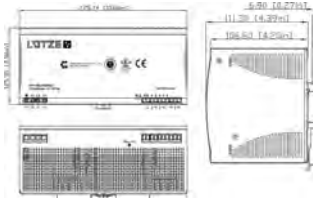


Power supply · regulated, 960 W, 3-phase

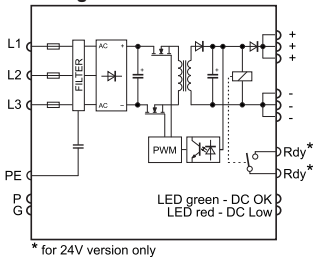
Primary switchmode power supply, PFC, 3-phase
Input: wide-range input AC 340–576 V, DC 480–820 V
Output: 24 V / 48 V, adjustable



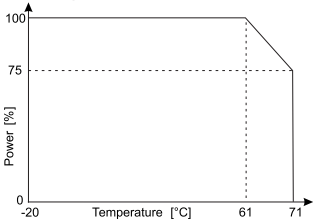
Dimensions



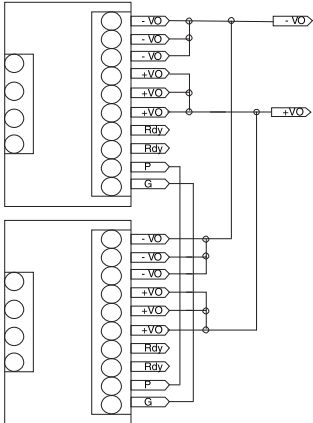
PIN assignment



Derating



Parallel/redundant mode



Description	Part-No.	Type	PU	
Screw terminal				
Output voltage/current	DC 24 V / 40 A	722806	WRA 960-24	1
	DC 48 V / 20 A	722810	WRA 960-48	1

Input	WRA 960-24	WRA 960-48
Nominal voltage		3× AC 400–500 V
Operation voltage range		3× AC 340–575 V; 3× DC 480–820 V
Line frequency		47 – 63 Hz
Rated current	U _I = AC 400 V: 2.4 A / U _I = AC 480 V: 1.6 A	
Inrush current	30 A	
Internal fuse	T6, 3 A / per phase	
External fuse	Automatic: 3 × B 16 A, C 10 A	
Power Factor Correction P.F.C.	0.7	

Output	WRA 960-24	WRA 960-48
Rated voltage output	DC 24 V	DC 48 V
Rated current output	40 A	20 A
Max. output current	–	
Short-circuit current	–	
Voltage trim range	22.5–28.5 V	47/56 V
Accuracy	1 %	
Line regulation	±1 %	
Load regulation	Single ±1 %, Parallel ±5 %	
Rise time	1 s	
Temperature coefficient	±0.03 % / °C	
Ripple & Noise	80 mV	
Hold up time	15 ms	
Status indication DC ON LED green	≥17.6–19.4 V	≥37–43 V
Status indication DC LOW LED red	≤17.6–19.4 V	≤37–43 V
Parallel/redundant operation	max 2 devices with 92 % load current each, connection P and G for distributed current	

Efficiency	92 %	93 %
Low power loss	–	
Rated over load protection	Rated over load protection: 110 % –130 %	
Over voltage protection	125–137 %	125–142 %
Short circuit characteristics	Hiccup-mode	
General		
Switching frequency	approx. 52 kHz	
Insulation voltage input/output	AC 3.0 kV _{eff}	
Insulation voltage input / ground	AC 1.5 kV _{eff}	
Insulation voltage output / ground	–	
Insulation resistance at DC 500 V	100 MΩ	
Operation temperature range	–25 °C – 71 °C (derating)	
Derating	–3.5 % / °C starting at 61°C	
Storage temperature range	–40 °C – 85 °C	

M.T.B.F.	352000 h	390000 h
Relative humidity	20–90% RH, non-condensing	
Dimensions (w × h × d) in mm	276.0 × 125.0 × 118.0	
Cooling	Natural air cooling, 25 mm distance on all sides	
Housing material	metal	
Field installation	rail TS 35 (EN 50022)	
Application height	3000 m	
Installation position	vertical	
Protection class	IP 20	
IP rating	I (SELV, PELV)	
Overvoltage category	II	
Pollution degree	2	
Weight (kg/piece)	3.200	
Termination	Screw terminal: 0.5–10.0 mm ² , max. 0.62 Nm	
Approvals	UL: UL 508 listed; cUL: UL 60950-1 accepted; TÜV: EN 60950-1, CE: EN 61000-6-3 / EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 55024	

Monitoring	WRA 960-24	WRA 960-48
DC ON Control (Rdy)	Normally open	–
Switching voltage	DC 60 V	–
Switching current	max. 300 mA	–
Switching capacity	–	–
Insulation voltage	DC 500 V	–