# **SIEMENS**

## Data sheet

## 3RT2015-1HB42



COUPLING RELAY, AC-3, 3KW/400V, 1NC, DC 24V, 0.7...1.25\*US, 3-POLE, SZ S00 SCREW TERMINAL

product brand name		SIRIUS	
Product designation		Coupling relay	
General technical data:			
Insulation voltage			
Rated value	V	690	
Degree of pollution		3	
Surge voltage resistance Rated value	kV	6	
Mechanical service life (switching cycles)			
<ul> <li>of the contactor typical</li> </ul>		30 000 000	
<ul> <li>of the contactor with added electronics-</li> </ul>		5 000 000	
compatible auxiliary switch block typical			
Thermal short-time current restricted to 10 s	А	56	
Protection class IP			
• on the front		IP20	
• of the terminal		IP20	
Equipment marking			
• acc. to DIN EN 61346-2		Q	
• acc. to DIN EN 81346-2		Q	
Main circuit:			
Number of poles for main current circuit		3	
Number of NC contacts for main contacts		0	
Number of NO contacts for main contacts		3	
Operating voltage			
<ul> <li>at AC-3 Rated value maximum</li> </ul>	V	690	
Operating current			

● at AC-1		
— at 400 V at ambient temperature 40 °C	A	18
Rated value		
— up to 690 V at ambient temperature 40 °C	А	18
Rated value		
— up to 690 V at ambient temperature 60 $^\circ  ext{C}$	А	16
Rated value		
• at AC-2 at 400 V Rated value	A	7
• at AC-3		
— at 400 V Rated value	А	7
— at 500 V Rated value	А	6
— at 690 V Rated value	А	4.9
<ul> <li>at AC-4 at 400 V Rated value</li> </ul>	А	6.5
Operating current with 1 current path		
● at DC-1		
— at 24 V Rated value	А	15
— at 110 V Rated value	А	1.5
— at 220 V Rated value	А	0.6
— at 440 V Rated value	А	0.42
— at 600 V Rated value	А	0.42
• at DC-3 at DC-5		
— at 24 V Rated value	А	15
— at 110 V Rated value	А	0.1
Operating current with 2 current paths in series		
● at DC-1		
— at 24 V Rated value	А	15
— at 110 V Rated value	А	8.4
— at 220 V Rated value	А	1.2
— at 440 V Rated value	А	0.6
— at 600 V Rated value	А	0.5
• at DC-3 at DC-5		
— at 110 V Rated value	А	0.25
— at 24 V Rated value	А	15
Operating current with 3 current paths in series		
● at DC-1		
— at 24 V Rated value	А	15
— at 110 V Rated value	А	15
— at 220 V Rated value	А	15
— at 440 V Rated value	А	0.9
— at 600 V Rated value	А	0.7
• at DC-3 at DC-5		
— at 110 V Rated value	А	15

— at 220 V Rated value	А	1.2
— at 24 V Rated value	А	15
— at 440 V Rated value	А	0.14
— at 600 V Rated value	А	0.14
Operating power	-	
• at AC-1 at 400 V Rated value	kW	11
• at AC-2 at 400 V Rated value	kW	3
• at AC-4 at 400 V Rated value	kW	3
Operating power	-	
● at AC-1		
— at 230 V at 60 °C Rated value	kW	6
— at 230 V Rated value	kW	6.3
— at 400 V at 60 °C Rated value	kW	10.5
— at 690 V at 60 °C Rated value	kW	18
— at 690 V Rated value	kW	19
● at AC-3		
— at 230 V Rated value	kW	1.5
— at 400 V Rated value	kW	3
— at 690 V Rated value	kW	4
Operating power for ≥ 200000 operating cycles at AC-4		
• at 400 V Rated value	kW	1.15
• at 690 V Rated value	kW	1.15
Operating frequency	-	
• at AC-3 maximum	1/h	750
Control circuit/ Control:		
Type of voltage of the control supply voltage		DC
Control supply voltage for DC	-	
Rated value	V	24
Operating range factor control supply voltage rated value of the magnet coil for DC		0.7 1.25
Closing power of the magnet coil for DC	W	2.8
Holding power of the magnet coil for DC	W	2.8
Auxiliary circuit:		
Number of NC contacts		
<ul> <li>for auxiliary contacts</li> </ul>		
— instantaneous contact		1
— instantaneous contact Number of NO contacts		1
		1
Number of NO contacts	_	1 0

