

AEG

Power supply systems

THYRO-P

Digital controller with communications capability



Thyro-P thyristor Power Controllers can be used wherever voltage, current or power have to be controlled/set.

With a wide band power supply, optional mains load optimization (ASM procedure, a patented world first) and a user-friendly user interface, they have a wide range of industrial applications such as :

- Glass industry
- Furnace construction
- Engineering
- Painting machines and printers
- Chemicals and mineral oil industry
- Furniture industry
- Automotive industry

The Thyro-P is the result of many years of experience for AEG with Power Controllers design. Several operating and control modes, ease of connection to the process and automation systems, a high level of control accuracy through the use of a 32-bit RISC processor, combined with ease of handling means that the Thyro-P sets the standard for new applications as well.



The use of the most modern mains thyristors means the type series has been extended to a maximum current of 2900 A, an increase of 1000 A over previous controllers.



>> THYRO-P

Parameters can be adapted using menus. The set and actual values of the process can be transferred to automation systems and other equipment via analog outputs or, as an option, via a communications bus.

Key Features

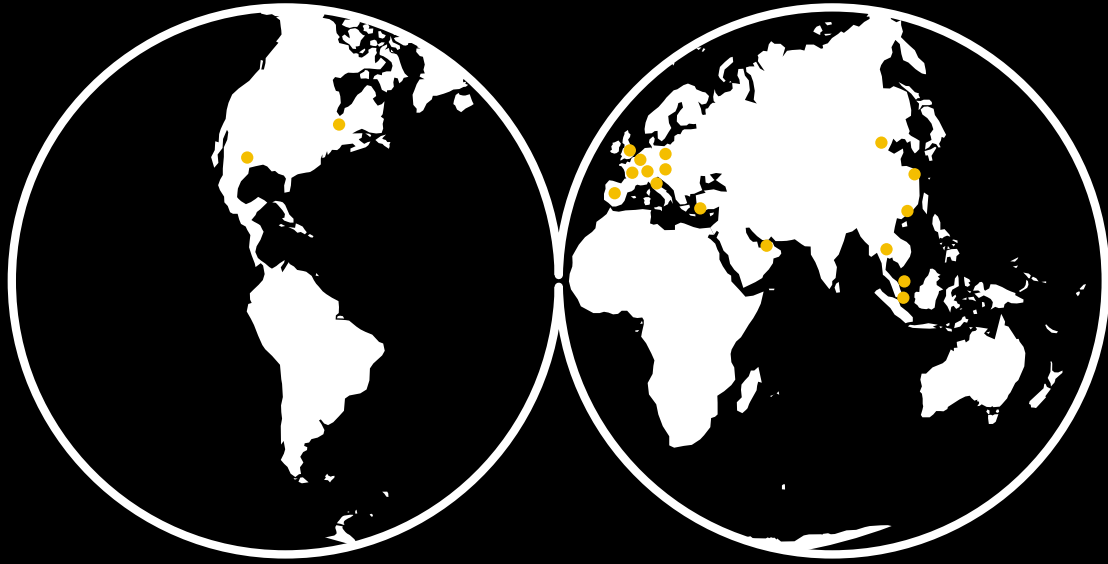
- Ease of handling for rapid and reliable start-up
- Ease of connection to automation equipment via bus communications
- Transformer load, ohmic load and heating elements with large R_{hot} / R_{cold}
- Integrated soft-starting for operation with downstream transformer
- Dynamic mains load optimization (patented process, ease of handling)
- Wide band power supply for control voltage
- 6- LED status indicators
- Centralized fault indication
- Error memory with event time
- Integrated load circuit monitoring
- Graphics-capable control options
- High efficiency, zero-wear operation
- Integrated semiconductor fuses
- Electrical protection separation between power and control section that meets VDE 0160
- Connection to SELV/PELF circuit
- Quality standard to DIN EN ISO 9001
- UL certification
- 37A - 280A c  US
- 300A - 650A c  U
- CE - compliant

SPECIFICATION

Digital controller with communications capability

TYPE	TYPE 1P	TYPE 2P	TYPE 3P
Rated connection voltage (V)	230 – 400;500;690 ± 10 %	3x230 – 400; 500; 690 ± 10 %	3x230 – 400; 500; 690 ± 10 %
Circuit	single-phase	3-phase economy circuit	3-phase circuit
Control voltage	AC 200 V (- 20 %) to 500 V (+ 10 %); 45 – 65 Hz		
Communications-capable	see bus interfaces		
Operating mode	Thyro-pulse, Thyrovar Softstart-Softdown	Thyro-pulse Softstart-Softdown	Thyrovar Softstart-Softdown
Current 230 V; 400 V; 500 V (A)	37, 75, 110, 130,170, 280, 495, 650, 1000, 1500 2100, 2900	2000, 2750	1850, 2600
Current 690 V (A)	80, 200, 300, 780, 1400 2000, 2600	1850, 2400	1700, 2200

TYPE	TYPE 1P	TYPE 2P	TYPE 3P
Frequency	50 – 60 Hz \pm 3 Hz		
Usable for	ohmic load, transformer load		
Setpoint input	0 – 20 mA; 0 – 5 V; 0 – 10 V		
Control start/finish	can be set as desired		
Control possibility	U-voltage, U ² -voltage, I-current, I ² -current, P-power, without control		
Act. value outputs	qty. 3, either 0 – 20 mA, 4 – 20 mA or 0 – 10 V		
Load circuit and self-monitoring	provided		
Operation indicators	via LED		
Fault message	via fault signalling relay		
Error memory	16 messages with event time		
Interfaces	RS232 and fiber optic		
OPTIONS			
Local control and display unit (LBA)	pluggable, operation, parameter setting and display with menus, copy function, 7 x 19 digit display, graphics-capable (line diagrams)		
Cabinet installation kit (SEK)	installation kit for LBA with cable, suitable for installation in switch cabinet door		
Thyro-Tool Family	PC software with functions such as: loading, saving, editing, comparing and printing parameters, set and actual value processing, line diagrams of process data (with print option), bar charts, simultaneous display of process data from various Power Controllers, simultaneous connection of up to 998 Thyro-P Power Controllers.		
Bus interfaces	adapter modules for plugging into the Thyro-P control unit. Interface to various bus systems, e.g. Profibus-DP, Modbus RTU.		
ASM procedure (patented)	automatic synchronization of multiple Power Controller applications for dynamic load optimization. Minimizes mains load peaks and related system perturbation components.		
GENERAL DATA			
Operating temperature	up to type current 170 A: - 10 °C to + 45 °C (natural air cooling) from type current 280 A: - 10 °C to + 35 °C (forced cooling)		
Storage temperature	- 25 °C to + 55 °C		EN 60146
Humidity class			DIN EN 50178 table 7
Site altitude	up to 1000 m above sea level at nominal load		
Test voltage			DIN EN 50178 table 18
Device operating conditions	installation device configured to:		DIN EN 50178
Contamination class			DIN EN 50178 table 2
Surge voltage category			DIN EN 50178 table 3
Safe isolation			DIN EN 50178 chapter 3
Application position			CISPR 3
Version			DIN EN 60146
Radio interference suppression of control unit, class A			DIN EN 55011, CISPR 11
Installation	vertical		
Connection	from below/front		



Power Systems

Whenever wherever watterver

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