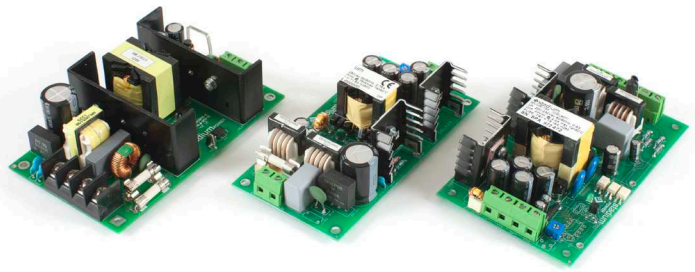
MVHR / MEV

HIGH EFFICIENCY

50-140W

MVHR / MEV RANGE OF HIGH EFFICIENCY POWER SUPPLIES - SAP APPENDIX Q



Features:

- Single output 50-140Watt @ 24Vdc open frame power supplies (6 Models)
- Specifically designed for MEV / MVHR applications intended to meet SAP Appendix Q
- High "Flat" efficiency > 92% average 25-100% load. (Exceeds ErP requirements)
- Very low No load / Standby power <0.2W
- High MTBF
- Open frame Class I (Earthed) or Class II (No Earth)
- Protection for Over-voltage and Over-temperature
- Wide operating temperature range
- Meets requirements of Class A Harmonic Input Currents of EN 61000-3-2
- Meets the EMC requirements for Emissions and Immunity of EN 61000-6-2 & 3
- Certified or CE marked to EN 60335-1
- Optional adjustable Constant Current output control
- Optional 1 or 2 switched live output signals

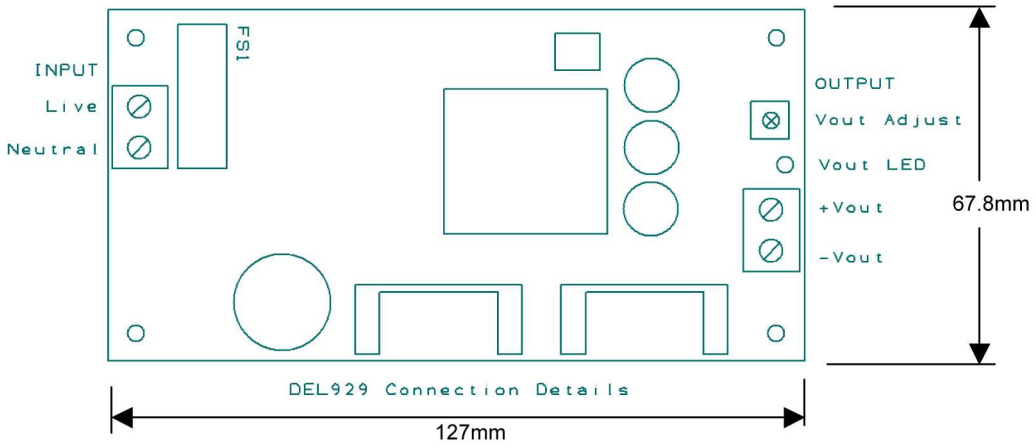
Configuration:

MODEL	M 50-24V	M 75-24V	M 100-24V	M 101-24V	M 120-24V	M 140-24V
OUTPUT POWER	50W	75W	100W	100W	120W	140W
OUTPUT CURRENT	2.08A	3.13A	4.17A	4.17A	5A	5.83A
OPTION - CONSTANT CURRENT	N/A	N/A	2.08 - 4.59A	2.08 - 4.59A	2.5 - 5.5A	3.5 - 6.4A
INPUT CURRENT - MAXIMUM	500mA	750mA	1A	1A	1.2A	1.4A
FUSING - 250V HRC 5X20MM	T1.6A	T1.6A	T3.15A	T3.15A	T3.15A	T5A
OPTION - SWITCHED LIVE SIGNAL	NA	NA	Impedence Protected	Single or twin impedance limited	Impedance Protected	Impedance Protected
EN 60335-1 SAFETY	Self Certified	Self Certified	Certified	Self Certified	Certified	Self Certified
SIZE (MM)	127x64x35mm	127x64.8x35mm	127x76.2x37mm	127x76.2x37mm	127x76.2x42mm	127x101.6x34mm
SIZE (INS)	5x2.55x1.38"	5x2.55x1.38"	5x3x1.46"	5x3x1.46"	5x3x1.65"	5x4x1.34"
FIXINGS	116.9x54.6mm	116.9x54.6mm	115.6x64.8mm	115.6x64.8mm	115.6x64.8mm	115.6x90.2mm
MAINS CONNECTOR	2 Way screw 0.3" pitch Rising Clamp Accepts wire up to 12AWG	2 Way screw 0.3" pitch Rising Clamp Accepts wire up to 12 AWG	4 Way barrier Screw terminal 0.375" pitch Accepts 0.25" ring or fork crimp	6 Way screw terminal 0.3" pitch Rising clamp Accepts wire up to 12AWG	4 Way barrier Screw terminal 0.375" pitch Accepts 0.25" ring or fork crimp	4 Way barrier Screw Terminal 0.375" pitch Accepts 0.25" ring or fork crimp
OUTPUT CONNECTOR	2 Way screw 0.3" pitch Rising Clamp Accepts wire up to 12AWG	2 Way screw 0.3" pitch Rising Clamp Accepts wire up to 12AWG	3 Way screw 0.3" pitch Rising Clamp Accepts wire up to 12AWG	4 Way screw 0.3" pitch Rising Clamp Accepts wire up to 12AWG	3 Way screw 0.3" pitch Rising Clamp Accepts wire up to 12AWG	3 Way barrier Screw Terminal 0.375" pitch Accepts 0.25" ring or fork crimp
			Optional 92% efficiency		*Optional 92% efficiency*	

