

10 – 100 W Low Profile

DIN Rail Mount Power Supplies



Automation



Industry



Renewables



Communication



Test



EVC



Building automation

The low profile wipos PBS1 DIN rail power supply series provides a reliable solution for many industrial and building automation applications. With double insulation and a safety Class II input, connection to earth is not required. The NEC Class 2 compliant output, in accordance with UL 1310, allows operation where output currents are to be limited under fault conditions. Available in four power ranges, the wipos PBS1 series provide a choice of 12 and 24 output voltages.

Features	Benefits
▶ High efficiency, up to 90%	▶ Lower operating costs and improved thermal performance
▶ UL 1310 Class 2 complaint	▶ Suitable for building automation requiring NEC Class 2
▶ Low no load power consumption	▶ Energy saving
▶ Long E-Capacitor life (> 8 years @40°C, 75% load, 230 V AC)	▶ Long field life
▶ Class II, Wide range input (85-264 V AC)	▶ Global application, no earth required

Model Selector

Part number	Type	Output voltage	Adjustment range	Output Power	Output current	Efficiency (115/230 V AC)
81.000.1200.0	WIPOS PBS1 12-2	12 V DC	12-15 V DC	25.2 W	2.1 A	87/88 %
81.000.1210.0	WIPOS PBS1 24-0.42	24 V DC	-	10 W	0.42 A	87/87 %
81.000.1211.0	WIPOS PBS1 24-1.25	24 V DC	24-28 V DC	30 W	1.25 A	88/90 %
81.000.1212.0	WIPOS PBS1 24-2.5	24 V DC	24-28 V DC	60 W	2.5 A	89/90 %
81.000.1214.0	WIPOS PBS1 24-4.2	24 V DC	24-28 V DC	100 W	4.2 A	88/90 %

Specifications

Model		PBS1 24-0.42	PBS1 12-2 PBS1 24-1.25	PBS1 24-2.5	PBS1 24-4.2
Input					
Input Voltage Range (Operating)	V	85 – 264 V _{AC} 120-373 V _{DC} ⁽¹⁾			
Input Surge Voltage	V	300 V _{AC} für 5 s			
Input Frequency	Hz	47 - 63			
Input Current (110/230Vac)	A	0.18 / 0.12	0.6 / 0.4	1.2 / 0.8	2.0 / 1.1
Inrush Current at 230 V _{AC} (Cold Start)	A	40	50	60	60
Leakage Current	-	Not applicable			
Power Factor (110/230Vac)	-	0.56 / 0.42	0.6 / 0.4	0.5 / 0.43	0.5 / 0.43
Harmonic Compliance	-	Meets EN61000-3-2 Class A			
No Load Power Consumption	W	< 0.3	< 0.3	< 0.5	< 0.5
Hold Up Time (typ. 115Vac input)	ms	20	20	20	15
Average Efficiency (230Vac) ⁽²⁾	%	76.8	83.6	>87	87
Immunity	-	See immunity table			
Insulation class	-	Construction suitable for class II installation			
Safety Agency Certifications and Markings	-	IEC/UL/CSA/EN 62368-1, 60950-1, UL508 Listed, UL1310 Class 2 ⁽³⁾ , CE Mark			

Immunity

Test	Standard	Test Level	Criteria	Notes
ESD	EN61000-4-2	3	A	8 kV air discharge
Radiated Susceptibility	EN61000-4-3	3	A	
Electrical Fast Transient Burst	EN61000-4-4	4	A	
Surge	EN61000-4-5	3	A	
Conducted Susceptibility	EN61000-4-6	3	A	
Magnetic fields	EN61000-4-8	4	A	
Voltage dips and input interruptions	EN61000-4-11 Class 3 Industrial	0% for 1 cycle	A	> 200 V _{AC} input
		40% for 10/12 cycles	B	
		70% for 25/30 cycles	B	
		80% for 250/300 cycles	B	
SEMI F47 Line Dip	SEMI F47			

