# **SIEMENS**

Product data sheet 3RV1031-4FA10



CIRCUIT-BREAKER SIZE S2. FOR MOTOR PROTECTION, CLASS 10, A-REL. 28...40A, N-REL. 520A, SCREW TERMINAL, STANDARD SWITCHING CAPACITY

General technical data:		
Product brand name		SIRIUS
Product designation		circuit breaker
Size of the circuit-breaker		S2
Trip class		CLASS 10
Degree of pollution		3
Altitude of installation site / at a height over sea level / maximum	m	2,000
Protection class IP / frontal/front side		IP20
Ambient temperature		
during storage	°C	-50 80
during the operating phase	°C	-20 70
during transport	°C	8050
Resistance against shock		25g / 11 ms
Insulation voltage / rated value	V	690
Impulse voltage resistance / rated value	kV	6
Real loss power / total / typical	W	20
Item designation		
<ul> <li>according to DIN 40719 extendable after IEC 204-2 / according to IEC 750</li> </ul>		Q
• according to DIN EN 61346-2		Q

Type of the driving mechanism / Motor drive  design of the operating mechanism  Product function  Overload protection Short-circuit to earth recognition Product component / auxiliary switch Product component / auxiliary switch No Product component / Intrinciplate release mechanism No Product component / Intrinciplate release mechanism No Product extension / optional / Motor drive  Main circuit: Number of poles / for main current circuit 3 Type of voltage Ac/DC Operating voltage / at 3 AC / rated value / maximum V 690 Operating current / at AC-3 / at 400 V / rated value At 40 Service power / at AC-3  at 400 V / rated value  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum Arrangement of electrical connectors / for main current circuit  Adjustable response current of the non-delayed short-circuit release Adjustable response current of the current-dependent overload release A 28 40 Continuous current / rated value Advisitary circuit:	Mechanical switching cycle as operating period / of the main contacts / typical		50,000
Product function  Overload protection Short-circuit to earth recognition Product component / auxiliary switch Product component / Undervoltage release mechanism No Product component / Undervoltage release mechanism No Product component / trip indicator Product extension / optional / Motor drive  Main circuit: Number of poles / for main current circuit 3 Type of voltage Operating voltage / at 3 AC / rated value / maximum V 690 Operating current / at AC-3 / at 400 V / rated value A 40 Service power / at AC-3 / at 400 V / rated value Service power / at AC-3 / according to IEC 60947-6-2 / maximum Arrangement of electrical connectors / for main current circuit front side  Adjustable response current of the non-delayed short-circuit release A 520 520 Adjustable response current of the current-dependent overload release A 28 40 Continuous current / rated value Product extension / auxiliary switch	Type of the driving mechanism / Motor drive		No
Overload protection     Short-circuit to earth recognition     Phase disturbance recognition     Product component / auxiliary switch Product component / Undervoltage release mechanism Product component / trip indicator Product extension / optional / Motor drive  Main circuit: Number of poles / for main current circuit Type of voltage Operating voltage / at 3 AC / rated value / maximum V 690 Operating current / at AC-3 / at 400 V / rated value A 40 Service power / at AC-3  • at 400 V / rated value  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum Arrangement of electrical connectors / for main current circuit front side  Adjustable response current • of the non-delayed short-circuit release A 520 520 Adjustable response current • of the current-dependent overload release A 28 40 Continuous current / rated value Product extension / auxiliary switch  Yes	design of the operating mechanism		selector switch
Short-circuit to earth recognition Product component / auxiliary switch Product component / Undervoltage release mechanism Product component / Undervoltage release mechanism No Product component / trip indicator Product extension / optional / Motor drive  Main circuit:  Number of poles / for main current circuit 3 Type of voltage Operating voltage / at 3 AC / rated value / maximum V 690 Operating current / at AC-3 / at 400 V / rated value Service power / at AC-3 • at 400 V / rated value  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum Arrangement of electrical connectors / for main current circuit  Adjustable response current • of the non-delayed short-circuit release A 520 520  Adjustable response current • of the current-dependent overload release A 28 40  Continuous current / rated value Product extension / auxiliary switch	Product function		
Product component / auxillary switch  Product component / Undervoltage release mechanism  Product component / Undervoltage release mechanism  Product component / trip indicator  Product extension / optional / Motor drive  Main circuit:  Number of poles / for main current circuit  Type of voltage  Operating voltage / at 3 AC / rated value / maximum  V 690  Operating current / at AC-3 / at 400 V / rated value  Service power / at AC-3  * at 400 V / rated value  KW 18.5  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  * of the non-delayed short-circuit release  A 520 520  Adjustable response current  * of the current-dependent overload release  A 40  Product extension / auxiliary switch	Overload protection		Yes
Product component / auxiliary switch  Product component / Undervoltage release mechanism  No  Product component / trip indicator  Product extension / optional / Motor drive  Main circuit:  Number of poles / for main current circuit  3  Type of voltage  Operating voltage / at 3 AC / rated value / maximum  V 690  Operating current / at AC-3 / at 400 V / rated value  A 40  Service power / at AC-3  * at 400 V / rated value  KW 18.5  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  * of the non-delayed short-circuit release  A 520 520  Adjustable response current  • of the current-dependent overload release  A 40  Product extension / auxiliary switch	Short-circuit to earth recognition		No
Product component / Undervoltage release mechanism  Product component / trip indicator  Product extension / optional / Motor drive  Main circuit:  Number of poles / for main current circuit  Type of voltage  Operating voltage / at 3 AC / rated value / maximum  V 690  Operating current / at AC-3 / at 400 V / rated value  A 40  Service power / at AC-3  * at 400 V / rated value  KW 18.5  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  * of the non-delayed short-circuit release  A 520 520  Adjustable response current  • of the current-dependent overload release  A 28 40  Continuous current / rated value  Product extension / auxiliary switch	Phase disturbance recognition		Yes
