

Protect 8 INV BROCHURE

JUNHO 2013

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PROTECT 8.INV

INDUSTRIAL INVERTERS

Protect 8.INV1 Industrial Inverter
Single Phase Output
230 V, 10 – 120 kVA

Protect 8.INV3 Industrial Inverter
Three Phase Output
400 V, 10 – 120 kVA



Engineering is our business

Inverter and UPS solutions engineered by AEG Power Solutions have been protecting oil and gas infrastructure, power stations and other industrial applications for more than 60 years.

Designed for all industrial applications

Protect 8.INV, the latest generation of our Protect Inverter product range is extremely robust, both electrically and mechanically. It is custom-designed for use in harsh industrial environments to meet the toughest product customization requirements:

- » Specific mechanical protection degree
- » Specific input and output voltage
- » Customized documentation

Protect 8.INV is just a part of the Protect product range of inverters and UPS's suitable for industrial applications. See also our Protect 3., Protect 4. and Protect 8. range of UPS's.

Protect 8. industrial applications

- » Oil and gas (petrochemicals, offshore, onshore, pipelines)
- » Energy and electricity generation (power generation, transmission, distribution)
- » Water (desalination, treatment)
- » Instrumentation and process control (chemicals, mining, steel, paper)
- » Emergency lighting
- » All industrial applications

PROTECT 8.INV1

SPECIFICATION



SINGLE PHASE OUTPUT

Model	P8.INV1-10	P8.INV1-20	P8.INV1-30	P8.INV1-40	P8.INV1-60	P8.INV1-80	P8.INV1-100	P8.INV1-120
Nominal Rating (at $\cos \varphi$ 0.8 lag)	10 kVA	20 kVA	30 kVA	40 kVA	60 kVA	80 kVA	100 kVA	120 kVA

INVERTER UNIT

DC input	216 V \pm 20 %							
Nominal AC voltage	230 V (220 V, 240 V)							
Output voltage static response	< \pm 1 %							
Output voltage dynamic response	< \pm 2 %							
Recovery time	1 ms							
Frequency	50 Hz / 60 Hz							
Frequency tolerance without mains	\pm 0.1 %							
Frequency synchronization range	\pm 1 % (\pm 2 %, \pm 3 %)							
Allowable load power factor	0.0 lag to 0.0 lead							
Output phase current in A	43	87	130	174	261	348	435	522
Voltage wave form	sinusoidal							
Voltage distortion	<3 %							
Crest factor	max. 3							
Overload response 1 min.	150 %							
Overload response 10 min.	125 %							
Max short circuit current	>3 x I_{nom}							

STATIC BYPASS SWITCH

AC voltage	230 V (220 V, 240 V)							
Frequency	50 Hz / 60 Hz							
Nominal power in kVA	10	20	30	40	60	80	100	120

GENERAL DATA

Efficiency – typical	up to 92 %							
Noise level depending on rating	<55 – 70 dB(A)							
EMC compatability	EN 62040-2							
Air cooling with redundant and monitoring fans	Yes							
Operating temperature range min./max. (without de-rating)	-5 °C – 40 °C							
Storage temperature range min./max.	-30 °C – 75 °C							
Maximum altitude without de-rating	1000 m							
Protection degree per IEC 529/EN 60529 standard system (as option)	IP20 (IP21 & IP43 ; >IP43 engineered)							
Equipment color	RAL 7035							

WEIGHT AND DIMENSIONS

Height standard inverter (mm)	1810	1810	1810	1810	1810	1810	1810	1810
Height with max. options (mm)	1915	1915	1915	1915	2015	2015	2015	2015
Width (mm)	600	900	900	900	1200	1500	1800	1800
Depth (mm)	860	860	860	860	860	860	860	860
Weight (kg)	270	400	580	580	900	1000	1100	1100

PROTECT 8.INV3

SPECIFICATION



THREE PHASE OUTPUT

Model	P8.INV3-10	P8.INV3-20	P8.INV3-30	P8.INV3-40	P8.INV3-60	P8.INV3-80	P8.INV3-100	P8.INV3-120
Nominal Rating (at $\cos \varphi$ 0.8 lag)	10 kVA	20 kVA	30 kVA	40 kVA	60 kVA	80 kVA	100 kVA	120 kVA

