

DC 3000 CAN

Modular switch-mode converter designed for industrial applications

Output current of a single power supply: 100 A (for 24 VDC)



The DC 3000 from AEG Power Solutions is a DC/DC-Converter, converting either 110 VDC or 220 VDC to 24 VAC with an output current of 100 A. The switch-mode power supply is fed by the secure 110 V or 220 VDC supply for high operating reliability.

Low volume thanks to a high switching frequency

The equipment is powered by DC voltage. Transistors produce an alternating voltage with a frequency of 75 kHz. With the assistance of transformers, potential separation and the voltage adjustment are on the secondary side. The high frequency AC voltage is then rectified by means of rapid acting diodes. An output filter is installed to reduce the voltage ripple. The output voltage and current are controlled by pulse-width modulation of the transistor switch on the primary side.

Typical applications

Industrial applications such as 24 VDC power to supply power to control technology systems in nuclear and conventional power stations, chemical industrial processes and electrical sub-stations.

FEATURES

- · Compact design which is lightweight
- High power density
- · High efficiency
- Low voltage ripple
- Low inrush current
- Resistant to sustained short circuit, double current as short circuit for one second
- Communication capable (CAN-Bus)
- Single mode or parallel mode also without CAN-Bus
- CE-compliant

BENEFITS

• Compact Design:

19" rack with 4U in height and a mounting depth of only 270 mm. The converter can be set up in the smallest space thanks to parallel connections built on the n+1 principle.

• Easy Operation:

The switch mode power supply is a prewired unit. The connections can be easily accessed from the front panel. Programming is simple as controls and indicators are embedded in the front panel.

• Communication:

The unit offers full functionality in stand-alone mode but can additionally be controlled and monitored via the digital CAN-Bus which is immune to interference.

