



Technical Information

E2403

Product name
E2403



Description	E2403
	Single-Phase Power Supply 24 V / 3 A for DIN Rail and electrical control cabinet
Characteristics	
	Ultra slim design
	Universal AC input voltage range
	Built-in constant current circuit for reactive loads
	Up to 90% efficiency
	Full power from -10°C to +50°C @ 230Vac with -30°C Cold Start
	Compliance to SEMI F47 @ 200Vac
	Limited Power Source (LPS) certified
Input	
Nominal Input Voltage	100 ~ 240 VAC
Input Voltage Range	85 ~ 264 VAC
Nominal Input Frequency	50 ~ 60 Hz
Input Frequency Range	47 ~ 63 Hz
Efficiency	89 % at 230 VAC
Inrush Current	1.45 A/115 VAC 0.9 A/230 VAC
Max. Inrush current	50 A/230 VAC
Leakage Current	< 1 mA/240 VAC



Output	
Nominal Output Voltage	24 V
Output Current	3.125 A
Output Power	75 W
Output Voltage Adjustment Range	21.6~ 26 VDC
Factory Set Point Tolerance	± 2.0 %
Line Regulation	< 5% (at 85-264 VAC, 100% load)
Load Regulation	< 1.0 % (0-100% load)
PARD ²	< 120m Vpp at > -10°C to 70°C < 360m Vpp at ≤ -10°C to -30°C
Rise Time	30 ms typ at nominal input (100% load)
Start-up Time	1200ms typ. at 115Vac (100% load) 1000ms typ. at 230Vac (100% load)
Hold-up Time	16ms typ. bei 115Vac (100% load) 60ms typ. bei 230Vac (100% load)
Dynamic Response (Overshoot & Undershoot O/P Voltage)	± 10% @ 115Vac & 230Vac Input, 0-50%, 50-100% load (Slew Rate: 2.5A/μS, 50% duty cycle @ 100Hz & 1KHz)
Start-up with Capacitive Loads	5,000 μF max.

Protection	
Overvoltage	<33.6 V, SELV output, Latch Mode
Overload/ Overcurrent	105 - 133% of rated load current, Constant current limit, Auto-recovery
Over Temperature	Latch Mode
Short Circuit	Hiccup Mode, Non-Latching (Auto-Recovery when fault is removed)
Internal Fuse at L Pin	F5AH
Degree of Protection	IP20
Protection Against Shock	Class I with PE connection

