

The digital, communication-enabled Thyro-S[®] thyristor switch provides a comprehensive set of advanced functions to suit the exacting requirements of a wide variety of applications and process technologies.

APPLICATIONS

- Automotive (e.g. paint drying equipment)
- Chemical (pipe trace heaters, pre-heating equipment)
- Furnace construction (industrial, diffusion, drying)
- Glass processing (drying coatings)
- Machine building (extruders, plastic presses)
- Packaging (shrink tunnels)
- Printing machines (IR drying)

RELIABLE, FAST, ECONOMIC, AND COMMUNICATION-ENABLED

The high-effiency, connection-ready Thyro-S[®] thyristor switch delivers accurate, reliable, switch-free performance.

It can be connected to bus systems, used as a standalone unit, or used in combination with all established two-point process controllers, PLCs, or computer systems.

With simple mounting, minimal space requirements, quick commissioning, and safe operation, Thyro-S thyristor switches are easily integrated into a wide range of applications.

KEY FEATURES

- > For ohmic or transformer loads
- > Current, voltage, or power switching
- > 230, 400, or 500 V
- > 16 to 280 A
- Integrated semiconductor fuse
- > Secure isolation between control and power sections
- Three-phase design by connecting two Thyro-S units
- > DIN rail mounting for 16 A, 30 A, 45 A, 60 A

ADVANCED COMMUNICATION AND CONTROL

- Standard system interfaces for connection to an optional bus module:
 - EtherNet/IP*
 - CANopen[®]
 - DeviceNet[™]
 - Modbus RTU[®]
 - Modbus TCP[®]
 - PROFIBUS® DPV1
 - PROFINET[®]
- LED status messages
- > 1:1 operating mode, as well as 1:2, 1:3, 1:5 for commissioning
- > 24 V (> 3 V) or standard system interface logic signal control

CERTIFICATION AND COMPLIANCE

- > UL 508A (100 kVA SCCR)
- > CE
- > ISO 9001 quality standards

ADDITIONAL FEATURES FOR H RL1 MODEL

- > 24 VAC/VDC external electronic power supply
- > Load monitoring
- > Alarm relay



(A) 230 V 400 V 500 V (W) W H D (kg) 16 3.7 6.4 8 30 45 121 127 0.7 30 6.9 12 15 477 45 121 127 0.7 45 10 18 22.5 48 52 190 182 1.7 60 14 24 30 80 52 190 182 1.7 100 23 40 50 105 75 190 190 1.9 130 30 52 65 150 125 320 237 4 170 39 68 85 210 125 370 237 5 30 V -57% +10% H1 types 112 140 330 125 370 237 5 30 V -57% +10% H2 types > 99 V using an external 24 V electronic power supply 00 V -57% + 10% H1 types <t< th=""><th rowspan="2">Туре</th><th rowspan="2">Current (A)</th><th colspan="3">Unit Rating (kW)</th><th>Power Loss</th><th colspan="3">Dimensions (mm)</th><th>Weight</th></t<>	Туре	Current (A)	Unit Rating (kW)			Power Loss	Dimensions (mm)			Weight	
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OPERATING SPECIFICATIONS All types from 47 to 63 Hz											
All types from 47 to 63 Hz				RL1 types > 2	215 V using ar	n external 24 V electronic po	ower supply				
letwork Frequency	OPERAT	ING SPECIFIC									
Max. frequency change 5% per half-wave	Network Frequency										
			M	Max. frequency change 5% per half-wave							

	Max. frequency change 5% per half-wave						
Load Types	Ohmic loads and transformer loads						
Relay Output	1 changeover contact						
Operating Modes ¹							
1:1	All full-waves (default setting) ²						
1:2	Every 2nd full wave cycle ²						
1:3	Every 3rd full wave cycle ²						
1:5	Every 5th full wave cycle ²						
Digital Set Point Inputs							
Set Point 1	Logical input DC 0 24 V $R_i > 3.3 k\Omega$ ON > 3 V						
Set Point 2	System interface, connection to controlling automation system via optional bus module is possible						
System Interface							
Connections	Optional bus module for Profibus* DPV1, Modbus* RTU, DeviceNetTM, CANopen*, Profinet*, Modbus* TCP, Ethernet/IP*						
	PC software Thyro-Tool Family via PC adapter						
Environmental Specifications							
	35°C external fan cooling (F-type, with integrated fan)						
	45°C passive convection cooling						
Ambient temperature	Operation at higher temperature is possible with reduced current limits:						
	Temperature range up to 55°C: rated current - 2%/°C						
	UL applications: max. 40°C						

¹ Load signal (for digital set point = ON)

² Without direct current ratio

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