Specifications

TYPE	110 V/24 A/100 A	230 V/24 V/100 A
Part Number	GHO G24/100 Wrug-Cha	GZ20 G24/100 Wrug-Cp0
Number	3 000 000 061	3 000 000 117
NPUT		
Nominal Input voltage	110VIX * 5% - 5%	220 VDC + 35% - 15%
nnish current	∢Ra	ted Input voitage
Required mains fuse	gL40A	g. 35A
TUTTUT		
Current consumption	ZhADC	BADC
Output voltage (U1)	2	50 VDC ±1%
Output voltage (U2)	7	55V0C +1%
Output voltage (U3)		4.0 VDC ± 1%.
Output voitage (U/A) Setting range (U1 – UA)	28.0 V	DC ±1%1+ 28 VDC
Output current (11–14) Setting range (11–14)	100 AD	C+2%5-100 ADC
Michelicy	90%	With 26 V/100 A
Adtage ripple		≈50 mV pp
nterference voltage to CCTTT		+18mV
Dynamic response	< 5% for sudden changes in load between 10 % -	90% - 10% rated output current (Compensation time (<5 mo
Short-circuit response	Resistant to sustained short circuit. 2 x rate	sd output current for a second, thereafter raited current
Parallel operation	Load distribution approx. 10 %, when connected to CAN-tius, load distribution approx. 5 %.	
Characteristic line	IU Characteristic to DIN 41772/DIN 61773	
MONITORING AND INDICATION		
Mains-side monitoring	Under-voltage with	swiftch-off, self-acknowledging
Presponse values	ON/OFF 93/85 VDC	ON/OFF 185/175 VDC
	Over-voltage with	strut-off, self-acknowledging
response values	CNACIFE 150/160 VDC	ON/OFF 290/300 VDC
Output-side monitoring	Ownte	ating with switch-off
With Indication of LED		and self-refaming, voltage value 22.6 VDC rand locking, response value 29.0 VDC
indicators Mains	Power available, operating and fault message via LED, UA and IA via LCD display	
External Functions		ay contact, ON/OFF via external floating contact.
	external sensor cables output voltage	ge UA; selection of 2.73.74. U characteristic line; with LCD display; external sel-point specification via CAN interta
MECHANICAL	external sensor cables output voltage	ge UA; selection of 2 / 3 / 4. U characteristic line;
	external sensor cables output voltage external sel-point specification 0 – 4. VOC for UA and U	je UA; selection of 2./3.74. U characteristic line; with LCD display; external sel-point specification via CAN interta
Design	external sensor cables output voltage external sel-point specification 0 – 4. VOC for UA and U	ge UA; selection of 2 / 3 / 4. U characteristic line;
Design ngress protection	external sensor cables output voltage eldernal sel-point specification 0 - x yOc for UA and U	je UA; selection of 2./3.7.4. U characteristic line; with LCD display; external set-point specification via CAN interta installation in subfraine to DIN 41494. IP 20
Design Ingress protection Mechanical strength and vibration resistance	external sensor cables output voltage eldernal sel-point specification 0 - x VOC for UA and Vi-	pe UA; selection of 2.73.74. U characteristic line; with LCD display; external set point specification via CAN interta instantion in subtraine to DIN 41494. IP 20. D178, section 9.4.3.2
Design Ingress protection Mechanical strength and vibration resistance Equipment	external sensor cables output voltage eldernal sel-point specification 0 - x VOC for UA and Vi- 19° plug-io module for II To EN S Colour R	pe UA; selection of 2.73.74. U characteristic line; with LCD display; external set point specification via CAN intertal retaination in subtraine to DIN 41494. IP 20 D176, section 9.4.3.2 AL 7035 (front panel)
Design Ingress protection Hechanical strength and vibration resistance Equipment Dimensions W x H x D (mm)	external sensor cables output voltage eldernal sel-point specification 0 - x VOC for UA and Vi- 19* plug-in module for II TO EN S Colour R.	pe UA; selection of 2.73.74. U characteristic line; with LCD display; external set point specification via CAN interta instantion in subtraine to DIN 41494. IP 20. D178, section 9.4.3.2
Design Ingress protection Hechanical strength and vibration resistance Equipment Dimensions W x H x D (nim) Megnt	external sensor cables output voltage eldernal sel-point specification 0 - x VDC for UA and UI 19° plug-in module for II 70 EN 5 Colour R. 483 x 71	pe UA; selection of 2.73.74. U characteristic line; with LCD display; external set point specification via CAN interta restaination in subtraine to DIN 41494 IP 20 D176, section 9.4.3.2 AL 7035 (troot panel) F7.x.270 (19° x 4.141) Approx. 15 kg
Design Ingress protection Mechanical strength and vioration resistance Equipment Dimensions W x H x D (mm) Meight Mains connection	external sensor cables output voltage eldernal sel-point specification 0 - x VOC for UA and UI 19° plug-in module for II 1	pe UA; selection of 2.7.3.7.4. U characteristic line; with LCD display; external set point specification via CAN interta retaination in subtraine to DIN 41494. IP 20 D176, section 9.4.3.2 AL 7035 (front panel) F7.x.270 (19° x 4.1412)
Design Ingress protection Mechanical strength and vioration resistance Equipment Dimensions W x H x D (mm) Meight Mains connection DC output	external sensor cables output voltage eldernal sel-point specification 0 - x VDC for UA and UI 19* plug-in module for II TO EN 5 Colour R. 483 x TI Phoenix II	pe UA; selection of 2.73.74. U characteristic line; with LCD display; external set-point specification via CAN intertal restaination in subtraine to DIN 41494. IP 20 D176, section 9.4.3.2 AL. 7035 (troot panel) F7.4.270 CI9* & 4.14L) Approx. TSkg erminal HDECV 10-VP
Design Ingress protection Mechanical strength and vioration resistance Equipment Dimensions W x H x D (mm) Mains connection OC output Conductor	external sensor cables output voltage eldernal sel-point specification 0 - x VDC for UA and UI 19* plug-in module for II TO EN 5 Colour R. 483 x TI Phoenix h	pe UA; selection of 2.73.74. U characteristic line; with LCD display; external set-point specification via CAN interfa- restaination in subtraine to DIN 41494. IP 20 D176, section 9.4.3.2 AL, 7035 (troot panel) F7 x 270 C19" x 4 HLD Approx. TSkg erminal HDEKV 10-VP hiead boilf M6.
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Design Ingress protection Mechanical strength and vioration resistance Equipment Dimensions W x H x D (nim) Might Mains connection DC output Conductor Signal interface ENVIRONMENTAL Type of cooling	external sensor cables output voltage eldernal sel-point specification 0 - x VDC for UA and UI 19* plug-in module for it TO EN 5 Colour R. 483 x Ti Phoenix h T Plug type MCVW 1.5	pe UA; selection of 2 / 3 / 4. U characteristic line; with LCD display; external set-point specification via CAN intertal restabilition in subtraine to DIN 41494 IP 20 D176, section 9.4.3.2 AL, 7035 (front panel) F7 x 270 C19" x 4 HLD Approx. TSkg erminal HDRCV 10-VP hiread boilf M6 F/14 - ST - 3.81, supplied with unif
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Design Ingress protection Mechanical strength and vibration resistance Equipment Dimensions W x H x D (mm) Weight Mains connection DC output Conductor Signal interface Environmental Type of cooling Operating temperature Environment conditions installation height STANDARDS Interference emission	external sensor cables output voltage eldernal sel-point specification 0 - 4 VOC for UA and UI 19* plug-in module for II 19* plug-in module for II 10* plug-in module for II 483 x 73 Phoenix fi T Plug type MCVW 1.5 Na Range 0*C to 45 Rang - EN-60721 part 3 - 3, car Maix 1,000 m alo	je UA; selection of 2 / 3 / 4. U characteristic line; with LCD display; external set point specification via CAN interfa- restabilition in subtraine to DIN 41494. IP 20 D176; Section 9.4.3.2 AL, 7035 (tront passet) F7 x 270 C19" x 4 HLD Approx 15 kg erminal HDRCV 10-VP hitead both M6 hitead both M6 / 14 - 5T - 5.81, supplied with unif . tural air cooting is "C, when installed in cabinet" ye - 20 "C to 70 °C ess 3K3 / 5.21 / 3811 / 302 / 353 / 3M2 ove sea level, all nominal load. EN 61000-6-4

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