

AEG

Power supply systems

THYRO-P

Digital controller with communications capability



Thyro-P Thyristor Power Controllers (SCR) can be used wherever voltage, current or power have to be controlled/set. Using AEG's patented ASM procedure, Thyro-P Power Controllers can be synchronized to eliminate peak power demands created when multiple controllers are used. A user friendly interface makes it adaptable for a wide range of industrial applications such as:

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



- Furniture
- Automotive

With over 40 years of Power Controller experience, the Thyro-P is AEG's most advanced controller design. Together with several operating and control modes to choose from, straightforward connections to process and automation systems, and a high level of control accuracy through the use of a 32-bit RISC processor, the Thyro-P sets the standard for digital SCR Power Controllers.



>> THYRO-P

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} ratios
- Integrated soft-starting for operation with downstream transformer
- ASM Dynamic mains load optimization (AEG's patented procedure)
- 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, trouble-free operation
- Integrated semiconductor fuses
- Electrical protection separation between power and control section that meets VDE 0160
- 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	Zero Cross, Phase Angle Firing Softstart-Softdown	Zero Cross Softstart-Softdown	Zero Cross Phase Angle Firing 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

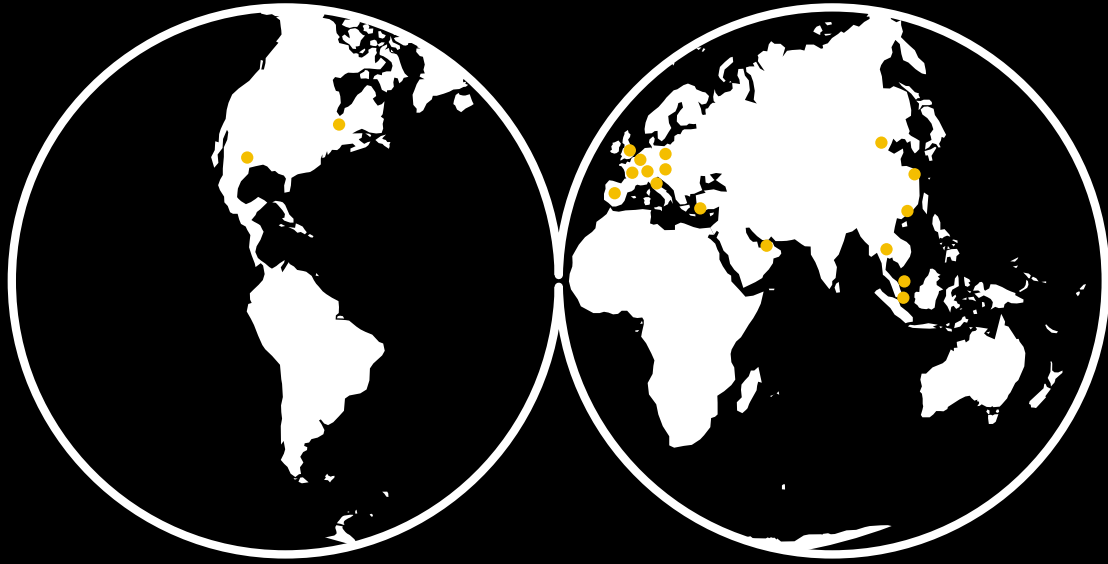
TYPE	TYPE 1P / 2P / 3P
Frequency	50 – 60 Hz \pm 3 Hz
Usable for	ohmic load, transformer load
Set point input	0-20 mA; 4-20 mA; 0-5 V; 0-10 V
Control start/finish	can be set as desired
Control modes	V-voltage, V ² -voltage, I-current, I ² -current, P-power, without control
Act. value outputs	qty. 3, either 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 cabinet door or panel
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 load peaks and other system related disturbances.

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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