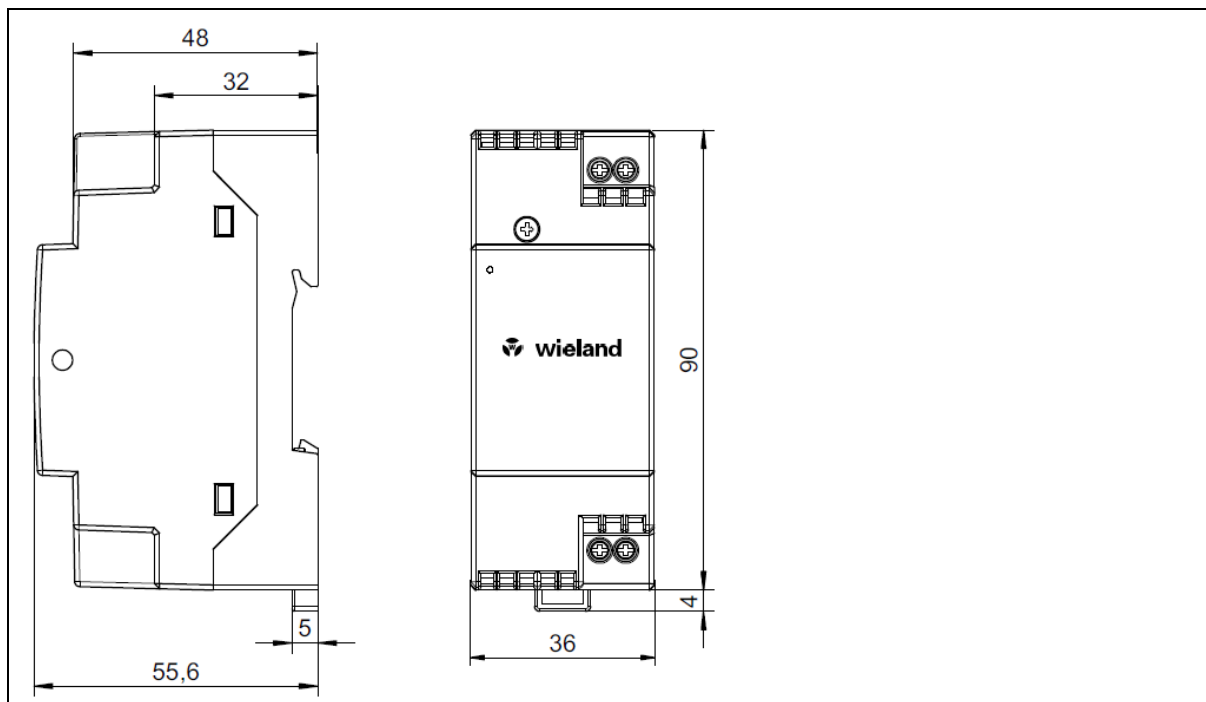
Specifications

Model		PBS1 24-0.42	PBS1 12-2 PBS1 24-1.25	PBS1 24-2.5	PBS1 24-4.2
Output					
Output Voltage Adjustment	V _{DC}	See model selector			
Switching Frequency (230 V _{AC} 100% Load)	kHz	~103.6	96.9 – 103.8	87 – 94	84.4 95.5
Line Regulation	mV	12 – 15 V Outputs: 120; 24 V Output: 240			
Load Regulation	mV	12 – 15 V Outputs: 120; 24 V Output: 240			
Ripple & Noise (max) (typ)	mV	12 – 15 V Outputs: 120; 24 V Output: 240			
Temperature Coefficient	%/°C	<±0.02			
Minimum Load	-	No minimum load required			
Overcurrent Protection	%	>105 Hiccup mode with auto recovery			
Overvoltage Protection	V	24 V Outputs: 29-35; 12 V Outputs: 16-19			
Indicators & Signals	-	Green LED indicates DC is ok			
Parallel Operation	-	Not available			
Series Operation	-	Possible, see installation manual			
Envionmental					
Operating Temperature (-25°C start-up)	°C	PBS1 24-0.42, PBS1 12-2, PBS1 24-1.25, PBS1 24-2.5: -20 to +71 full load at +55°C; (derate linearly to 60% load at +71°C) PBS1 24-4.2: -20 to +71°C. 115V _{AC} ~240V _{AC} : full load at +51°C; (derate linearly to 60% load at +71°C) 100V _{AC} ~115V _{AC} : full load at +40°C; (derate linearly to 40% load at +71°C)			