INVERTER UNIT

DC input	216 V \pm 20 %							
Nominal AC voltage	3 x 400 V (3 x 380 V, 3 x 415 V)							
Output voltage static response	< \pm 1 %							
Output voltage dynamic response	< \pm 2 %							
Recovery time	1 ms							
Frequency	50 Hz / 60 Hz							
Frequency tolerance without mains	\pm 0.1 %							
Frequency synchronization range	\pm 1 % (\pm 2 %, \pm 3 %)							
Allowable load power factor	0.0 lag to 0.0 lead							
Output phase current in A	14	29	43	58	87	116	145	173
Voltage wave form	sinusoidal							
Voltage distortion	<3 %							
Crest factor	max. 3							
Overload response 1 min.	150 %							
Overload response 10 min.	125 %							
Max short circuit current	>3 x I_{nom}							

STATIC BYPASS SWITCH

AC voltage	3 x 400 V (3 x 380 V, 3 x 415 V)							
Frequency	50 Hz / 60 Hz							
Nominal power in kVA	10	20	30	40	60	80	100	120

GENERAL DATA

Efficiency – typical	up to 92 %							
Noise level depending on rating	<55 – 70 dB(A)							
EMC compatability	EN 62040-2							
Air cooling with redundant and monitoring fans	Yes							
Operating temperature range min./max. (without de-rating)	-5 °C – 40 °C							
Storage temperature range min./max.	-30 °C – 75 °C							
Maximum altitude without de-rating	1000 m							
Protection degree per IEC 529/EN 60529 standard system (as option)	IP20 (IP21 & IP43 ; >IP43 engineered)							
Equipment color	RAL 7035							

WEIGHT AND DIMENSIONS

Height standard inverter (mm)	1810	1810	1810	1810	1810	1810	1810	1810
Height with max. options (mm)	1915	1915	1915	1915	2015	2015	2015	2015
Width (mm)	900	900	900	900	1200	1500	1800	1800
Depth (mm)	860	860	860	860	860	860	860	860
Weight (kg)	500	500	600	600	1000	1000	1600	1600

AEG POWER SOLUTIONS



Protect 8.INV highlights

- » The new generation of AEG Power Solutions inverters
- » More than 60 years of experience in the UPS business incorporated into Protect.8 INV
- » Modern modular "building block" to meet all customization requirements
- » Inverters designed for industrial applications
- » Short lead times
- » High robustness for harsh working environments
- » Redundant controls for high reliability
- » Small footprint
- » High efficiency even at low output power
- » Compatible with every type of battery
- » Full digital control
- » Top class communication platform

Batteries

AEG Power Solutions has considerable in-house knowledge in battery technology and is able to offer expert advice on the specifying, selection, operation and testing of batteries. Our total systems solutions include a wide range of products using lead acid and nickel-cadmium batteries in vented and gas recombination technologies. Replacement batteries can be supplied and installed by our global service team.

Services

With over 60 years of expertise in power systems and solutions, AEG Power Solutions is renowned for its unparalleled services and technical support in critical application environments. As a world class system provider, you can rely on a global network of 20 services centers supported by over 150 field engineers and more than 100 certified service partners around the world. From power solution selection to your process installation and commissioning, our certified experts go beyond your expectations by offering service excellence that will ensure the lowest operational cost for your mission-critical equipment. The reliability of your installed power solution is supported by a global service team renowned for its short response time and trouble shooting efficiency. Choosing one of the Pro Care™ preventive maintenance options gives you the ultimate peace of mind reassuring complete cost control, security and uninterrupted power supply in utmost critical situations.

You can also benefit from a full range of professional services that will protect and ensure the durability of your investment and will take over when you need it most:

- » Pro Care™ preventive maintenance options
- » Turnkey solutions
- » Installation and commissioning
- » Maintenance services
- » E-Service/remote monitoring
- » 24/7 hotline
- » Onsite training
- » Hot swapping
- » Onsite battery replacement
- » Battery monitoring
- » Facility and equipment management
- » 24/7 global onsite contracts
- » Power quality assessment
- » Load bank and site capacity analysis
- » Trouble shooting and repair

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