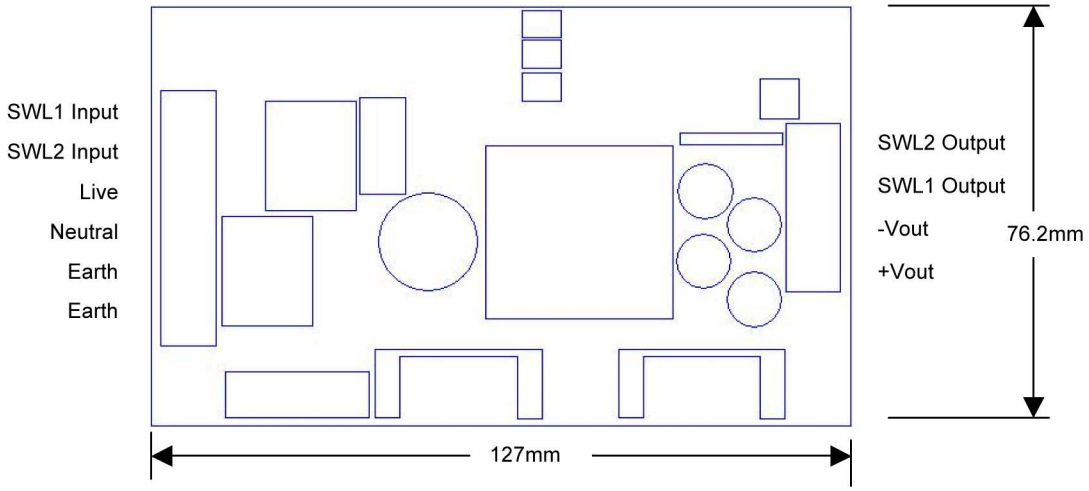
NOTE: Alternative configurations available.