Storage Temperature	°C	-40 to +85			
Operating Humidity (non condensing)	%RH	5 - 95 (Operating & Storage)			
Cooling		Convection			
Altitude	m	3.000			
Withstand Voltage (For 1 minute)	V _{AC}	Input to Output 3k			
Isolation Resistance	MΩ	>100 at 25°C, 70%RH & 500V _{DC}			
Vibration (operating)	-	IEC 60068-2-6, Sine Wave, 10-500Hz, 19.6m/s2 (2G peak) 10 min per cycle, 60 min for all X,Y,Z directions			
Shock	-	IEC 60068-2-27, Half Sine Wave, 39.2m/s2 (4G) for a duration of 22ms 3 shocks for each 3 directions, 9 times in total			
Other					
Weight (Max)	g	65	120	200	280
Size (WxHxD)	mm	18 x 90 x 55.6	36 x 90 x 55.6	54 x 90 x 55.6	72 x 90 x 55.6
Size (WxHxD)	Inches	0.71 x 3.58 x 2.19	1.42 x 3.58 x 2.19	2.13 x 3.58 x 2.19	2.83 x 3.58 x 2.19
Case Material	-	Flame Retardant Polycarbonate (UL94 V-0)			
DIN Rail Type	-	Suitable for mounting on TS-35/7.5 or TS35/15 DIN Rails			
MTBF – Telcordia SR-332 issue 3 ⁽⁴⁾	Hrs	1,401,366	704,390	369,824	437,110
Warranty	Years	2			

