

Control your Power

The Thyro-Family Thyristor Power Controllers (SCR)

With the introduction of our series Thyro-S, Thyro-A and Thyro-P, AEG PSS presents its new Thyro-Family of Thyristor Power Controller (SCR). These Power Controllers are well equipped to meet tomorrow's demands because they universally possess unique communications capabilities.

Quality, repeatability, communications capabilities and high reliability form the basis for documented outstanding product quality in the application process. Thyristor Power Controllers (SCR) from AEG PSS switch, control or regulate electrical energy beginning with simple applications for optimized Power Controllers as cost-effective solutions - right up to the complex applications that require digital high-end controllers. AEG PSS Power Controllers can be found around the world anywhere that melting, heating, drying or forming must be done precisely and reliably, e.g. in the fields of:

- Oven equipment (industrial, diffusion, and drying ovens)
- Glass processing (float glass, feeder, finishing, fiber glass)
- Plant equipment (extruders, plastic presses)
- Chemical industry (pipe trace heating, preheat equipment)
- Automotive industry (paint drying equipment)
- Printing machines (IR driers)
- Packaging industry (shrink tunnels)

Beyond the higher product quality achieved through AEG PSS also offers security for application processes by virtue of more than 40 years of development and support experience.

Standards:

- Secure isolation between control and power sections
- Integrated semiconductor fuse
- Meets ISO 9001 quality standards
- Approval in accordance with UL 508, File E 135074
- S.C.C.R., certified in accordance with UL 508 A (100 kA short-circuit-test)
- CE compliant
- Canadian National Standard
- RoHS compliant 5/6



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The Thyro-Family



Thyristor Switch Thyro-S



Thyristor Power Controller (SCR) Thyro-A 1A/2A

Thyro-S ...H1

- V_{mains} 230 V, 400 V, 500 V
- V_{mains} down to $0,43 \times V_{\text{nom}}$
- Mains frequency 47-63 Hz
- Current ratings up to 280 A
- Simple handling and small space requirements
- Integrated semiconductor fuse
- For resistive loads
- Secure isolation between control and power sections
- 3-phase system by connecting of two Thyro-S
- Standard system interface features for connection to an optional bus module or PC-Software Thyro-Tool Family
- Operating modes 1:1, 1:2, 1:3, 1:5 (e.g for commissioning)
- Control with 24 V ($> 3 \text{ V} = \text{ON}$)

Thyro-S ...HRL1 Type additional

- Load circuit monitoring
- Alarm relay
- Possible auxiliary electronic supply 24 V DC/AC

Thyro-A

- V_{mains} 230 V, 400 V, 500 V
- V_{mains} down to $0,43 \times V_{\text{nom}}$
- Mains frequency 47-63 Hz
- Current ratings up to 350 A
- 1-/2-/3-phase
- Standard system interface features for connection to an optional bus module or PC-Software Thyro-Tool Family
- Setpoint setting:
 - analog 0/4-20 mA; 0/1-5 V; 0/2-10 V
 - digital by bus system or PC-Software
- Suitable for resistive and transformer loads
- Soft-start function for inductive loads
- Channel separation
- Mains load optimization

Thyro-A 1A

- V_{mains} 230 V, 400 V, 500 V
- Operating modes:
 - Zero Cross (TAKT)
 - Phase angle (VAR)
 - rapid half-cycle pulse (QTM)
- For 1-phase load between 2-phase or phase/neutral

Thyro-A 2A

- V_{mains} 400 V, 500 V
- Operating modes: Zero Cross
- For 3-phase economic circuits (star or delta without neutral)



Thyristor Power Controller (SCR) Thyro-A 3A ...

Thyro-A 3A ...

- V_{mains} 400 V, 500 V
- Operating modes: Zero Cross TAKT, Phase angle VAR
- For 3-phase load (star-connection with/without neutral, delta connection or open delta)

Thyro-A ... H1

- V, V^2 regulation

Thyro-A ... HRL1

- V, V^2, I, I^2 regulation
- Load monitoring
- Alarm relay
- $R_{\text{warm}}/R_{\text{cold}}$ to ≤ 6
- Analog output 10 V/20 mA
- Possible auxiliary electronic supply 24 V DC/AC

Thyro-A ... HRLP

Like H RL1, with additional

- P regulation
- Power indication at analog output

Thyro-S/A accessories and options

- Bus connection via busmodule, Profibus DPV1, Modbus RTU, DeviceNet, CANopen
- PC software package, Thyro-Tool Family, for quick commissioning and simple visualization
- Thyro-Power Manager, for network load optimization if using several Power Controllers



Thyristor Power Controller (SCR) Thyro-P

Thyro-P (1P/2P/3P)

- V_{mains} 400 V, 500 V, 690 V, rating 184 to 759 V
- Mains frequency 45-65 Hz
- Current ratings up to 2,900 A
- 1-/2-/3-phase
- Menu driven user interface
- Set point by:
 - 2 x analog 0/4-20 mA; 0/1-5 V; 0/2-10 V
 - digital by bus system or PC-Software (RS232 interface / optic cable)
- $V-, V^2-, I-, I^2-, P-$ regulation
- Resistive or inductive load, and loads with large $R_{\text{warm}}/R_{\text{cold}}$
- Soft-start function for inductive loads
- Load circuit monitoring
- Wide band power supply approx. AC 185-550 V, 45-65 Hz possible

Thyro-P accessories and options

- Bus connection via adapter card, e.g. for Profibus DPV1, Modbus RTU and DeviceNet
- Patented ASM procedure for dynamic load optimization
- Local display and operating unit (LBA), graphic-capable, menu driven
- Panel mounting (SEK) for LBA
- Thyro-Power Manager, for network load optimization if using several Power Controllers
- PC software package, Thyro-Tool Family, for quick commissioning and simple visualization

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The Thyro-Family

Thyro-Tool Family

is a start-up and visualization software operated under Windows in English, German, French, and Chinese.

It is delivered with an introduction program and can be installed onto a PC/notebook in a user-friendly manner.

The Thyro-Tool Family is designed to connect the complete product portfolio of AEG Power Controllers via an RS232 interface or an optical cable, respectively.

It contains the most important functions such as:

- parameterization and setting of the devices
- target value processing
- actual value processing
- operating hours counter
- energy display (in kWh)
- loading, storing, and print-outs of all relevant measurement and display values
- comparison of two parameter sets

Simultaneous presentation of several bar and line charts, as well as variable in size and composition.

Simultaneous presentation of data and parameters as inputted from several power controllers.

Possible connection capability of up to 998 Thyro-P power controllers via an optical cable distribution (LLV).

