

# Control your Power

## Thyro-S

Thyristor Switch

Secure, fast, economical and communication enabled

The new communication capable thyristor switch Thyro-S is equipped with advanced functions and system features to handle an extended application field.

As a connection-ready thyristor switch with secure operational behavior and load monitoring, the Thyro-S switches currents, voltages and power sources. It can be connected to bus systems, used in standalone operation, or used in conjunction with process controllers, PLC and computer systems. Used with the AEG Thyro-Tool Family programming software, it provides for quick commissioning and simple visualization. Because it is simple to mount, easy to handle and commission, the new Thyro-S type thyristor switch is an excellent choice for a wide field of applications in process technology, e.g. in the areas of:

- ovens (industrial, diffusion, drying)
- plant equipment (extruders, plastic presses)
- chemical industry (pipe trace heaters, pre-heating equipment)
- glass processing (drying coatings)
- automotive industry (e.g. paint drying equipment)
- printing machines (IR drying)
- packaging industry (shrink tunnels)

### Key Features

In addition to wear-free operation and high efficiency, this product series features:

- simple handling and small space requirements
- voltage ratings 230 V, 400 V, 500 V
- current ratings 16 A ... 280 A
- integrated semiconductor fuse
- standard system interface for connection to an optional bus module (e.g. Profibus-DP, ModBus RTU, CANopen, DeviceNet)
- LED status indicators
- operational modes 1:1, as well as 1:2, 1:3, 1:5 (e.g. for commissioning)



- 24 V logic signal control (> 3V) or over standard system interface
- secure isolation between control and power sections
- single phase (3-phase structure by connecting two Thyro-S units)
- UL approval, UL508 A (100 kA S.C.C.R.)
- meets ISO 9001 quality standards
- CE compliant

### Extras for the ... HRL type

- additional 24V DC/AC electronic power supply
- load monitoring
- alarm relay



PERFECT IN FORM AND FUNCTION

**AEG**

# Specification

## Type series and specification (excerpt)

THYRO-1S H1, HRL1	Current (A)	Type Rating (kW)			Dissipation (W)	Dimensions (in)			Weight (lb) approx.
		230 V	400 V	500 V		W	H	D	
	16	3.7	6.4	8	30	1.8	4.8	5.0	1.6
	30	6.9	12	15	47	1.8	4.8	5.0	1.6
	45	10	18	22.5	48	2.1	7.5	7.2	3.8
	60	14	24	30	80	2.1	7.5	7.2	3.8
	100	23	40	50	105	3.0	7.5	7.5	4.2
	130	30	52	65	150	5.0	12.7	9.4	8.9
	170	39	68	85	210	5.0	12.7	9.4	8.9
..F.	280	64	112	140	330	5.0	14.7	9.4	11.1

### VOLTAGE RATINGS

	230 Volt – 57 % + 10 %;	for H 1
	230 Volt – 15 % + 10 %;	> 99 V for H RL 1 with additional 24 AC/DC electronic power supply
	400 Volt – 57 % + 10 %;	for H 1
	400 Volt – 15 % + 10 %;	> 172 V for H RL 1 with additional 24 AC/DC electronic power supply
	500 Volt – 57 % + 10 %;	for H 1
	500 Volt – 15 % + 10 %;	> 215 V for H RL 1 with additional 24 AC/DC electronic power supply

### LINE FREQUENCY

	all types	47 Hz to 63 Hz
		max. frequency change 5 % per half cycle

### LOAD TYPE

	Ohmic load
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### OPERATIONAL MODES

Name	Load signal for digital set-point = on
1 : 1	= all full waves (default setting)
1 : 2	= every 2nd full line cycle
1 : 3	= every 3rd half line cycle (DC free)
1 : 5	= every 5th half line cycle (DC free)

### DIGITAL SET-POINT INPUTS (SWITCH-ON SIGNALS)

set-point 1	logic input 0 ... 24 V Ri > 3,3 kΩ ON > 3 V
set-point 2	system interface, connection to controlling automation system via optional bus module

### RELAY OUTPUT

	1 changeover contact
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### AMBIENT TEMPERATURE

	113 °F by passive convection cooling
	95 °F by external fan cooling (type ..F has integrated fan)
	Operation at higher temperatures is permissible with reduced current limits
	temperature range to 131 °F: current rating reduction of -3.6 % / °F
	With UL applications max. 104 °F