

Technical Information

Two-phase Power Supply Z2405



Description	Z2405
	Two Phase Power Supply for DIN-Rail 24 V / 5 A with extended input range

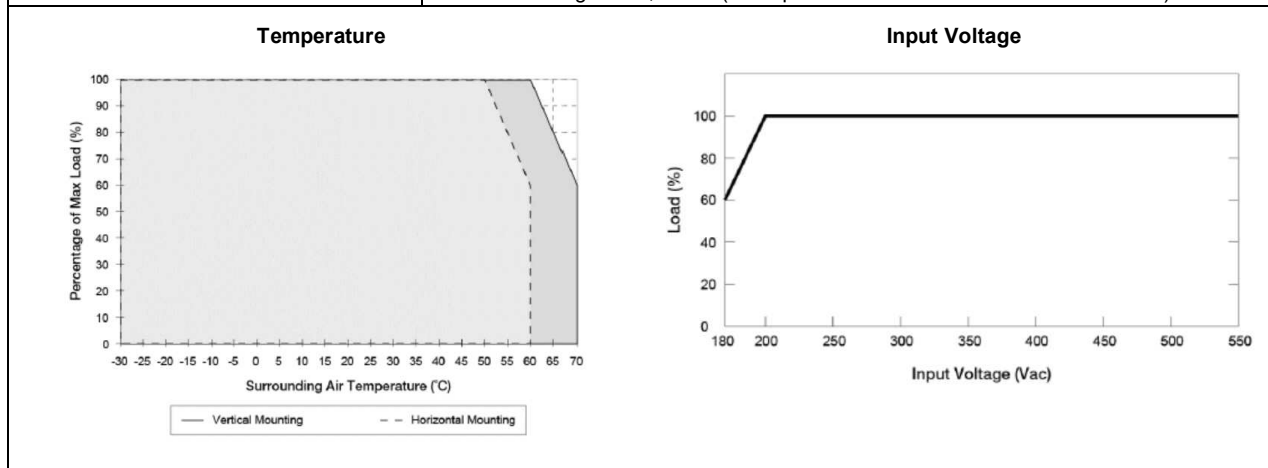
Output	
DC Voltage	24 V DC
Rated Current	5 A
Rated Power	120 W
Overload	3s at 24V (6A, 144W)
Terminal connections	- = Output - Ground + = Output +24 V DC
Connection square	Max. 2,5mm ²
Interference Voltage Ripple & Noise	< 150 mVp-p
Voltage Adj. Range	24-28V DC
Voltage Tolerance	± 2% max.
Line regulation	< 0,5% (at 200-550V AC Input, 100% load)
Load regulation	< 1% (at 200-550V AC Input, 100% load)
Rise Time	< 70 ms at rated input (100% load)
Setup time	< 2500 ms at rated input (100% load)
Hold up time (typ.)	> 10ms at 2x 230V AC (100% load) > 50ms at 2x 400V AC (100% load)
Monitoring function	LED - DC OK (lights up at Power ON) DC OK - relay contact (max. 30V / 1A) Contact closes when reaching correct output voltage

Input	
Voltage Range	180-550V AC with Derating (see derating table) 260-780V DC
Terminal connections	⊕ = Protected earth L2/N = Phase 2 / Neutral L1 = Phase 1
Terminals	Max. 8mm ²
Frequency range	47-63 Hz
Efficiency / Typ.	> 90% at 400V AC
AC Current	< 1,2 A at 230V AC, <0,8A at 400V AC
Inrush Current (Cold Start)	< 50 A at 200V AC
Leakage Current	< 1 mA at 500V AC
Power loss	0% load: < 1,7W at 200V AC, < 3,2W at 500V AC 100% load: < 17W at 200V AC, < 15W at 500V AC

Protection	
Overload	> 120-160% rated output power, constant current, Hiccup Mode, automatic recovery
Overvoltage	32V ± 10%, SELV output, Hiccup Mode, automatic recovery
Overtemperature	< 80°C ambient temperature at 100% load, automatic recovery
Short Circuit	Hiccup-Mode, automatic recovery
Protection degree	IP20
Internal Fuse	3,15A T
Protection Class	Class I with PE connection

Environmental Conditions	
Operating temperature and humidity	-30 – +70°C (see derating table temperature) 5-95% rel. humidity
Storage temperature and humidity	-40 – +85°C, 5-95% rel. humidity
Shock	30G (300m/s ²) for 18ms, 3 times per direction, 6 times in total, IEC 60068-2-27
Vibration	10-500 Hz at 30m/s ² (3G peak), 60min all axes, IEC 60068-2-6
Pollution degree	2

