



Technical Information

EV2404

Product name
EV2404



Description	EV2404
	Single-Phase Power Supply 24 V / 3,8 A for DIN Rail and electrical control cabinet and distributors

Characteristics	
	Class II, Double Isolation (No Earth connection is required)
	Universal AC input voltage range and full power up to 55°C
	Power will not de-rate for the entire input voltage range
	Efficiency > 89.0% @ 230Vac
	Can be installed in compact cabinets
	NEC Class 2 and Limited Power Source (LPS) approvals
	Conforms to harmonic current IEC/EN 61000-3-2, Class A
	Safety approval according to IEC/EN/UL 60950-1, IEC/EN/UL 62368-1 and UL508

Input	
Nominal Input Voltage	100 - 240 VAC
Input Voltage Range	90 - 264 VAC
Nominal Input Frequency	50 - 60 Hz
Input Frequency Range	47 - 63 Hz
Nominal DC Input Voltage	125-250 VDC
DC Input Voltage Range	125-375 VDC
Efficiency at 100% load	>87% at 215 VAC, >89% at 230 VAC
Input Current	<2.20A at 115 VAC <1.00A at 230 VAC
Max. Power Dissipation	0% load: <0.4W at 115 VAC & 230 VAC 100% load: <13.6W at 115 VAC & 230 VAC
Max. Inrush current (Cold Start)	< 30A at 115 VAC < 60A at 230 VAC
Leakage Current	< 0.25 mA at 240 VAC



Output	
Nominal Output Voltage	24 VDC
Output Current	0-3.8A (3,8A max.)
Output Power	91.2 W
Output Voltage Adjustment Range	22-24 VDC
Factory Set Point Tolerance	± 2 %
Line Regulation	< 0.5 % (at 90-264 VAC input, 100% load)
Load Regulation	< 1.0 % (at 90-264 VAC input, 0-100% load)
PARD	<100mVpp
Rise Time	< 70 ms at nominal input (100%)
Start-up Time	< 2,000ms at nominal input (100%)
Hold-up Time	> 10ms at 115Vac > 60ms at 230 VAC (100%)
Dynamic Response (Overshoot & Undershoot O/P Voltage)	± 5% at 90-264 VAC Input, 10-100 % load (Slew Rate: 0.1A/μS, 50% duty cycle @ 5Hz to 100KHz)
Start-up with Capacitive Loads	3,000 μF max.

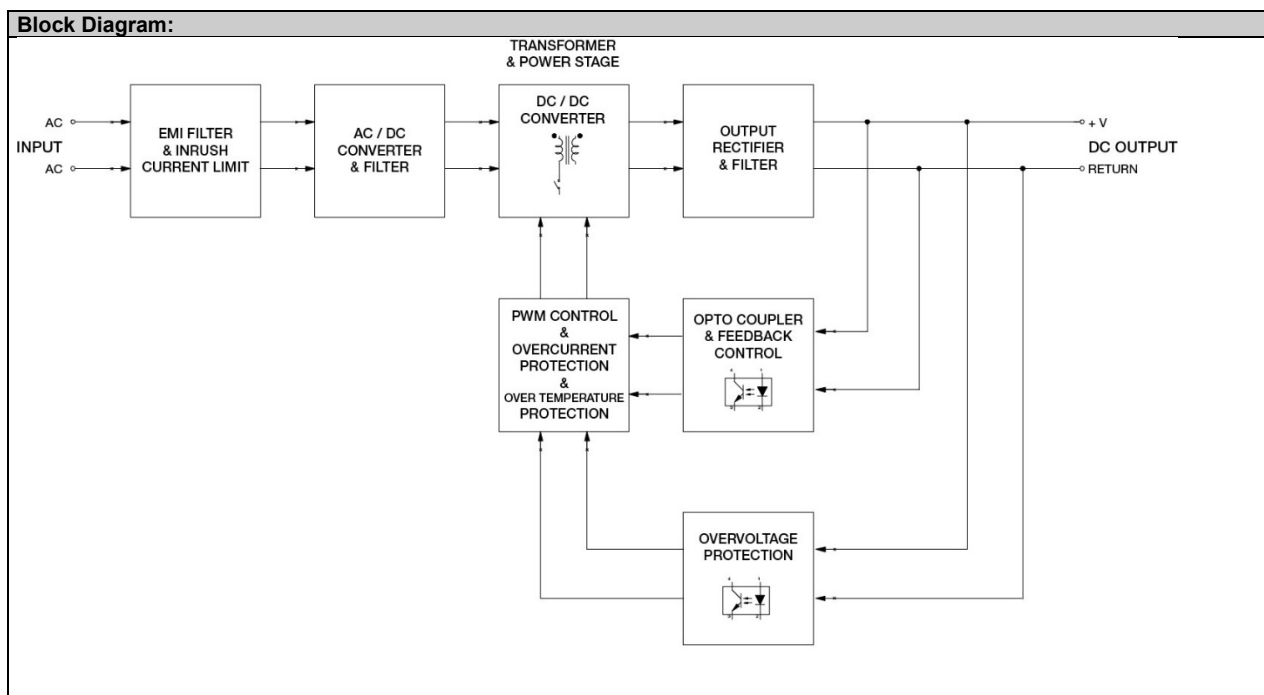
Protection	
Overvoltage	<34.8 V, SELV Output, Latch Mode
Overload/ Overcurrent	> 102~108% of rated load current, Fold Forward Mode (current rises, voltage drops) Non-Latching (Auto-Recovery)
Over Temperature	> 75°C Surrounding Air Temperature @ 100% load, Latch Mode
Short Circuit	Hiccup Mode, Non-Latching (Auto-Recovery when fault is removed)
Protection Against Shock	Class II (No PE connection is required)
Internal Fuse at L pin	T3.15AH
Degree of Protection	IP20

