



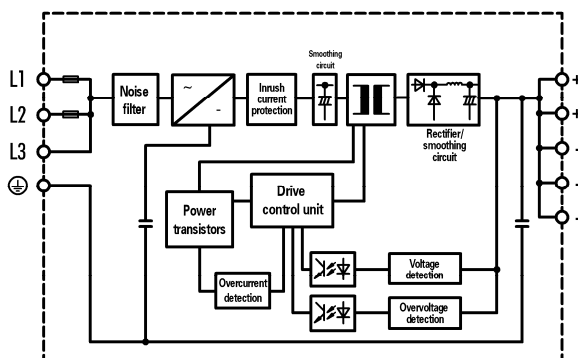
wipos PS3 24-40

Switching power supply

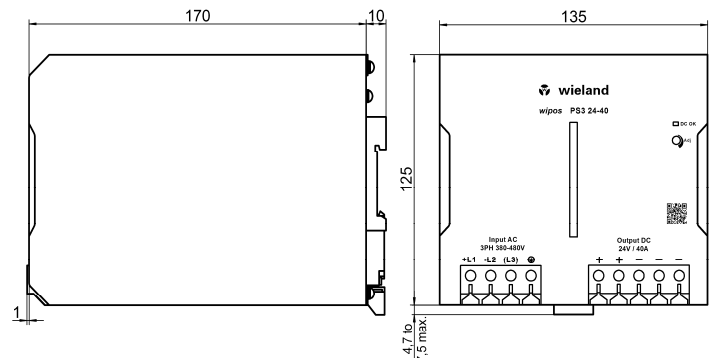
24 V DC/40 A

81.000.6590.0

- Primary switching power supply, three phases
- Output: 24 V DC/40 A (adjustable 24.0 - 29.5 V DC)
- Input: 320 - 576 V AC
- Full load up to 60 °C
- Vertical mount



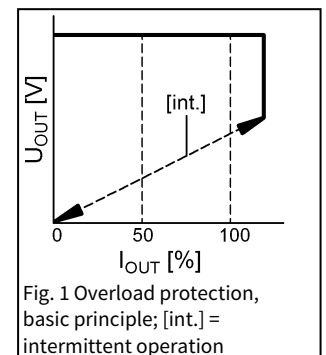
Block diagram



Dimensional diagram

Technical Data

wipos PS3 24-40	Part number: 81.000.6590.0
Input (+L1, -L2, L3)	
Rated voltage AC	3PH 380 ... 480 V AC
Voltage range AC	3PH 320 ... 576 V AC
Line frequency AC	47 ... 63 Hz
Rated input current 3~400 V AC typ.	1.8 A typ.
Inrush current 3~400 V AC max.	6 A typ. (5ms)
Output (+, -)	
Rated output power	960 W
Rated output voltage	24 V DC
Rated output current	40 A DC
Operation indicator Output voltage	"DC OK", LED green Display range ($U_o < 19.4$ V)
Output voltage trim range	24.0 V ... 29.5 V
Overload protection	> 121 % (see Fig. 1 Overload protection)
Power boost function	120 %, max. 10 s
Efficiency typ.	93 % typ.
Line regulation	± 0.5 % max.
Load regulation	1.5 % max.
Temperature coefficient	± 0.05 %/c max.
Ripple & noise	< 60 mV _{ss} (at 20 MHz of bandwidth)
Hold up time 3~400 V AC	> 20 ms



Technical Data

wipos PS3 24-40		Part number: 81.000.6590.0
General data		
Isolation voltage (input/output)		3000 V AC
Isolation resistance (input/output)		100 MOhm
Operating ambient temperature		-40 °C ... +70 °C (UL: max. 40 °C)
Storage temperature		-40 °C ... +85 °C
Derating		<p>Standard mounting:</p> <p>A. 3PH 340 ... 576 V AC below 340 V AC: U_o max. 28.5 V, max. 60 % load</p> <p>B. 2PH 380 ... 576 V AC U_o max. 26.4 V</p> <p>C. 2PH 360 ... 380 V AC: U_o max. 26.4 V, load max. 60 % or diagram curve C (see Fig. 2 Derating - Standard mounting)</p> <p>Face-up mounting:</p> <p>D. 3PH 340 ... 576 V AC below 340 V AC: U_o max. 28.5 V, load max. 60 %</p> <p>E. 2PH 380 ... 480 V AC: U_o max. 26.4 V</p> <p>F. 2PH 480 ... 576 V AC: at 2PH 340 ... 380 V AC: U_o max. 26.4 V, load max. 60 % or diagram curve F (see Fig. 3 Derating - Face-up mounting)</p>
Humidity in operation		0 - 95 % RH, non-condensing
Ventilation/Cooling		free air convection
MTBF		150.000 h
Pollution degree		2
Degree of protection		IP 20
Safety class		1
Mounting		DIN rail 35 mm (EN 60715)
Mounting conditions (free space)		20 mm horizontal, 75 mm vertical
Dimensions (W x H x D)		135 x 125 x 150 mm
Weight		2,000 g max.
Housing material		Metal, PC
Connections		
Connector cross section input	solid/stranded	1.5 - 16 mm ² (AWG16 - 6)
Connector cross section output	solid/stranded	10 - 16 mm ² (AWG8 - 6)
Connector cross section PE	solid/stranded	min. 2.5 mm ² (AWG14)
Strip length		13 - 16 mm
Torque		10.62 ... 13.28 lb-in max.
Approvals and Standards		
Standards		SELV: EN50178 PELV: EN50178 / EN60204-1
Approvals		CE / cULus / LR
Control elements		
ADJ		Trimmer potentiometer for U_o adjustment
Terminal assignment		
+L1, -L2, (L3)		AC: phase conductor, DC: positive terminal at +L1, negative terminal at -L2
⊕ (PE)		PE (Ground), always connect
+		2 x output voltage 24 V, positive output terminal (internally connected)
-		3 x output voltage 24 V, negative output terminal (internally connected)

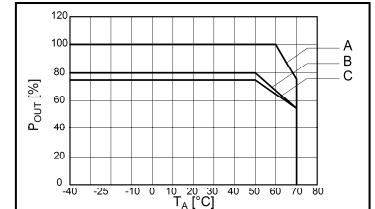


Fig. 2 Derating - Standard mounting
A. 3PH 340 ... 576 V AC
B. 2PH 380 ... 576 V AC
C. 2PH 360 ... 380 V AC

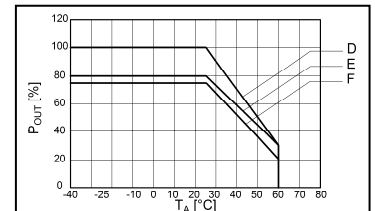


Fig. 3 Derating - Face-up mounting
D. 3PH 340 ... 576 V AC
E. 2PH 380 ... 480 V AC
F. 2PH 480 ... 576 V AC