INPUT	
INPUT VOLTAGE	230Vac +10% / -15%
FREQUENCY RANGE	50 / 60Hz
INPUT FUSE	Fused - Time delay 250V HRC 5x20mm (See table for rating)
INPUT CURRENT	See table
HOLD-UP TIME	Typically > 20mS @ Full load (230Vacin)
NO LOAD POWER	<0.2W (230Vac)
START UP	Less than 5 seconds @ 230Vac
OUTPUT	
OUTPUT VOLTAGE	24V + / - 0.02V set point @ 50% load. Output adjustable +16% / -4%
CONSTANT CURRENT OUTPUT (OPTIONAL)	Constant current down to 60% of output voltage. Adjustable 50 - 110%
OUTPUT POWER (SEE MODEL TABLE)	50 / 75 / 80 / 100 / 120 / 140 Watts Maximum
SWITCHED LIVE 1 OR 2 OUTPUTS (SEE TABLE)	24 Volts at 10mA controlled by primary side live inputs
POWER LIMIT	115% +/- 10% (If constant current option not fitted)
EFFICIENCY	Average > 92% @ 25 / 50 / 75 / 100% load current
	Minimum efficiency > 87% at any load current 10 - 100%
SHORT CIRCUIT PROTECTION	Hiccup mode
OVP	Typically 140% (Latching, non-dissipative)
TRANSIENT DEVIATION	<2% deviation, return within 2mS for 50% load
TEMPERATURE COEFFICIENT	0.02% / °C
LOAD REGULATION	+/- 1%
LINE REGULATION	+/- 1%
NOISE AND RIPPLE	Typically <1% (DC - 20MHz BW, full load)
ENVIRONMENT	
TEMPERATURE	0°C to +70°C (Derate 2.5% / °C above 50°C)
COOLING	Convection cooled
HUMIDITY	10 to 95% Non-condensing
STORAGE	-25°C to +85°C
MTBF	> 200,000 hrs 25°C (MIL217F parts count method 25°C ground benign)
THERMAL PROTECTION	Latching shutdown in the event of over-temperature
SAFETY & REGULATORY SPECIFICATIONS	
PSU CLASS	Class I or II : Component part (Can be used in Class I or Class II equipment)
SAFETY	CE marked to meet LVD. Certified or self certified to EN 60335-1 Component part only (See model table)
ISOLATION	Mains to O/P : 5.656KVdc (If Earthed connection available : Mains to Earth : 2.2KVdc)
EARTH LEAKAGE CURRENT	Negligible
PROTECTIVE IMPEDANCE CURRENT	<250uA (230Vac, 50Hz)
EMC - EMISSIONS GENERIC	Designed to meet requirements of EN 61000-6-3
EMC - CONDUCTED	Designed to meet requirements of EN 55022 "Class B"
EMC - RADIATED	Designed to meet requirements of EN 55022 "Class A"
EMC - HARMONIC CURRENT EMISSIONS	Designed to meet requirements of EN61000-3-2 "Class A"
EMC - POWER FACTOR	No active PFC (See Harmonic Current Emissions)
EMC - IMMUNITY GENERIC	Designed to meet requirements of EN61000-6-2
EMC - ESD	Designed to meet requirements of EN61000-4-2
EMC - FAST TRANSIENTS	Designed to meet requirements of EN61000-4-4
EMC - SURGE	Designed to meet requirements of EN61000-4-5
EMC - VOLTAGE DIPS & FLUCTUATIONS	Designed to meet requirements of EN61000-4-11
MECHANICAL	
DIMENSIONS	See model table
FIXINGS	4 x 3.5mm ø holes. (See model table)
WEIGHT	See model table
INPUT CONNECTORS	See model table
OUTPUT CONNECTORS	See model table