Environment	
Surrounding Air Temperature	-25°C to +71°C
Humidity	5 to 95% RH (Non-Condensing)
Storage Temperature	-25°C to +85°C
Power De-rating (temperature)	> 55°C de-rate by 2.5 % / °C
Operating Altitude	0 – 2,000 m
Vibration	Operating: IEC 60068-2-6, Sine Wave: 10-500Hz @ 19.6m/S ² (2G peak); 10 min per cycle, 60 min for all X, Y, Z directions
Shock Test	Operating: IEC 60068-2-27, Half Sine Wave: 4G for a duration of 22ms, 3 shocks for each 3 di- rections, 9 times in total
Over Voltage Category	II
Pollution degree	2

Safety/EMC	
Safety Entry Low Voltage	SELV (EN 60950)
Electrical Safety	TUV Bauart: EN 62368-1 UL/cUL recognized: UL 60950-1 and CSA C22.2 No. 60950-1 (File No. E131881) UL 62368-1 and CSA C22.2 No. 62368-1 (File No. E131881) CB scheme: IEC 60950-1, IEC 62368-1, Limited Power Source (LPS)
Industrial Control Equipment	UL/cUL listed: UL 508 and CSA C22.2 No. 107.1-01 (File No. E338991)
Class 2 Power Supply	UL/cUL recognized: UL 60950-1 and CSA C22.2 No. 60950-1 (File No. E131881) UL 62368-1 and CSA C22.2 No. 62368-1 (File No. E131881)
CE	In conformance with EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU
BIS	IS 13152-1
UKCA	In conformance with Electrical Equipment (Safety) Regulations 2016 No. 1011 and The Electromag- netic Compatibility Regulations 2016 No. 1091
Galvanic Isolation	Input-Output: 3 KVAC

