation indicator			None			
Overvoltage protection			Uses overvoltage prevention*4			
Overcurrent protection			Fixed voltage threshold type, automatic recovery.			
Remote ON-OFF			None			
Remote sensing			None			
Output voltage external variable function			None			
Standards						
Safety standards			UL478, CSA ELECTRICAL BULLETIN No.1402 approved.			
Noise terminal voltage			FCC class B compliant.			
Construction						
External dimensions H×W×L		mm	19×55×50[Except input and output terminals]			
Weight		g	80max.			
Mounting method			Can be attached to 1 side.			
Case material			Nonflammable resin			
Input and output cables			None			

*1 Output may fail to come on when operated in series.

*2 Current rating(maximum output current) is determined for 0 to +50°C. Derating is required when used outside this temperature range.

*3 The output load variation is determined within the range set by the minimum output current and the maximum output current. Nominal values might possibly not be satisfied when output is below the minimum output current.

*4 Although there is no built-in overvoltage protection circuit, the overvoltage prevention method is used for circuit design, thereby preventing overvoltage.

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SPECIFICATIONS

10W TYPE

Part No.			FMP05-2R0*1 FMP05-2R0B*1	FMP12-R85 FMP12-R85B	FMP15-R70 FMP15-R70B	FMP24-R45 FMP24-R45B
Output voltage, current*2			5V • 2A	12V • 0.85A	15V • 0.7A	24V • 0.45A
Maximum output power		W	10	10.2	10.5	10.8
Input requirements						
Input voltage Eac		V	85 to 132[Rating: 100-120]			
Input frequency		Hz	47 to 440[Single phase]			
Input current		A	0.25typ.[85V, 25°C, input and output ratings](Output ratings: 0.35max.)			
Surge current		A	16max.[25°C, input and output ratings, cold start]			
Leakage current		mA	0.5max.[25°C, input and output ratings]			
Efficiency		%	75typ.	78typ.	78typ.	81typ.
Output characteristics						
Output voltage		V	5	12	15	24
Voltage variable range		V	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4
Maximum output current*2		A	2	0.85	0.7	0.45
Minimum output current*3		A	0.2	0.08	0.07	0.04
Overcurrent threshold		A	2.2 to 3.3	0.9 to 1.4	0.75 to 1.2	0.5 to 0.8
Voltage stability	Input variation	%	0.1typ.[Within the input voltage range]		Total variation ±3max.(±1typ.)	
	Load variation	%	0.8typ.[10 to 100% load]			
	Temperature variation	%	1typ.[0 to +50°C]			
	Drift	%	1max.[25°C, input and output ratings, after input voltage ON for 30min to 8h]			
	Dynamic load	%/ms	±4max./1max.[50 to 100% sudden load change]			
Ripple Ep-p		mV	50max.	80max.	80max.	100max.
Ripple noise Ep-p		mV	100max.	150max.	150max.	150max.
Start up time		ms	100max.			
Hold up time		ms	20min.			
Accessory equipment						
Operation indicator			None			
Overvoltage protection			Uses overvoltage prevention*4			
Overcurrent protection			Fixed voltage threshold type, automatic recovery.			
Remote ON-OFF			None			
Remote sensing			None			
Output voltage external function			None			
Standards						
Safety standards			UL478, CSA ELECTRICAL BULLETIN No.1402 approved.			
Noise terminal voltage			FCC class B compliant.			
Construction						
External dimensions H×W×L		mm	19×55×80[Except input and output terminals]			
Weight		g	100max.			
Mounting method			Can be attached to 1 side.			
Case material			Nonflammable resin			
Input and output cables			None			

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