Product component / trip indicator Product extension / optional / Motor drive  Main circuit:  Number of poles / for main current circuit  Type of voltage Operating voltage / at 3 AC / rated value / maximum V 690 Operating current / at AC-3 / at 400 V / rated value A 40 Service power / at AC-3  * at 400 V / rated value  Arrangement of electrical connectors / for main current circuit  Adjustable response current • of the non-delayed short-circuit release A 520 520 Adjustable response current • of the current-dependent overload release A 28 40 Continuous current / rated value A 40 Product extension / auxiliary switch	Product component / auxiliary switch		No
Product extension / optional / Motor drive  Main circuit:  Number of poles / for main current circuit  Type of voltage  Operating voltage / at 3 AC / rated value / maximum  V 690  Operating current / at AC-3 / at 400 V / rated value  A 40  Service power / at AC-3  • at 400 V / rated value  KW 18.5  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  • of the non-delayed short-circuit release  A 520 520  Adjustable response current  • of the current-dependent overload release  A 40  Continuous current / rated value  Product extension / auxiliary switch	Product component / Undervoltage release mechanism		No
Main circuit:  Number of poles / for main current circuit  Type of voltage  Operating voltage / at 3 AC / rated value / maximum  V 690  Operating current / at AC-3 / at 400 V / rated value  A 40  Service power / at AC-3  • at 400 V / rated value  kW 18.5  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  • of the non-delayed short-circuit release  A 520 520  Adjustable response current  • of the current-dependent overload release  A 28 40  Continuous current / rated value  Product extension / auxiliary switch	Product component / trip indicator		No
Number of poles / for main current circuit  Type of voltage  Operating voltage / at 3 AC / rated value / maximum  V 690  Operating current / at AC-3 / at 400 V / rated value  A 40  Service power / at AC-3  • at 400 V / rated value  KW 18.5  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  • of the non-delayed short-circuit release  A 520 520  Adjustable response current  • of the current-dependent overload release  A 28 40  Continuous current / rated value  A 40  Product extension / auxiliary switch	Product extension / optional / Motor drive		Yes
Type of voltage  Operating voltage / at 3 AC / rated value / maximum  V 690  Operating current / at AC-3 / at 400 V / rated value  A 40  Service power / at AC-3  • at 400 V / rated value  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  • of the non-delayed short-circuit release  A 520 520  Adjustable response current  • of the current-dependent overload release  A 28 40  Continuous current / rated value  A 40  Product extension / auxiliary switch	Main circuit:		
Operating voltage / at 3 AC / rated value / maximum  Operating current / at AC-3 / at 400 V / rated value  A 40  Service power / at AC-3  • at 400 V / rated value  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  • of the non-delayed short-circuit release  A 520 520  Adjustable response current  • of the current-dependent overload release  A 28 40  Continuous current / rated value  A 40  Product extension / auxiliary switch	Number of poles / for main current circuit		3
Operating current / at AC-3 / at 400 V / rated value  Service power / at AC-3  • at 400 V / rated value  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  • of the non-delayed short-circuit release  A 520 520  Adjustable response current  • of the current-dependent overload release  A 28 40  Continuous current / rated value  Product extension / auxiliary switch  Yes	Type of voltage		AC/DC
Service power / at AC-3  • at 400 V / rated value  Switching frequency / at AC-3 / according to IEC 60947-6-2 / 1/h 15  Arrangement of electrical connectors / for main current circuit front side  Adjustable response current  • of the non-delayed short-circuit release  Adjustable response current  • of the current-dependent overload release  A 28 40  Continuous current / rated value  Product extension / auxiliary switch  AWW 18.5  In the Service Power / at AC-3 / according to IEC 60947-6-2 / 1/h 15  A 520 520  Adjustable response current  • of the current-dependent overload release  A 28 40  Yes	Operating voltage / at 3 AC / rated value / maximum	V	690
• at 400 V / rated value  Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit  Adjustable response current  • of the non-delayed short-circuit release  Adjustable response current  • of the current-dependent overload release  A 28 40  Continuous current / rated value  Product extension / auxiliary switch	Operating current / at AC-3 / at 400 V / rated value	А	40
Switching frequency / at AC-3 / according to IEC 60947-6-2 / maximum  Arrangement of electrical connectors / for main current circuit front side  Adjustable response current  • of the non-delayed short-circuit release  A 520 520  Adjustable response current  • of the current-dependent overload release  A 28 40  Continuous current / rated value  Product extension / auxiliary switch	Service power / at AC-3		
Arrangement of electrical connectors / for main current circuit front side  Adjustable response current  • of the non-delayed short-circuit release A 520 520  Adjustable response current  • of the current-dependent overload release A 28 40  Continuous current / rated value A 40  Product extension / auxiliary switch Yes	• at 400 V / rated value	kW	18.5
Adjustable response current  • of the non-delayed short-circuit release  A 520 520  Adjustable response current  • of the current-dependent overload release  A 28 40  Continuous current / rated value  Product extension / auxiliary switch  Yes		1/h	15
• of the non-delayed short-circuit release     A 520 520  Adjustable response current     • of the current-dependent overload release     A 28 40  Continuous current / rated value  Product extension / auxiliary switch  Yes	Arrangement of electrical connectors / for main current circuit		front side
Adjustable response current  • of the current-dependent overload release  A 28 40  Continuous current / rated value  A 40  Product extension / auxiliary switch  Yes	Adjustable response current		
• of the current-dependent overload release     A 28 40  Continuous current / rated value A 40  Product extension / auxiliary switch Yes	of the non-delayed short-circuit release	Α	520 520
Continuous current / rated value  A 40  Product extension / auxiliary switch  Yes	Adjustable response current		
Product extension / auxiliary switch Yes	of the current-dependent overload release	Α	28 40
	Continuous current / rated value	Α	40
Auxiliary circuit:	Product extension / auxiliary switch		Yes
	Auxiliary circuit:		
Number of NC contacts / for auxiliary contacts / instantaneous 0 switching	•		0
Number of NO contacts / for auxiliary contacts / instantaneous switching  0			0
Number of change-over switches / for auxiliary contact 0	Number of change-over switches / for auxiliary contact		0
Inputs/ Outputs:	Inputs/ Outputs:		
Number of digital inputs 0	Number of digital inputs		0
Short-circuit:	Short-circuit:		
Breaking capacity limit short-circuit current (Icu)	Breaking capacity limit short-circuit current (lcu)		
• at 400 V / rated value kA 50	• at 400 V / rated value	kA	50