Operating current at AC-15		
• at 230 V Rated value	А	10
• at 400 V Rated value	А	3
• at 690 V Rated value	А	1
Operating current	-	
• at DC-12 at 125 V Rated value	А	2
• at DC-12 at 220 V Rated value	А	1
• at DC-12 at 600 V Rated value	А	0.15
• at DC-13 at 125 V Rated value	А	0.9
• at DC-13 at 220 V Rated value	А	0.3
• at DC-13 at 600 V Rated value	А	0.1
Operating current	_	
• at DC-12		
— at 60 V Rated value	А	6
— at 110 V Rated value	А	3
• at DC-13		
— at 24 V Rated value	А	10
— at 60 V Rated value	А	2
— at 110 V Rated value	А	1
Contact reliability of the auxiliary contacts	_	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings:		
Full-load current (FLA) for three-phase AC motor		
• at 480 V Rated value	А	4.8
• at 600 V Rated value	А	6.1
yielded mechanical performance [hp]		
<ul> <li>for single-phase AC motor at 110/120 V Rated value</li> </ul>	metric hp	0.25
<ul> <li>for single-phase AC motor at 230 V Rated</li> </ul>		
value	metric hp	0.75
value • for three-phase AC motor at 200/208 V Rated value		0.75 1.5
• for three-phase AC motor at 200/208 V Rated	hp metric	
<ul> <li>for three-phase AC motor at 200/208 V Rated value</li> <li>for three-phase AC motor at 220/230 V Rated</li> </ul>	hp metric hp metric	1.5
<ul> <li>for three-phase AC motor at 200/208 V Rated value</li> <li>for three-phase AC motor at 220/230 V Rated value</li> <li>for three-phase AC motor at 460/480 V Rated</li> </ul>	hp metric hp metric hp metric	1.5 2
<ul> <li>for three-phase AC motor at 200/208 V Rated value</li> <li>for three-phase AC motor at 220/230 V Rated value</li> <li>for three-phase AC motor at 460/480 V Rated value</li> <li>for three-phase AC motor at 575/600 V Rated</li> </ul>	hp metric hp metric hp metric hp	1.5 2 3

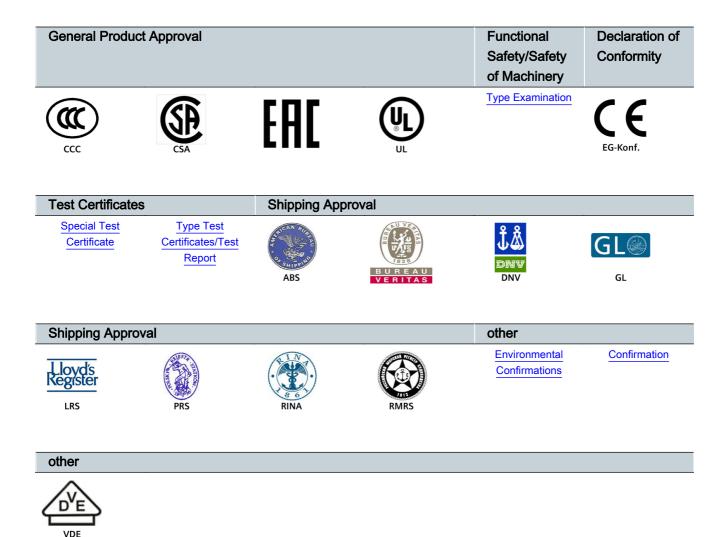
• for short-circuit protection of the main circuit

— with type of assignment 1 required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A
— with type of assignment 2 required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 A
• for about aircuit materation of the accuition and		
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>		fuse gL/gG: 10 A
Tequiled		
Installation/ mounting/ dimensions:		
mounting position		+/-180° rotation possible on vertical mounting
		surface; can be tilted forward and backward by +/-
		22.5° on vertical mounting surface
Mounting type		screw and snap-on mounting onto 35 mm standard
		mounting rail according to DIN EN 50022
<ul> <li>Side-by-side mounting</li> </ul>		Yes
Height	mm	57.5
Width	mm	45
Depth	mm	73
Required spacing		
<ul> <li>with side-by-side mounting</li> </ul>		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	0
— downwards	mm	0
— at the side	mm	0
<ul> <li>for grounded parts</li> </ul>		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	0
— at the side	mm	6
— downwards	mm	0
for live parts		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	0
— downwards	mm	0
— at the side	mm	6
Connections/ Terminals:		
Type of electrical connection		
<ul> <li>for main current circuit</li> </ul>		screw-type terminals
<ul> <li>for auxiliary and control current circuit</li> </ul>		screw-type terminals
Type of connectable conductor cross-section		
<ul> <li>for main contacts</li> </ul>		
— single or multi-stranded		2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²

— finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul> <li>for AWG conductors for main contacts</li> </ul>	2x (20 16), 2x (18 14), 2x 12
<ul> <li>for auxiliary contacts</li> </ul>	
— single or multi-stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²
— finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul> <li>for AWG conductors for auxiliary contacts</li> </ul>	2x (20 16), 2x (18 14), 2x 12
Safety related data:	

B10 value with high demand rate acc. to SN 31920		1 000 000
Proportion of dangerous failures	-	
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	%	40
<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	%	73
Failure rate [FIT] with low demand rate acc. to SN 31920	FIT	100
Product function Mirror contact acc. to IEC 60947-4-1		Yes
T1 value for proof test interval or service life acc. to IEC 61508	У	20
Protection against electrical shock		finger-safe
Mechanical data:		
Size of contactor		S00
Ambient conditions:		
Installation altitude at height above sea level maximum	m	2 000
Ambient temperature		
• during operation	°C	-25 +60
• during storage	°C	-55 +80
Cartificates/annrovals:		

Certificates/ approvals:



#### Further information

Information- and Downloadcenter (Catalogs, Brochures,...) http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system) http://www.siemens.com/industrymall

#### Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT20151HB42

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RT20151HB42/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT20151HB42&lang=en

