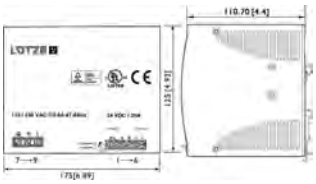
Power supply · regulated, 480 W

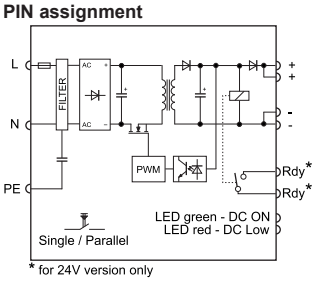
Primary switchmode power supply, PFC, Single-phase
Input: wide-range input AC 90–264 V, DC 120–370 V
Output: 24 V / 48 V, adjustable

Description		Part-No.	Type	PU
Screw terminal				
Output voltage/current	DC 24 V/ 20 A	722782	DRA 480-24A	1
	DC 48 V/ 10 A	722779	DRA 480-48A	1

Dimensions

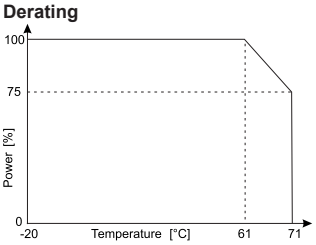


PIN assignment

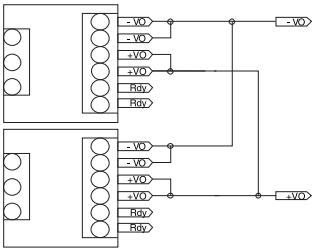


* for 24V version only

Derating



Parallel/redundant mode



Input	DRA 480-24A	DRA 480-48A
Nominal voltage	AC 115 / 230 V (auto select)	
Operation voltage range	AC 90–264 V; DC 120–370 V	
Line frequency	47 – 63 Hz	
Rated current	U_i= AC 115 V: 4.8 A / U_i= AC 230 V: 2.45 A	
Inrush current	U_i= AC 115 V: 25 A / U_i= AC 230 V: 50 A	
Internal fuse	T10 A / AC 250 V	
External fuse	Mini-circuit breaker: B 16 A	
Power Factor Correction P.F.C.	0.99	
Output		
Rated voltage output	DC 24 V	DC 48 V
Rated current output	20 A	10 A
Max. output current	–	
Short-circuit current	–	
Voltage trim range	22.5–28.5 V	47/56 V
Accuracy	±1 %	
Line regulation	±0.5 %	
Load regulation	Single ±0.5 %, Parallel ±5 %	
Rise time	1 s	
Temperature coefficient	±0.03 % / °C	
Ripple & Noise	100 mV	
Hold up time	min. 30 ms	
Status indication DC ON LED green	≥17.6–19.4 V	≥37–40 V
Status indication DC LOW LED red	≤17.6–19.4 V	≤37–43 V
Parallel/redundant operation	max 3 devices with 90 % load current each, switching with switch S/P	
Efficiency	89 %	90 %
Low power loss	63 A (AC 230 V)	60 A (AC 230 V)
Rated over load protection	120–140 %	
Over voltage protection	125–137 %	119–131 %
Short circuit characteristics	Current limit	
General		
Switching frequency	approx. 60 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	-4% / °C starting at 61 °C	
Storage temperature range	-40 °C – 85 °C	
M.T.B.F.	403000 h	416000 h
Relative humidity	20–90% RH, non-condensing	
Dimensions (w × h × d) in mm	175.0 × 125.0 × 116.0	
Cooling	Natural air cooling, 25 mm distance on all sides	
Housing material	metal	
Field installation	rail TS 35 (EN 50022)	
Application height	2000 m	
Installation postition	vertical	
Protection class	IP 20	
IP rating	I (SELV, PELV)	
Overvoltage category	II	
Pollution degree	2	
Weight (kg/piece)	1.920	
Termination	Screw terminal: 0.2–4.0 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		
DC ON Control (Rdy)	Normally open	–
Switching voltage	DC 60 V	–
Switching current	max. 300 mA	–
Switching capacity	–	
Insulation voltage	DC 500 V	–

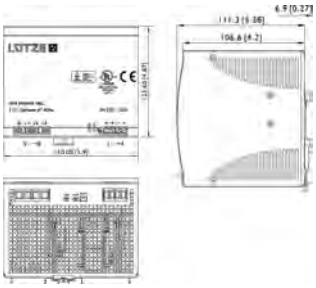
Power supply · regulated, 480 W, 3-phase

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

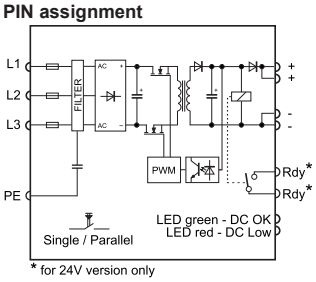
Description		Part-No.	Type	PU
Screw terminal				
Output voltage/current	DC 24 V/ 20 A	722805	WRA 480-24	1
	DC 48 V/ 10 A	722809	WRA 480-48	1

Input	**WRA 480-24**	**WRA 480-48**
Nominal voltage	3× AC 380–500 V	
Operation voltage range	3× AC 340–576 V; 3× DC 480–820 V	
Line frequency	47 – 63 Hz	
Rated current	U_i= AC 400 V: 1.5 A / U_i= AC 480 V: 1.2 A	
Inrush current	20 A	
Internal fuse	T3, 15 A / per phase	
External fuse	Automatic: 3 × B 10 A, C 6 A	
Power Factor Correction P.F.C.	0.7	
Output		
Rated voltage output	DC 24 V	DC 48 V
Rated current output	20 A	10 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	–	
Temperature coefficient	±0.03 % / °C	
Ripple & Noise	100 mV	
Hold up time	min. 20 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 3 devices with 90 % load current each, switching with switch S/P	
Efficiency	90 %	
Low power loss	58 A (AC 380 V)	55 A (AC 380 V)
Rated over load protection	115–135 %	
Over voltage protection	125–137 %	125–142 %
Short circuit characteristics	Current limit (C) / Hiccup-Mode (D); switching with switch C/D Hiccup-Mode: deactivation within 3s and restart after 30s	
General		
Switching frequency	approx. 80 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	-2.5% / °C starting at 61 °C	
Storage temperature range	-40 °C – 85 °C	
M.T.B.F.	411000 h	423000 h
Relative humidity	20–90% RH, non-condensing	
Dimensions (w × h × d) in mm	150.0 × 125.0 × 116.0	
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 postition	vertical	
Protection class	IP 20	
IP rating	I (SELV, PELV)	
Overvoltage category	II	
Pollution degree	2	
Weight (kg/piece)	1.750	
Termination	Screw terminal: 0.2–4.0 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		
DC ON Control (Rdy)	Normally open	–
Switching voltage	DC 60 V	–
Switching current	max. 300 mA	–
Switching capacity	–	
Insulation voltage	DC 500 V	–

Dimensions



PIN assignment



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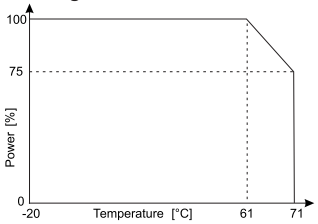

Parallel/redundant mode