• at 500 V / rated value	kA	10
• at 690 V / rated value	kA	4
Design of the overcurrent release and short-circuit release		thermomagnetic

Installation/mounting/dimensions:		
built in orientation		any
Type of fixing/fixation		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
Width	mm	55
Height	mm	140
Depth	mm	149
distance, to be maintained, to the ranks assembly		
• backwards	mm	0
• sidewards	mm	0
Product function / removable terminal for auxiliary and control circuit		No

Connections:		
Design of the electrical connection		
for main current circuit		screw-type terminals with box terminals
Type of the connectable conductor cross-section		
• for main contacts		
• unifilar		2x (0.75 16 mm2)
• stranded wire		2x (0.75 25 mm2), 0.75 35 mm2
• stranded wire		
<ul> <li>with conductor end processing</li> </ul>		2x (0.75 16 mm2), 0.75 25 mm2
• at AWG-conductors / for main contacts		2x (18 2), 1x (18 2)
Conductor cross section that can be connected / for main contacts		
• unifilar	mm²	0.75 16
• stranded wire	mm²	0.75 35
stranded wire		
<ul> <li>with conductor end processing</li> </ul>	mm²	0.75 25
AWG number / as coded connectable conductor cross-section		
• for main contacts		18 2

Safety:	
Protection against electrical shock	finger-safe

## Further information:

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

#### Global Industry Mall (Online ordering system)

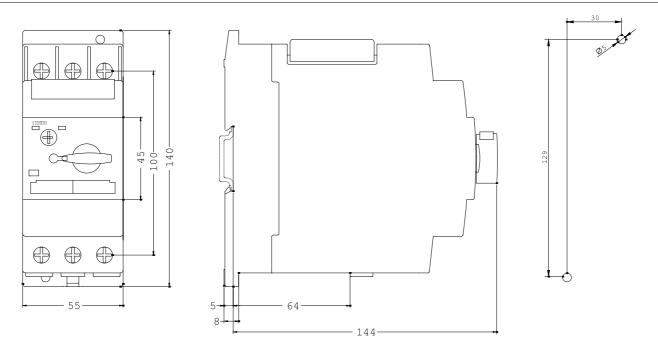
http://www.siemens.com/industrial-controls/mall

#### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

http://support.automation.siemens.com/WW/view/en/3RV1031-4FA10/all

### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RV1031-4FA10



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