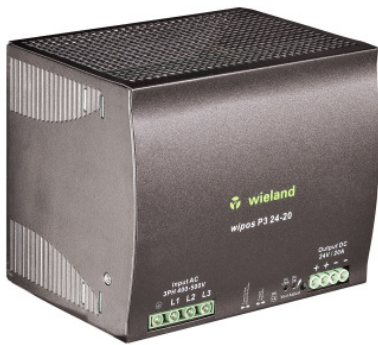
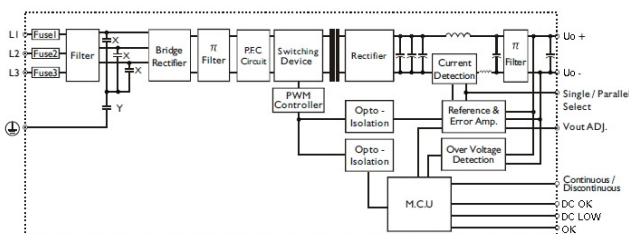
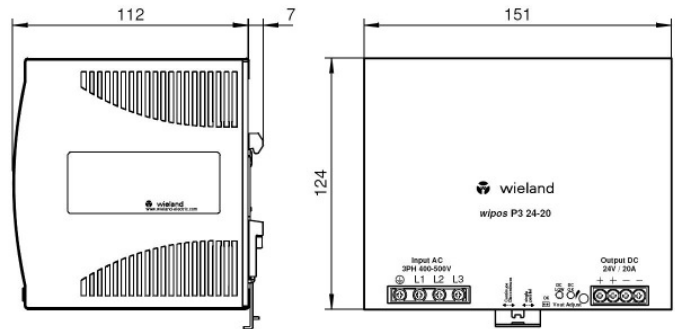
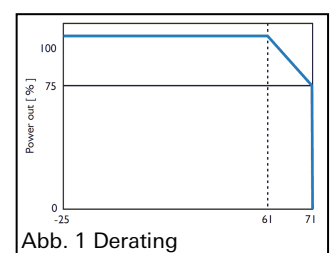


wipos P3 24-20

wipos P3 24-20
Switching power supply
24 V DC / 20 A
81.000.6180.0

- Primary switching power supply, three phase
- Output: 24 V DC / 20 A (adjustable 22.5 – 28.5 V DC)
- Short circuit proof
- Fold forward / Hiccup mode selectable
- Input: 3 PH 400 - 500 V AC; 480 - 820 V DC
- Full load up to 60 °C
- PFC technology
- Vertical mount
- Parallel operation possible
- 100 % burn-in


Block diagram

Dimensional diagram
Technical Data

wipos P3 24-20		Part number: 81.000.6180.0
Rated output power	[P _O]	480 W
Rated output voltage	[U _O]	24 V DC
Rated output current	[I _{ON}]	20 A DC
Efficiency typ. / min.		90 % / 88 %
Minimum load		none
Output voltage trim range (U _{IN_AC} , 0.8 x I _{ON})		22.5 V . . . 28.5 V
Output voltage accuracy (U _{IN_AC} , I _{ON})		-0 % / +1 %
Line regulation		±1 %
Load regulation (U _{IN_AC})	single operation parallel operation	±1 % ±5 %
Temperature coefficient (U _{IN_AC} , I _{Omin})		± 0.03 % / K
Rated overload protection		110 % - 135 % Temperature switch-off at 100 °C – 110 °C; auto-restart after cool down
Output short circuit (U _O , I _{ON})	Continuous (switch position "C") Discontinuous (switch position "D") (selectable via slide switch)	C: current limited (fold forward) D: hiccup mode: switch-off after 3 seconds, auto-restart after cool down
Ripple & noise (U _{IN_AC} , I _{ON} , BW = 20 MHz)		<100 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 _{ON})		yes, max. 2 units (slide switch)
Derating (61 °C . . . 71 °C)		2.5 % / K (see Abb. 1 Derating)
Overvoltage protection (U _{IN_AC} , I _{ON})		30 . . . 33 V



wipos P3 24-20

Technical Data

wipos P3 24-20		Part number: 81.000.6180.0
Relay contact ("OK") closes at		$U_o > 19.4 \text{ V DC}$ ($U_o = 17.6 \dots 19.4 \text{ V}$)
Relay contact load current (60 V DC) max.		0.3 A
Relay contact isolation voltage		500 V DC
Rated input voltage AC	[$U_{IN AC}$]	3PH 400 - 500 V AC
Line frequency AC		47 – 63 Hz
Power factor correction filter (PFC)		yes (0.65)
Input voltage range AC	[$U_{L AC}$]	3PH 340 ... 575 V AC
Input voltage range 2PH AC	[$U_{I AC}$]	2PH 340 ... 575 V, $I_o = 15 \text{ A max.}$
Input voltage range DC	[$U_{I DC}$]	480 ... 820 V DC
Rated input current ($U_{I AC} = 400 \text{ V}$, I_{ON})		1.4 A max.
Inrush current ($U_{IN AC}$, I_{ON})		20 A typ.
Input fuse		3 x T3.15 A / 500 V AC (internal)
Hold up time ($U_{IN AC}$, I_{ON})		> 20 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]	-30 °C . . . +71 °C
Humidity in operation		20 – 95 % RH
Storage temperature	[T_U]	-30 °C . . . +85 °C
Mounting on		DIN rail 35 mm (EN 60715)
Degree of protection		IP 20
MTBF		411,000 h
Dimensions (W x H x D)		151 x 124 x 119 mm
Weight		ca. 1.75 kg
Housing material		Metal
Connector cross section - screw terminals		
min.	solid / stranded	0.5 mm ² (AWG24)
max.	solid / stranded	6 mm ² (AWG10)
Strip length		8 mm
Torque	input connectors	1.0 Nm max.
	output connectors	0.6 Nm max.
Connector cross section "OK" (spring terminal)		
min.	solid / stranded	0.13 mm ² (AWG26)
max.	solid / stranded	0.5 mm ² (AWG20)
Strip length		9 - 10 mm
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, EN 61000-6-2, 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, ENV50204 Level 2, EN61204-3
Control Elements		
Slide switch 'Continuous/Discontinuous'		Continuous fold forward Discontinuous hiccup mode
Slide switch 'Single/Parallel'		Single / parallel operation
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