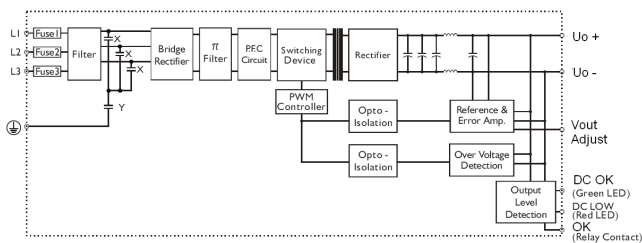


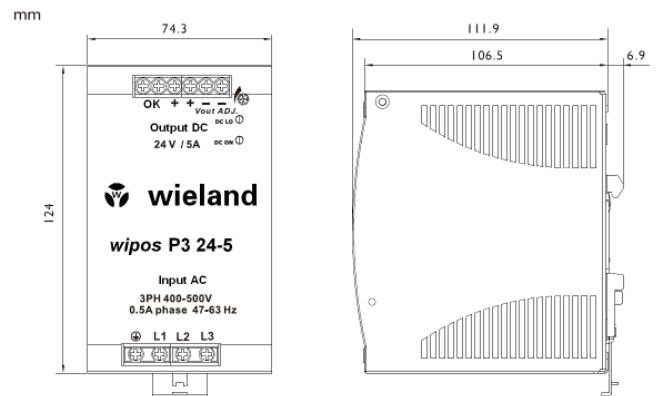
**wipos P3 24-5**

**wipos P3 24-5**  
 Switching power supply  
 24 V DC / 5 A  
 81.000.6160.0

- Primary switching power supply, three phase
- Output: 24 V DC / 5 A (adjustable 22.5 – 28.5 V DC)
- Short circuit proof
- Input: 340 - 575 V AC; 480 - 820 V DC
- Full load up to 60 °C
- PFC technology
- Vertical mount
- 100 % burn-in



Block diagram



Dimensional diagram

**Technical Data**

wipos P3 24-5		Part number: 81.000.6160.0
Rated output power	[P <sub>O</sub> ]	120 W
Rated output voltage	[U <sub>O</sub> ]	24 V DC
Rated output current	[I <sub>ON</sub> ]	5 A DC
Efficiency typ. / min.		89 % / 87 %
Minimum load		none
Output voltage trim range (U <sub>IN,AC</sub> , 0.8 x I <sub>ON</sub> )		22.5 V . . . 28.5 V
Output voltage accuracy (U <sub>IN,AC</sub> , I <sub>ON</sub> )		-0 % / +1 %
Line regulation		±1 %
Load regulation (U <sub>IN,AC</sub> )		±1 %
Temperature coefficient (U <sub>IN,AC</sub> , I <sub>Omin</sub> )		± 0.03 % / K
Rated overload protection		115 % - 135 % Temperature switch-off at 100 – 110 °C; auto-restart after cool down
Output short circuit (U <sub>O</sub> , I <sub>ON</sub> )		Current limited (hiccup mode)
Ripple & noise (U <sub>IN,AC</sub> , I <sub>ON</sub> , BW = 20 MHz)		<100 mV <sub>ss</sub>
Operation indicator		Display range output voltage OK (U <sub>I</sub> , I <sub>ON</sub> ) "DC OK", LED green (U <sub>O</sub> 17.6 ... 19.4 V) output voltage too low (U <sub>I</sub> , I <sub>ON</sub> ) "DC LOW", LED red (U <sub>O</sub> < 17.6 ... 19.4 V)
Parallel operation		no
Derating (61 °C . . . 71 °C)		2.5 % / K (see Fig. 1 Derating)
Overvoltage protection (U <sub>IN,AC</sub> , I <sub>ON</sub> )		30 . . . 33 V
Relay contact ("OK") closes at		U <sub>O</sub> > 19.4 V DC (U <sub>O</sub> 17.6 ... 19.4 V)
Relay contact load current (60 V DC) max.		0.3 A
Relay contact isolation voltage		500 V DC

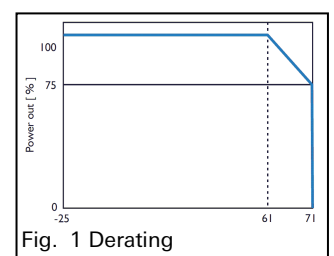


Fig. 1 Derating

## wipos P3 24-5

### Technical Data

wipos P3 24-5		Part number: 81.000.6160.0
Rated input voltage AC	[U <sub>IN,AC</sub> ]	3PH 400-500 V AC
Line frequency AC		47 – 63 Hz
Power factor correction filter (PFC)		yes (0.55)
Input voltage range AC	[U <sub>I,AC</sub> ]	3PH 340 ... 575 V
Input voltage range 2PH AC	[U <sub>I,AC</sub> ]	2PH 340 ... 575 V, I <sub>O</sub> = 3.75 A max.
Input voltage range DC	[U <sub>I,DC</sub> ]	480 ... 820 V
Rated input current (U <sub>I,AC</sub> = 400 V, I <sub>ON</sub> )		0.36 A typ. / 0.5 A max.
Inrush current (U <sub>IN,AC</sub> , I <sub>ON</sub> )		10 A typ.
Input fuse		3 x T2.0 A / 600 V AC (internal)
Hold up time (U <sub>IN,AC</sub> , I <sub>ON</sub> )		> 20 ms
Internal surge voltage protection		Varistor
Isolation voltage (input / output)		3000 V AC / 4242 V DC
Isolation resistance (input / output)		100 MOhm
Switching frequency		70 kHz
Ventilation / Cooling		free air convection
Mounting conditions (free space)		25mm free space on all sides recommended for cooling; up to 50 °C no horizontal space needed
Pollution degree		2
Operating ambient temperature	[T <sub>U</sub> ]	-40 °C . . . +71 °C
Humidity in operation		20 – 95 % RH
Storage temperature	[T <sub>U</sub> ]	-40 °C . . . +85 °C
Mounting on		DIN rail 35 mm (EN 60715)
Degree of protection		IP 20
MTBF		559,000 h
Dimensions (W x H x D)		74.3 x 124 x 119 mm
Weight		ca. 0.8 kg
Housing material		Metal
Connector cross section screw terminals		
min.	solid / stranded	0.5 mm <sup>2</sup> (AWG24)
max.	solid / stranded	6 mm <sup>2</sup> (AWG10)
Strip length		8 mm
Torque	input terminals	1.0 Nm max.
	output terminals	0.6 Nm max.
Approvals and standards		
UL / cULus		UL 508 Listed, UL60950-1 Recognized
TUV / Safety		EN60950-1, EN61558-1, EN61558-2-17 (follow EN60204), IRAM
CE		EN61000-6-3, EN 55022 Class B, EN61000-3-2, EN61000-3-3, EN61000-6-2, EN55024, EN61000-4-2, Level 4, EN61000-4-3 Level 3, EN61000-4-4 Level 4, EN61000-4-5 L-N Level 3, L/N-FG Level 4, EN61000-4-6 Level 3, EN61000-4-8 Level 4, EN61000-4-11, ENV 50204 Level 2, EN61204-3
Control Elements		
V <sub>out</sub> Adjust		Trimmer potentiometer for U <sub>out</sub> adjustment
Terminal connections		
-		2 x output voltage 24 V, negative output terminal (internally connected)
+		2 x output voltage 24 V, positive output terminal (internally connected)
OK		2 x relay (normally closed)
L1, L2, L3		AC: phase conductor, DC: no polarity
⊕ (PE)		PE (Ground), always connect