

wipos P3 24-40

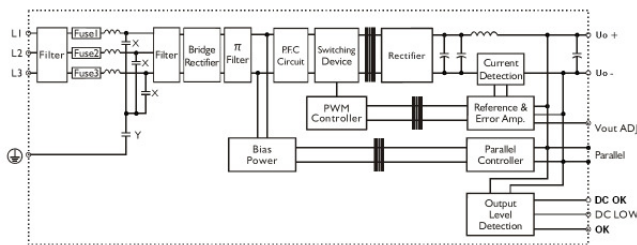
wipos P3 24-40

Switching power supply

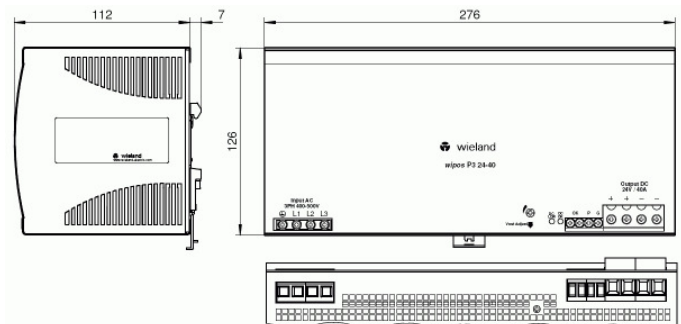
24 V DC / 40 A

81.000.6190.0

- Primary switching power supply, three phase
- Output: 24 V DC / 40 A (adjustable 22.5 – 28.5 V DC)
- Short circuit proof
- Input: 400 - 500 V AC; 480 - 820 V DC
- Full load up to 60 °C
- PFC technology
- Parallel operation possible
- 100 % burn-in



Block diagram



Dimensional diagram

Technical Data

wipos P3 24-40		Part number: 81.000.6190.0
Rated output power	[P _O]	960 W
Rated output voltage	[U _O]	24 V DC
Rated output current	[I _{ON}]	40 A DC
Efficiency typ. / min.		92 % / 90 %
Minimum load		none
Output voltage trim range (U _{IN AC} , 0.8 × I _{ON})		22.5 V . . . 28.5 V
Output voltage accuracy (U _{IN AC} , I _{ON})		-0 % / +1 %
Line regulation		±1 %
Load regulation (U _O)	single operation parallel operation	±1 % ±5 %
Temperature coefficient (U _{IN AC} , I _{Omin})		± 0.03 % / K
Rated overload protection		110 % - 130 % Temperature switch-off at 100 – 110 °C; auto-restart after cool down
Output short circuit (U _O , I _{ON})		Current limited (hiccup mode)
Ripple & noise (U _{IN AC} , I _{ON} , BW = 20 MHz)		<80 mV _{ss}
Operation indicator	output voltage OK (U _I , I _{ON}) output voltage too low (U _I , I _{ON})	Display range "DC OK", LED green (U _O 17.6 ... 19.4 V) "DC LOW", LED red (U _O < 17.6 ... 19.4 V)
Parallel operation (0.1 . . . 0.9 I _{Omax})		yes, max. 2 units (current share, see Fig. 1 Parallel operation)
Derating (61 °C . . . 71 °C)		3.5 % / K (see Fig. 2 Derating)
Oversvoltage protection (U _{IN AC} , I _{ON})		30 . . . 33 V
Relay contact ("OK") closes at		U _O > 19.4 V DC (U _O 17.6 ... 19.4 V)
Relay contact load current (60 V DC) max.		0.3 A
Relay contact isolation voltage		500 V DC

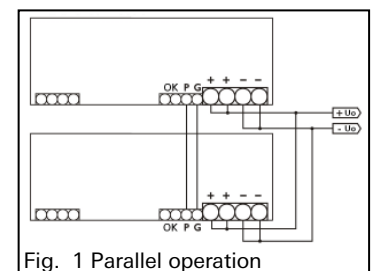


Fig. 1 Parallel operation

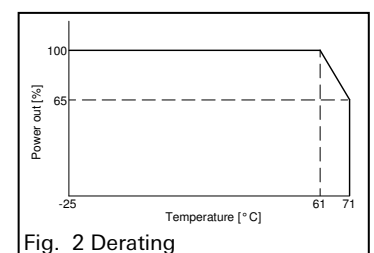


Fig. 2 Derating

wipos P3 24-40

Technical Data

wipos P3 24-40		Part number: 81.000.6190.0
Rated input voltage AC	[U _{IN AC}]	3PH 400 - 500 V AC
Line frequency AC		47 – 63 Hz
Power factor correction filter (PFC)		yes (0.8)
Input voltage range AC	[U _{I AC}]	3PH 340 ... 575 V AC
Input voltage range 2PH AC	[U _{I AC}]	2PH 340 ... 575 V, I _O = 30 A max.
Input voltage range DC	[U _{I DC}]	480 ... 820 V DC
Rated input current (U _{I AC} = 400 V, I _{ON})		2.4 A max.
Inrush current (U _{IN AC} , I _{ON})		30 A typ.
Input fuse		3 x T5 A / 500 V AC (internal)
Hold up time (U _{IN AC} , I _{ON})		> 15 ms
Internal surge voltage protection		Varistor
Isolation voltage (input / output)		3000 V AC / 4242 V DC
Isolation resistance (input / output)		100 MOhm
Ventilation / Cooling		free convection
Mounting conditions (free space)		25 mm free space on all sides recommended for cooling; up to 50 °C no horizontal space needed
Pollution level		2
Operating ambient temperature	[T _U]	-40 °C . . . +71 °C
Humidity in operation		20 – 95 % RH
Storage temperature	[T _U]	-40 °C . . . +85 °C
Mounting on		DIN rail 35 mm (EN 60715)
Degree of protection		IP 20
MTBF		352,000 h
Dimensions (W x H x D)		276 x 126 x 119 mm
Weight		ca. 3.4 kg
Housing material		Metal
Connector cross section - input connectors		(power supply, OK, P, G)
min. solid / stranded		0.2 mm ² (AWG24)
max. solid / stranded		6 mm ² (AWG10)
Strip length		8 mm
Torque supply:		1.0 Nm max.
connectors "OK", "P", "G":		0.6 Nm max.
Connector cross section - output connectors		("+", "-")
min. solid / stranded		0.5 mm ² (AWG20)
max. solid / stranded		10 mm ² (AWG6)
Strip length		10 - 11 mm
Torque		1.8 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, EN55022 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, EN 61000-4-11, ENV50204 Level 2, EN61204-3
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
G		Parallel GND pin for current share
P		Parallel PIN for current share