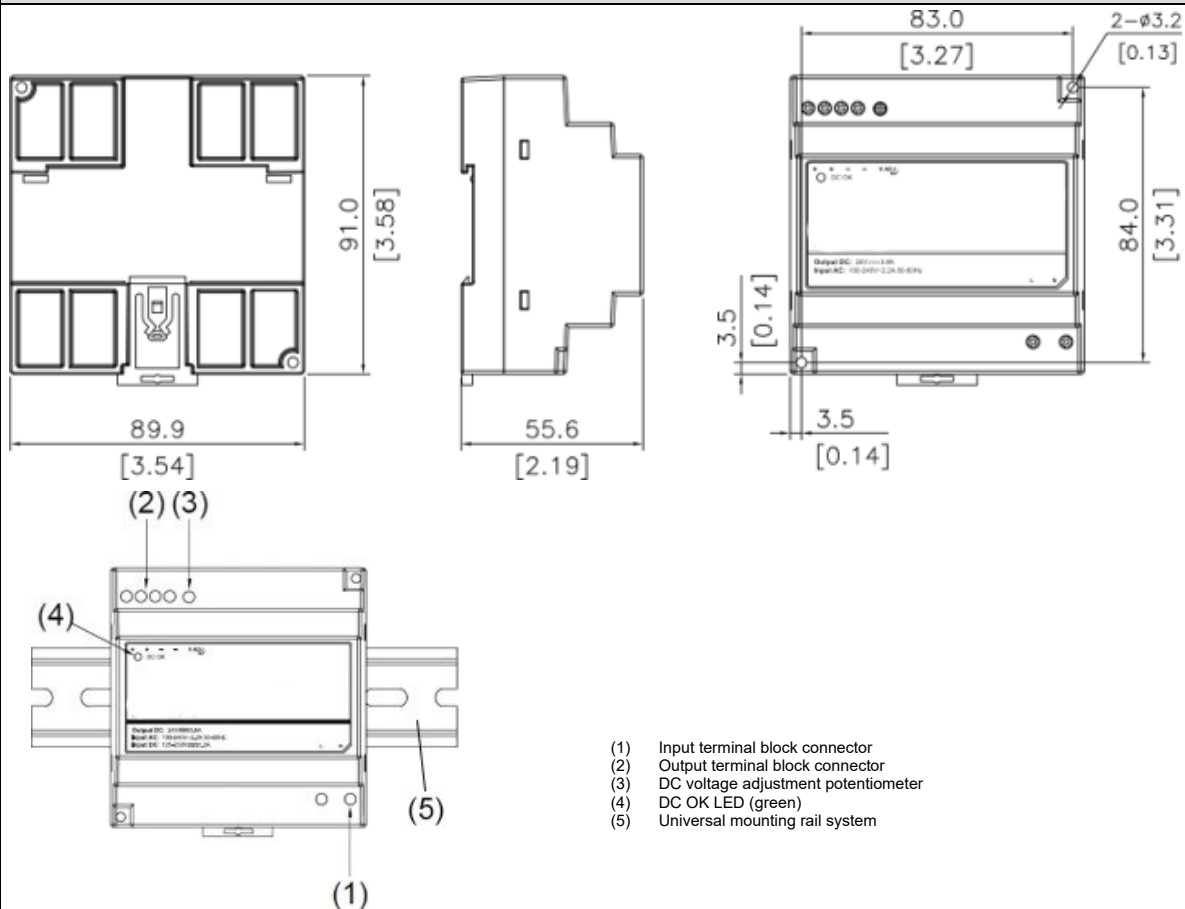


EMC Emissions (CE & RE)	Generic Standards: CISPR 32, EN 55032, FCC Title 47: Class B	
EMC Immunity	Generic Standards: EN 55024	
Electrostatic Discharge	IEC 61000-4-2	Level 3 Criteria A Air Discharge: 8kV Contact Discharge: 4kV
Radiated Field	61000-4-3	Level 2 Criteria A 80MHz-1GHz, 3V/M with 1kHz tone / 80% modulation
Electrical Fast Transient / Burst	61000-4-4	Level 3 Criteria A1 1kV
Surge	IEC 61000-4-5	Level 3 Criteria A, Differential Mode: 1kV
Conducted	IEC 61000-4-6	Level 2 Criteria A 150kHz-80MHz, 3Vrms
Power Frequency Magnetic Fields	IEC 61000-4-8	Criteria A, 1A/Meter
Voltage Dips and Interruptions	IEC 61000-4-11	0% of 100 Vac, 20 ms 40% of 100 Vac, 200 ms 70% of 100 Vac, 500 ms 0% of 100 Vac, 5,000 ms 0% of 240 Vac, 20 ms 40% of 240 Vac, 200 ms 70% of 240 Vac, 500 ms 0% of 240 Vac, 5,000 ms
Harmonic Current Emission	IEC/EN 61000-3-2, Class A	
Voltage Fluctuation and Flicker	IEC/EN 61000-3-3	
MTBF – Mean Time between Failure	> 500,000 hrs as per Telcordia SR-332 I/P: 100VAC, O/P: 100% load, Ta35°C	
Erwartete Cap Lebensdauer	10 years (115 VAC & 230 VAC, 50% Last at 40°C)	





Mechanical Data

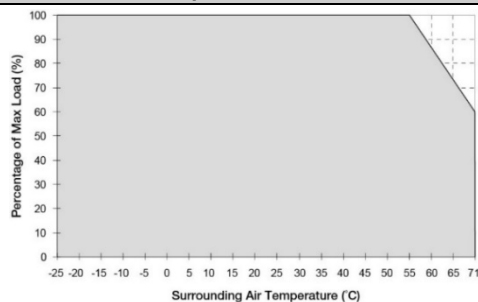


- (1) Input terminal block connector
- (2) Output terminal block connector
- (3) DC voltage adjustment potentiometer
- (4) DC OK LED (green)
- (5) Universal mounting rail system

Dimensions L x W x D in mm	91 x 89.9 x 55.6 mm
Weight in kg	0.35
Case Cover/ Chassis	Plastic
Indicator	green LED (DC-OK)
Cooling	convection
Terminal	Input: 2 Pins (rated 300V/25A) Output: 4 Pins (rated 300V/25A)
Wire	Input/ Output: AWG 20-12
Mounting rail	Standard TS35 mounting rail (in accordance to EN 60715)
Noise (1 Meter from power supply)	SPL < 25dBA

Derating

Temperature/Load



Input Voltage/ Load