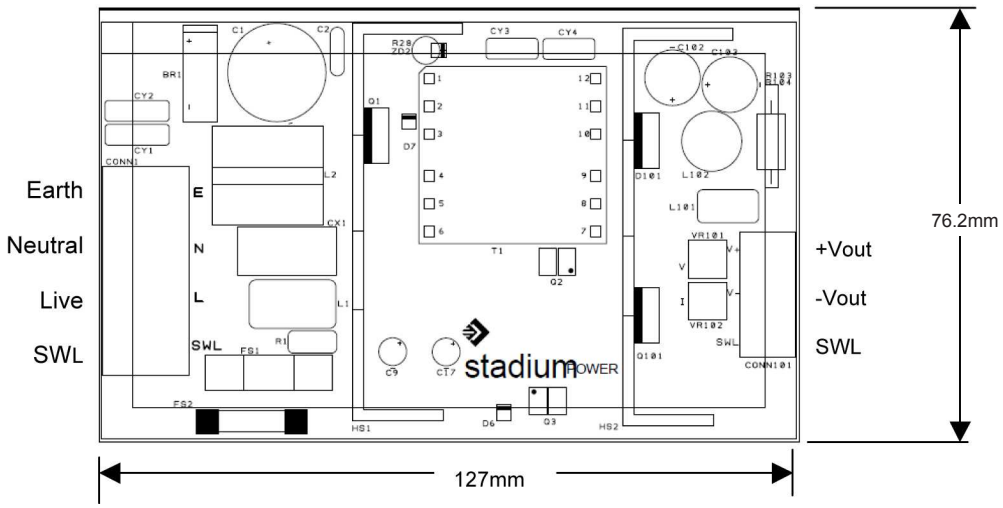
M 50 / M 75



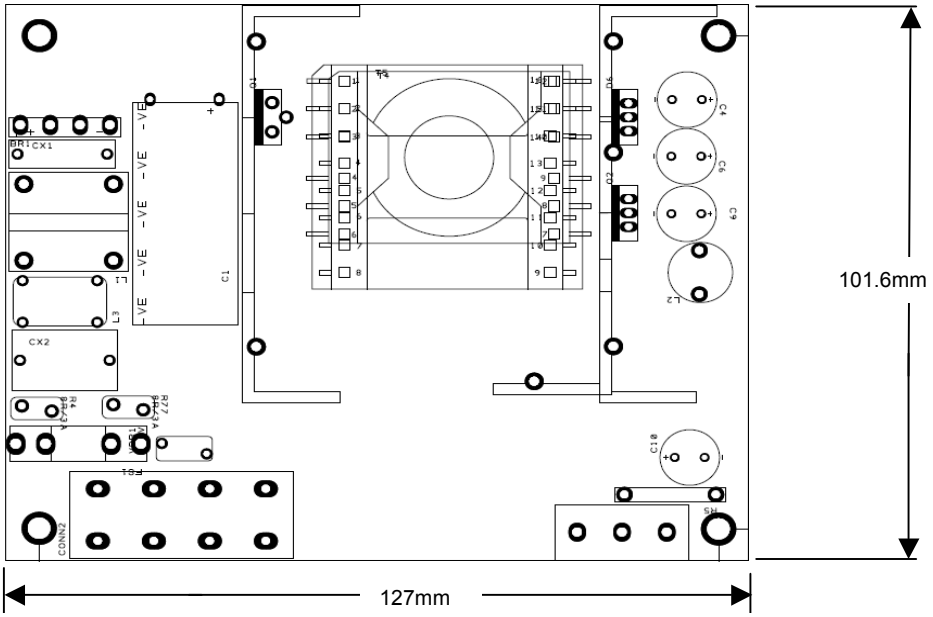
M 101



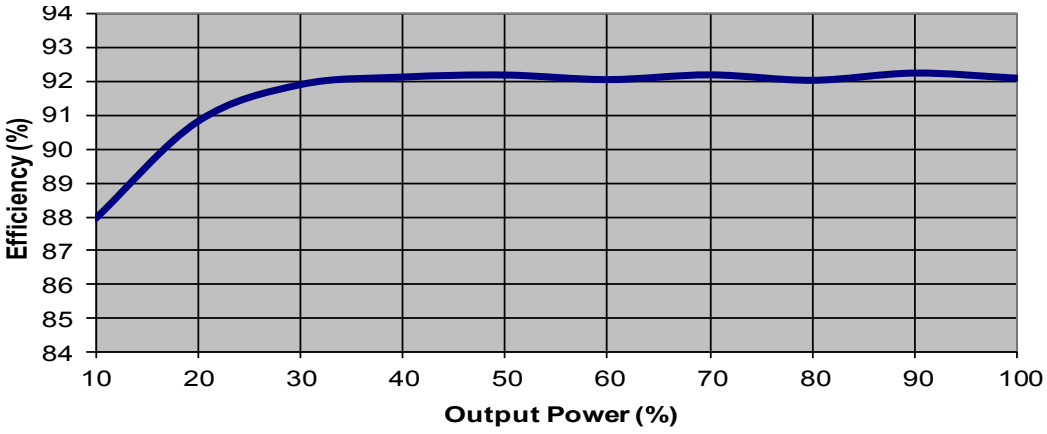
M 100 / M 120



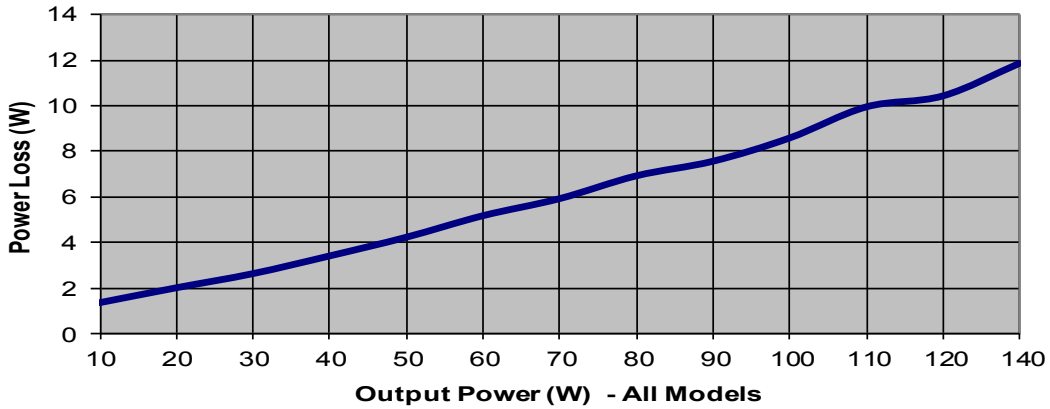
M 140



Efficiency (Typical)



Power Loss (Typical)



NOTE: Earth connections provided are not required for safety or functionality
EMC will require re-evaluation in host equipment