

3-phase switching power supply 400-500 Vac output power 2400 W

- 3-phase input 340...550 Vac or 2-phase with derating
- Short circuit, overload, over temperature, input and output overvoltage protections
- High outrush current to guarantee downstream overcurrent protections selectivity and to start-up heavy loads
- High efficiency and low dissipated power
- Suitable for applications in PELV circuits
- Input protected by ASSIL circuit (Surge Suppressor and Inrush Limiter)



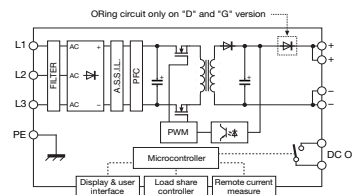
UL pending



NOTES

- The depth dimension includes the DIN rail clamp.
With DC input voltage, the output current must be derated by 30%
(2) Version available upon request; for information call our sales department, local agent or representative
(3) Over 45°C (113°F) apply a derating of about 40 W/°C
(4) For this peak current, the output voltage does not drop more than 10% of the nominal value, but the current value, provided by the power supply also depends on the total line resistance.
(5) Version CSG2401G and CSG2401R is not suitable for SELV applications

BLOCK DIAGRAM



Special version for DC motors

VERSIONI
Output 72 Vdc 33 A redundant version (5)
Output 100-110-170 Vdc 14 A redundant version (5)

Cod. XCSG2401G	Cod. XCSG2401R
CSG2401G (5) (2)	CSG2401R (5) (2)

APPLICATIONS

Series CSG2401 has an internal microprocessor that controls the many functions of the power supply, which can be programmed thanks to a user-friendly menu activated by 4 buttons on the front and shown on the front display.

Front display: during normal operation, this shows the output voltage value and current used by the load; during programming, it allows for the choice of the various functions available.

Input protection: the input circuit has been designed to avoid the most common problems seen in 3-phase networks. It therefore has:

- 1) a special ASSIL (Active Surge Suppressor and Inrush Limiter) circuit to protect it against overvoltage in accordance with VDE0160;
- 2) a PFC circuit failure (latched shutdown) circuit;
- 3) a system for controlling lack of phase that automatically reduces output power;
- 4) an auto-restart switch-off system in the event of overvoltage and undervoltage.

Output protection: limit current can be selected as between 10% and 100% of rated current; protection type against overload and short circuit can be chosen from:

- 1) hiccup autoreset with limit current, equal to 150% of rated current and ON/OFF time equal to 5 secs./10 secs. (values can be altered manually);
- 2) constant power.

Output signals: in addition to the "DC OK" and "FAULT" LEDs, the device also has:

- 1) an analogue signal 0...10V or 4...20mA that provides an indication of current used by the load;
- 2) a programmable alarm contact able to signal and record the exceeding of the various limits to a memory: output voltage, input current, output overload, overtemperature and other parameters that can be defined by programming.

Additional functions: the following functions are also available:

- 1) battery charger: the acid lead battery charging function can be selected;
- 2) remote sensing (sense): this allows for the monitoring and compensation of voltage drops on long power supply lines;
- 3) remote switch-off: the power supply can be switched off and disabled from a remote position;
- 4) auxiliary voltage: auxiliary 12 Vdc is also available, regardless of the main output voltage status;
- 5) temperature control: by connecting an external sensor (NTC), the battery charge temperature can be controlled;
- 6) communication port: by means of an RS232 communication device, the power supply can be piloted and monitored from a remote position.

INPUT TECHNICAL DATA

Input rated voltage	3x 400-500 Vac (range 340...550 Vac)
Frequency	47...63 Hz
Current @ full max. (Uin 400 / 500 Vac)	4.2 A / 3.5 A
Inrush peak current	< 2 A (with active inrush current limiter)
Power factor	> 0.92
Internal protection fuse	—
External protection on AC line	circuit breaker: 3x 10 A C characteristic - fuse: 3x T10 A

OUTPUT TECHNICAL DATA

Output rated voltage	72 Vdc	100-110-170 Vdc
Output adjustable range	50...87 Vdc	88...175 Vdc
Continuous current	33 A @ 45°C (3)	14 A @ 45°C (3)
Overload limit	50 A for >5 s with Uout>90% Un (4)	21 A for >5 s with Uout>90% Un (4)
Short circuit peak current	>50 A for 5 s (4)	>21 A for 5 s (4)
Load regulation	< 1%	< 1%
Ripple @ nominal ratings	≤ 200 mVpp	≤ 200 mVpp
Hold up time (Uin 400 / 500 Vac)	>10 ms / >10 ms	>10 ms / >10 ms
Overload / short circuit protections	programmable (see on right side)	
Status display	"DC OK" green LED / "DC OK" alarm contact / "Overload" red LED / LCD display (see on right side)	

Alarm contact threshold	programmable
Parallel connection	possible
Redundant parallel connection	possible

GENERAL TECHNICAL DATA

Efficiency (Uin 400 / 500 Vac)	>92% / >92%	>92% / >92%
Dissipated power (Uin 400 / 500 Vac)	200 W / 200 W	200 W / 200 W
Operating temperature range	-20...+60°C, with derating over 45°C / over temperature protection (3)	
Input/output isolation	3 kVac / 60 s SELV output (5)	
Input/ground isolation	1.5 kVac / 60 s	
Output/ground isolation	0.5 kVac / 60 s	
Standard/approvals	EN60950, IEC950	
EMC Standards	EN 55011, EN 61000-3-2, EN61000-4-5 Surge immunity Level IV, VDE0160	
MTBF @ 25°C @ nominal ratings	>500'000 h acc. to SN 29500 / >150'000 h acc. to MIL Std. HDBK 217F	
Overvoltage category/Pollution degree	II / 2	
Protection degree	IP 20 IEC529, EN60529	
Connection terminal	4 and 6 mm ² screw type	
Housing material	aluminium	
Approx. weight	2,8 kg (98,76 oz)	
Mounting information	vertical on rail, allow 60 mm spacing between adjacent components	

MOUNTING ACCESSORIES

Mounting rail type according to IEC60715/TH35-7.5	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail type according to IEC60715/G32	—