

POWERLINE - DC/DC-Converter

E-Series, 30 Watt, 1.6 kV Isolation & Wide Input Range (Single Output)

RECOM

Features

- Ideal for Telecom/Networking Application
- 2:1 Input Range
- Efficiency up to 91%
- Six-Sided Shield
- On/Off Control
- Small Package
50.8 x 40.6 x 10.2 mm
- Over Current Protection
- International Safety Standard Approvals
- UL 1950 Component Recognised



Selection Guide 24V and 48V Input Types

Part Number	Input Range	Output Voltage	Output Current	Ripple & noise	Efficiency (%)
RP30-2418SE	18-36 VDC	1.8 VDC	6.00 A	50 mVp-p	82
RP30-2433SE	18-36 VDC	3.3 VDC	6.00 A	50 mVp-p	86
RP30-2405SE	18-36 VDC	5 VDC	6.00 A	50 mVp-p	88
RP30-2412SE	18-36 VDC	12 VDC	2.50 A	75 mVp-p	91
RP30-4818SE	36-75 VDC	1.8 VDC	6.00 A	50 mVp-p	83
RP30-4825SE	36-75 VDC	2.5 VDC	6.00 A	50 mVp-p	85
RP30-4833SE	36-75 VDC	3.3 VDC	6.00 A	50 mVp-p	87
RP30-4805SE	36-75 VDC	5 VDC	6.00 A	50 mVp-p	89
RP30-4812SE	36-75 VDC	12 VDC	2.50 A	75 mVp-p	91
RP30-4815SE	36-75 VDC	15 VDC	2.00 A	75 mVp-p	91

Maximum Capacitive Load

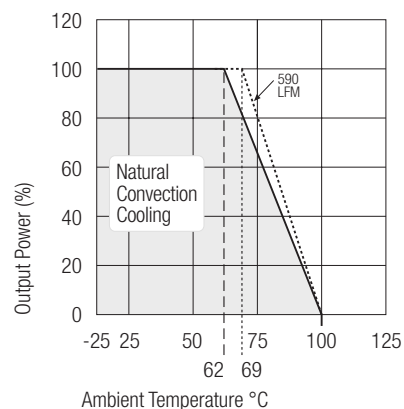
RP30-xx05SE	10200µF
RP30-xx1.8SE	6500µF
RP30-xx3.3SE	19500µF
RP30-xx05SE	10200µF
RP30-xx12SE	3300µF
RP30-xx15SE	1100µF

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Input Voltage Range	24V nominal 48V nominal	18-36VDC 36-75VDC
Input Filter		LC Type
Voltage Accuracy		±1%
Ripple and Noise, 20MHz BW		See Table
Line Regulation, HL-LL		±0.2%
Load Regulation, 100% to 10% Full Load		±0.5%
Efficiency		See Table
Temperature Coefficient		±0.02%/°C
Short Circuit Protection		Continuous
Transient Response Recovery Time, 25% Load Step Change		400msec
Transit voltage peak deviation		150mV max.
Control voltage referenced to negativ(-)input Compatibility		CMOS, TTL
On-control		4.8V min. or open
Off-control		0.4V max. or short
Switching frequency		300kHz, typ.
Isolation Voltage		1600VDC min.
Isolation Resistance		10 ⁹ Ω, min
Maximum Case Temperature		+100°C
Operating Temperature Range		-25°C to +71°C
Storage temperature range		-55°C to +105°C
Cooling		Free-air convection
EMI/RFI		Six-sided Continuous Shield
Case Material		Nickel-Coated Copper with Non-Conductive Base
Dimensions		50.8 x 40.6 x 10.2 mm
MTBF (MIL-HDBK-217F TA = 25°C full load)		2 x 10 ⁶ Hours

Graph showing Output Power (%) versus Ambient Temperature (°C) for the 590 LFM. The graph indicates the power output capability under natural convection cooling conditions. The solid line represents the power output, which starts at 100% at 62°C and decreases linearly to 0% at 100°C. The dotted line represents the 590 LFM, which starts at 100% at 69°C and decreases linearly to 0% at 100°C. The shaded area represents the power output range.



Bottom View

50.80

45.70

40.60

15.20

17.80

10.20

5.10

Pin 1

Pin 2

Pin 3

Pin 4

Pin 5

Pin 6

Pin 7

Pin 8

10.20

5.6

dia. 1.0

Pin Connections

Pin #	Single
1	+Vin
2	-Vin
3	No Pin
4	Ctrl
5	No Pin
6	+Vout
7	-Vout
8	Trim

Pin Pitch Tolerance ± 0.5 mm