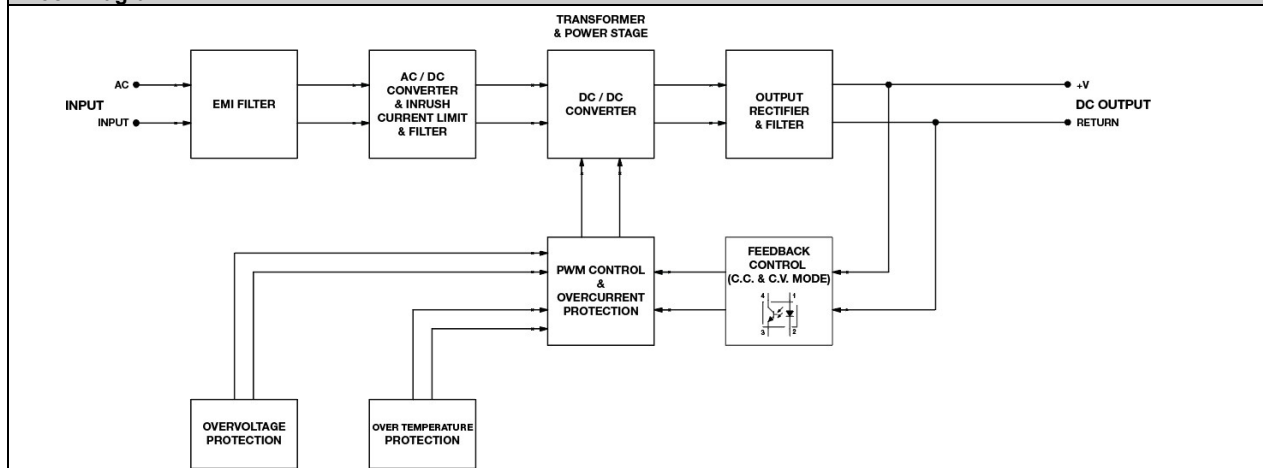
Environment	
Surrounding Air Temperature	-20°C to +70°C (-30°C Kaltstart)
Humidity	5 to 95% RH non-condensing
Storage Temperature	-40 to +85°C
Power De-rating (temperature)	10°C to -20°C derating um 1% / °C > 40°C de-rate by 1.67% / °C @ 115Vac > 50°C de-rate by 2.5% / °C @ 230Vac
Power De-rating (input voltage)	< 100VAC de-rate by 1.33%/VAC
Operating Altitude	0 – 5,000 m
Vibration	Non-operating: IEC 60068-2-6, Random: 5Hz to 500Hz; 2.09Grms; 20 min per axis for all X, Y, Z directions Operating: IEC 60068-2-6, Sine Wave: 10Hz to 500Hz @ 19.6m/s ² (2G peak); displacement of 0.35mm; 10 min per cycle, 60 min for X direction
Shock Test	Non-operating: IEC 60068-2-27, Half Sine Wave: 50G for duration of 11ms; 3 times per direction, 9 times in total Operating: IEC 60068-2-27, Half Sine Wave: 10G for duration of 11ms; 1 time in X axis
Over Voltage Category	II
Pollution Degree	3

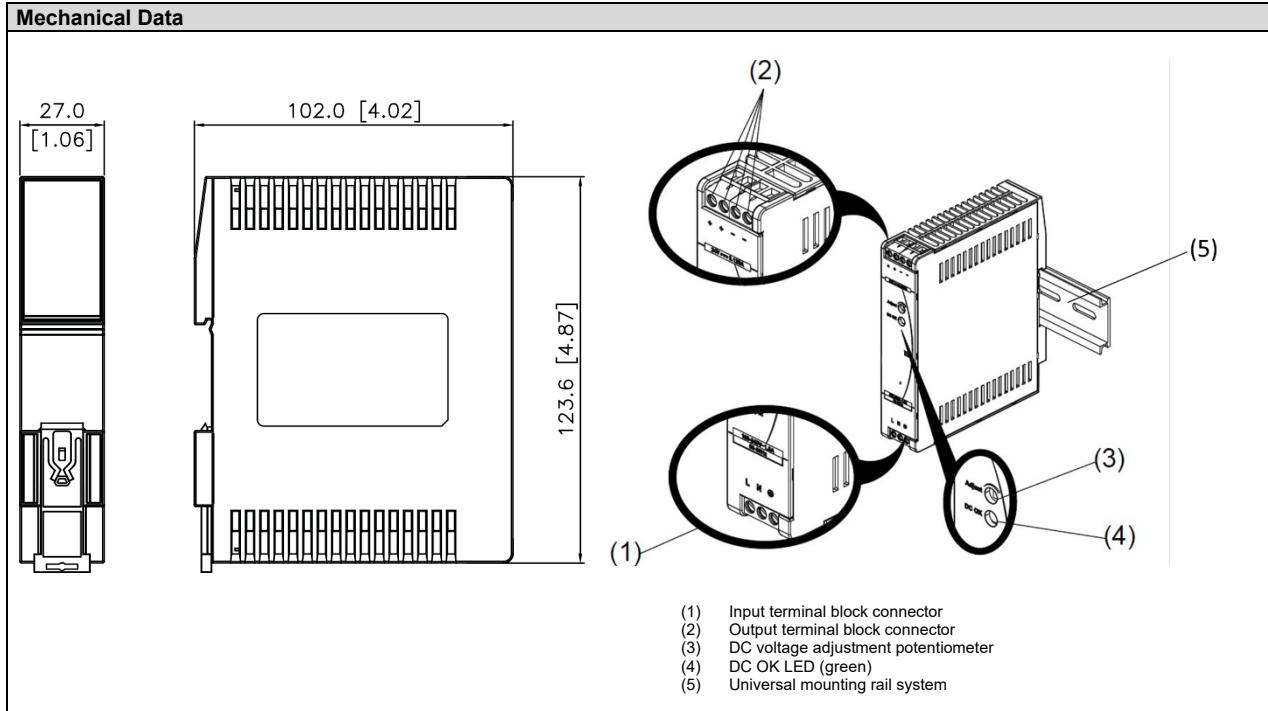
Safety/ EMC	
Electrical Safety	CB Scheme; IEC 62368-1, IEC 60950-1, IEC 61010-1 TÜV Bauart: EN 62368-1 UL/cUL and cTUVus: UL 62368-1 CCC: GB4943.1 EAC: TP TC 004/2011 KC: K60950-1
Limited Power Source (LPS)	CB Scheme: IEC 62368-1
CE	In conformance with EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU
Galvanic Isolation	Input-Output: 3 KVAC Input-Ground: 2 KVAC Output-Ground: 0,5 KVAC