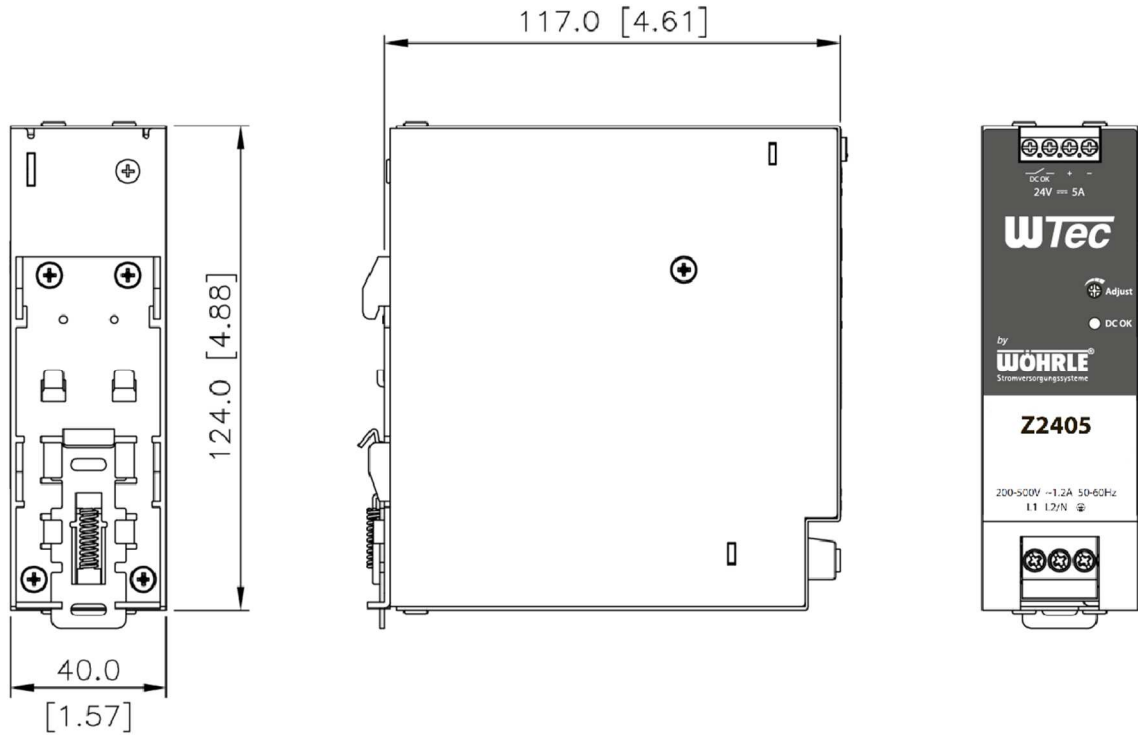
Derating	
Vertical mounting	> 60°C derating with 4%/°C
Horizontal mounting	> 50°C derating with 4%/°C
Input current	< 200V AC derating with 2%/V AC
Cold start	< -10°C derating with 2,5%/°C (Example: at -30°C load should be 50% or less)



Safety Standards	
Electrical Equipment of Machines	EN 60204-1 (Overvoltage Category III)
Low voltages	PELV (EN 60204-1), SELV (EN 60950-1)
Electrical safety	UL/cUL recognized: UL 60950-1 and CAN/CSA C22.2 No. 60950-1-07 (File E307271) CB-Certification: IEC60950-1 IEC/EN 62477-1 / IEC 62103
Industrial Control Equipment	UL/cUL listed: UL 508 and CSA C22.2 Nr. 107.1 (File E236194)
CE	In compliance with EMC directive 2014/30/EU (only AC input) and low-voltage directive 2014/35/EU
Material and parts	In compliance with RoHS directive 2011/65/EU (EN 50581)
Galvanic Isolation	Input to Output: 4kV AC Input to earth: 2kV AC Output to earth: 1,5kV AC

EMC		
Emissions (CE & RE)	CISPR 32, EN 55032, CISPR 11, EN 55011, FCC Title 47: Class B	
Harmonic current emissions	IEC/EN 61000-3-2, Class A	
Voltage Fluctuations and Flicker	IEC/EN 61000-3-3	
Power supplies for low voltage with DC output	EN 61204-3	
Immunity	EN 55024, EN 61000-6-2	
Immunity against electrostatic discharge	IEC 61000-4-2	Level 4 Criterion A Air discharge: 15kV Contact discharge: 8kV
Immunity against electromagnetic fields	IEC 61000-4-3	Level 3 Criterion A 80MHz-1GHz, 10V/M, 80% Modulation (1kHz) 1.4GHz-2GHz, 3V/M, 80% Modulation (1KHz) 2GHz-2.7GHz, 1V/M, 80% Modulation (1KHz)
Immunity against transient disturbances	IEC 61000-4-4	Level 3 Criterion A 2kV
Immunity against surge voltages	IEC 61000-4-5	Level 3 Criterion A Common Mode: 2kV Differential Mode: 1kV
Immunity against conducted disturbances	IEC 61000-4-6	Level 3 Criterion A 150kHz-80MHz, 10Vrms
Immunity against power frequency magnetic fields	IEC 61000-4-8	Criterion A 30A/m
Immunity against voltage dips, short interruptions and voltage variations	IEC 61000-4-11	100% dip; 1 cycle (20ms); self recoverable
Immunity against damped sinusoids	IEC 61000-4-12	Level 3 Criterion A Common Mode: 2kV Differential Mode: 1kV

Weight, Dimensions and Connections



Dimensions W x H x D in mm	40 x 124 x 117
Weight in g	620