



# Function Modules

## SIRIUS 3RA28 Function Modules for 3RT2 Contactors and 3RH21 Contactor Relays

### Introduction

### Technical specifications

Type	<b>3RA28 11</b>		<b>3RA28 12</b>		<b>3RA28 16</b>	
Function	<b>ON-delay</b>		<b>OFF-delay with auxiliary voltage</b>		<b>Wye-delta function</b>	
Dimensions	See 3RT20 contactors, pages 3/17 and 3/21.					
<b>General data</b>						
<b>Rated insulation voltage <math>U_i</math></b>	V AC	300				
Pollution degree 3 Overvoltage category III						
<b>Operating range of excitation</b>	0.85 ... 1.1 x $U_s$ , 0.95 ... 1.05 times the rated frequency					
<b>Overvoltage protection</b>	Varistor integrated					
<b>Rated power</b>	W	1				1
• Power consumption at 230 V AC, 50 Hz	VA	1				2
<b>Rated operational currents <math>I_e</math></b>						
• AC-140	At 24 ... 240 V, 50 Hz	A	0.4			--
• DC-13	At 24 ... 240 V	A	0.4			--
• AC-15	At 24 ... 240 V, 50 Hz	A	--			3
• DC-13	- At 24 V	A	--			1
	- At 125 V	A	--			0.2
	- At 250 V	A	--			0.1
<b>DIАЗED protection</b>	gG operational class	A	--			4
<b>Switching frequency</b> for load						
• With $I_e$ at 230 V AC		h <sup>-1</sup>	2500			--
• With 3RT2 contactor at 230 V AC		h <sup>-1</sup>	2500			--
<b>Recovery time</b>		ms	50			150
<b>Minimum ON period</b>		ms	--		35	--
<b>Residual current</b>	Max.	mA	5			--
<b>Voltage drop</b>	Max.	VA	3.5			--
With conducting output						
<b>Short-time loading capacity</b>	Up to 10 ms	A	10			--
<b>Setting accuracy</b>	Typ.	±15 %				
With reference to upper limit of scale						
<b>Repeat accuracy</b>	Max.	±1 %				
<b>Mechanical endurance</b>	Operat- ing cy- cles	100 x 10 <sup>6</sup>				10 x 10 <sup>6</sup>
<b>Permissible ambient temperature</b>						
• During operation	°C	-25 ... +60				
• During storage	°C	-40 ... +80				
<b>Degree of protection</b> acc. to IEC 60947-1, Appendix C	IP20					
<b>Shock resistance</b>	g/ms	15/11				
Half-sine acc. to IEC 60068-2-27						
<b>Vibration resistance</b>	Hz/mm	10 ... 55/0.35				
according to IEC 60068-2-6						
<b>Electromagnetic compatibility (EMC)</b>	IEC 61812-1, IEC 61000-6-2, IEC 61000-6-4				IEC 60947-4-1	
<b>Permissible mounting positions</b>	Any					
<b>Conductor cross-sections</b>						
Connection type						
 <b>Screw terminals</b>						
• Solid	mm <sup>2</sup>	1 x (0.5 ... 4), 2 x (0.5 ... 2.5)				--
• Finely stranded with end sleeve	mm <sup>2</sup>	1 x (0.5 ... 2.5), 2 x (0.5 ... 1.5)				--
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)				--
• Terminal screws		M3 (for standard screw driver size 2 or Pozidriv 2)				--
• Tightening torque	Nm	0.8 ... 1.2				--
<b>Connection type</b>						
 <b>Spring-type terminals</b>						
• Operating devices	mm	3.0 x 0.5				--
• Solid	mm <sup>2</sup>	2 x (0.25 ... 1.5)				--
• Finely stranded with end sleeve	mm <sup>2</sup>	2 x (0.25 ... 1.5)				--
• Finely stranded	mm <sup>2</sup>	2 x (0.25 ... 1.5)				--
• AWG cables, solid or stranded	AWG	2 x (24 ... 16)				--