Emissions (CE & RE)	CISPR 32, EN 55032, EN 55011, AS/NZS CISPR32: Class B; GB9254.1 Compliance with: EN 61000-6-3, EN 61000-6-4	
Component Power Supply for General Use	EN61204-3	
Immunity	EN 55035, EN 55024 Compliance with: EN 61000-6-1, EN 61000-6-2	
Electrostatic Discharge	IEC 61000-4-2	Level 4 Criteria A Air Discharge: 15kV Contact Discharge: 8kV
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 A 2kV
Surge	IEC 61000-4-5	Level 4 Criteria A Common Mode: 4kV Differential Mode: 2kV
Conducted	IEC 61000-4-6	Level 2 Criteria A 150kHz-80MHz 3Vrms
Power Frequency Magnetic Fields	IEC 61000-4-8	Level 2, Kriterium A 3A/m
Voltage Dips and Interruptions	IEC 61000-4-11	0 % of 115 VAC, 12 ms (criteria A) 40 % of 115 VAC, 200 ms (criteria B) 70 % of 115 VAC, 500 ms (criteria A) 0 % of 115 VAC, 5000 ms (criteria B) 0 % of 240 VAC, 12 ms (criteria A) 40 % of 240 VAC, 200 ms (criteria A) 70 % of 240 VAC, 500 ms (criteria A) 0 % of 240 VAC, 5000 ms (criteria B)
Harmonic Current Emission	IEC/EN 61000-3-2	Class A; GB17625.1
Voltage Fluctuation and Flicker	IEC/EN 61000-3-3	
Voltage Sag Immunity SEMI F47 – 0706	SEMI F47 – 0706	80 % of 200 VAC, 160 VAC, 1000 ms (criteria B) 70 % of 200 VAC, 140 VAC, 500 ms (criteria A) 50% of 200 VAC, 100 VAC, 200 ms (criteria A)
MTBF – Mean Time between Failure	Telcordia > 700.000Std. ; IP : 100VAC, O/P : 100% load, Ta: 25°C	
Expected Cap Lifetime	10 years (115Vac & 230Vac, 50% load @ 40°C)	

Block Diagram:





Dimensions L x W x D in mm	123,6 x 27 x 102 mm
Weight in kg	0,22
Case Cover/ Chassis	Plastic
Indicator	Green LED (DC-OK)
Cooling	Convection
Terminal	Input: 3 Pins (rated 300V/16A) Output: 4 Pins (rated 300V/16A)
Wire	Input: AWG 18-12 Output: AWG 22-12
Mounting rail	Standard TS35 mounting rail (in accordance with EN 60715)
Noise (1 Meter from power supply)	SPL < 25dBA