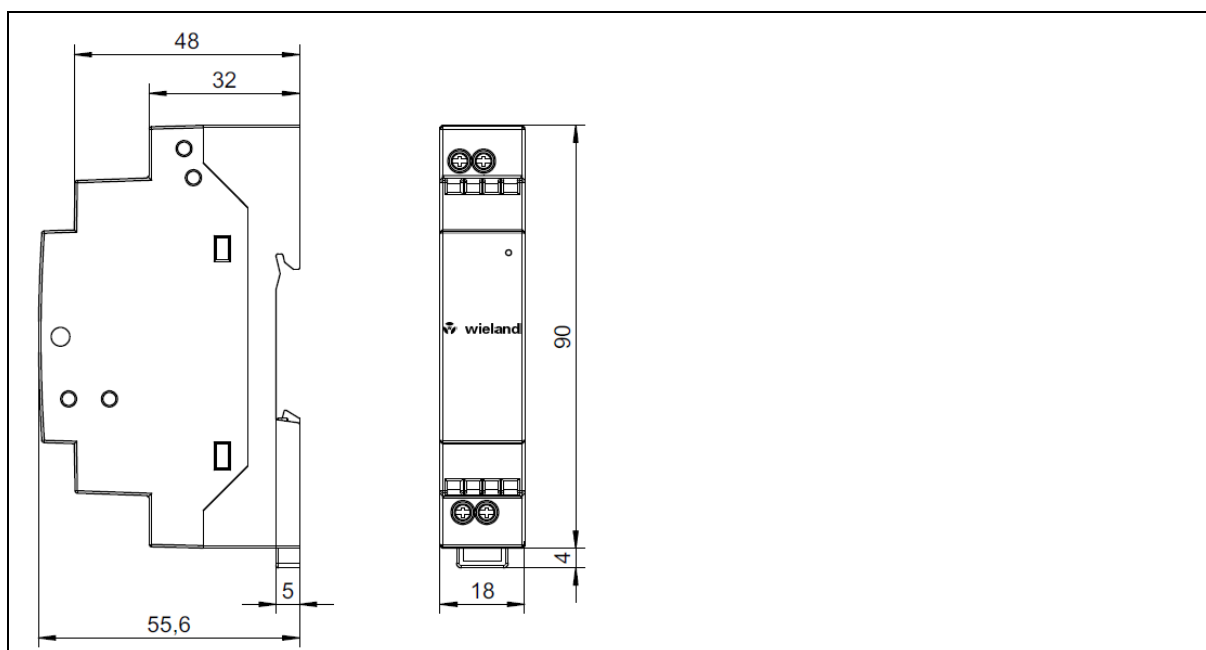
Notes

- (1) Safety certified for AC input only
- (2) Measured at 25%, 50%, 75% and 100% load conditions
- (3) NEC Class 2 in accordance with UL1310. Excludes wipos PBS1 24-4.2 model
- (4) 24V output model, 55°C ambient, full load, 230Vac input

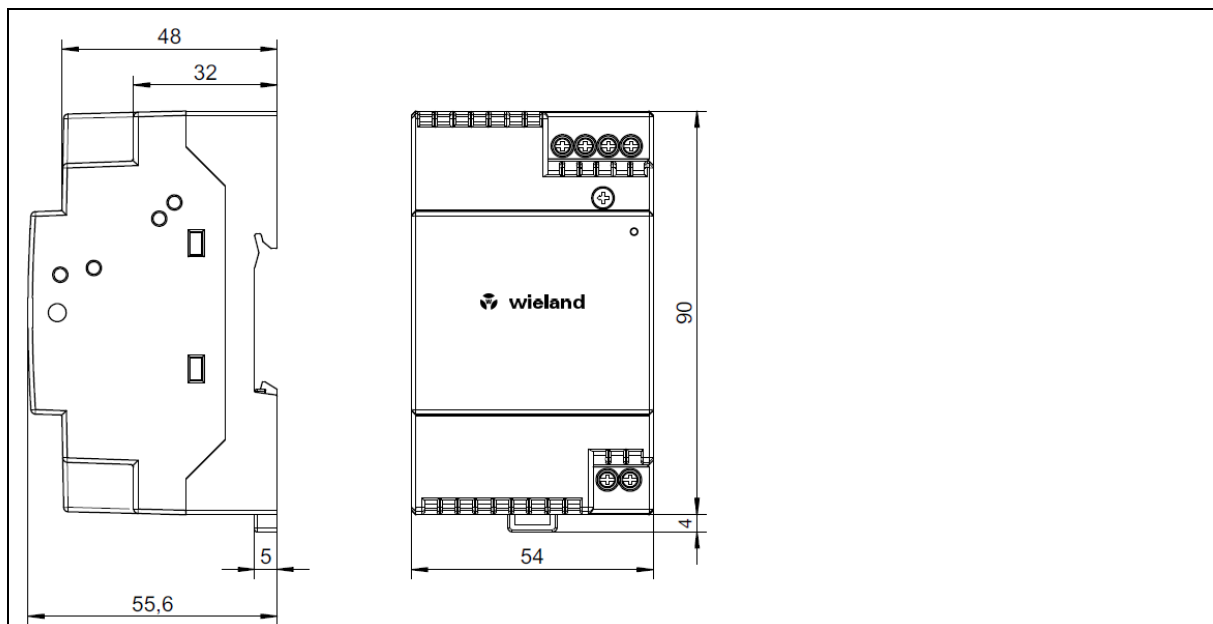
Outline wipos PBS1 12-2 | PBS1 24-1.25



Outline wipos PBS1 24-0.42



Outline wipos PBS1 24-2.5



Outline wipos PBS1 24-4.2

