



SOLID-STATE CONTACTOR 3-PH 3RF3 AC53 12.5A 40 DEGREES C 48-480V / 110-230V AC 2-PH. CONTROLLED INSTANTANEOUS SPRING-LOADED TERMINALS

General technical data:

product brand name		SIRIUS
Product designation		solid-state motor contactor
Protection class IP		IP20
Insulation voltage / rated value	V	600
Installation altitude / at a height over sea level / maximum	m	1,000
Ambient temperature		
• during storage	°C	-55 ... +80
• during operating	°C	-25 ... +60
Shock resistance		
• according to IEC 60068-2-27		15g / 11 ms
Resistance against vibration		
• according to IEC 60068-2-6		2g
Resistance against the impulse current / rated value	A	1,200
Active power loss / total / typical	W	22
Reference code		
• according to DIN 40719 extended according to IEC 204-2 / according to IEC 750		K
• according to DIN EN 61346-2		Q
Product function		instantaneous switching

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		2
Operating frequency		
• rated value	Hz	60 ... 50
Operating voltage		
• at 60 Hz / at AC / rated value	V	48 ... 480
• at 50 Hz / at AC / rated value	V	48 ... 480
Operating current		
• minimum	mA	500
• at AC-3 / at 400 V / rated value	A	12.5
Working range relative to the operating voltage		
• at 50 Hz / with AC	V	40 ... 506
• at 60 Hz / with AC	V	40 ... 506
Service power / at AC-3 / at 400 V		
• rated value	kW	5.5
Derating temperature	°C	40
Tolerance of the line frequency	Hz	5
Relative symmetrical tolerance / of the operation frequency	%	10
I ² t-level / maximum	A ² ·s	7,200
Voltage slew rate / at the thyristor / for main contacts		
• maximum permissible	V/μs	1,000
Block voltage / at the thyristor / for main contacts		
• maximum permissible	V	1,200
Reverse current / of the thyristor	mA	10
Control circuit/ Control:		
Voltage type / of control feed voltage		AC
Control supply voltage frequency		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
Relative symmetrical tolerance		
• of the control supply voltage frequency	%	10
• of the supply voltage frequency	%	10
Control supply voltage		
• 1		
• at 50 Hz / for AC		
• initial rated value	V	90
• final rated value	V	253

• at 60 Hz / for AC • initial rated value • final rated value • at 50 Hz / for AC / final value for signal<0>-recognition • at 60 Hz / for AC / final value for signal<0>-recognition	V	90
	V	253
	V	40
	V	40
Control current		
• for AC / rated value	mA	15
• at minimum control supply voltage / for AC	mA	2
switching times		
• ON delay		5 ms
• OFF delay		30 ms + in addition max. one half-wave

Auxiliary circuit:		
Number of NC contacts / for auxiliary contacts		0
Number of NO contacts / for auxiliary contacts		0
Number of changeover contacts / for auxiliary contacts		0

Installation/ mounting/ dimensions:		
mounting position		vertical
Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail
Mounting type / series installation		Yes
Tightening torque / of the screw for fastening of the operating resource	N·m	1.5
Design of the thread / of the screw for fastening of the operating resource		M4
Width	mm	90
Height	mm	95
Depth	mm	100.8
Distance, to be maintained, to the ranks assembly / upwards	mm	70
Distance, to be maintained, to the ranks assembly / downwards	mm	50

Connections/ terminals:		
Design of the electrical connection		
• for main current circuit		spring-loaded terminals
• for auxiliary and control current circuit		spring-loaded terminals
Product function / removable terminal for auxiliary and control circuit		Yes
Type of the connectable conductor cross-section		
• for main contacts		
• solid		2x (0.5 ... 2.5 mm²)
• finely stranded		

• with conductor end processing • without conductor final cutting		2x (0.5 ... 1.5 mm ²)
• for AWG conductors / for main contacts		2x (0.5 ... 2.5 mm ²)
• for auxiliary and control contacts		2x (18 ... 14)
• solid • finely stranded		0.5 ... 1.5 mm ²
• with conductor end processing • without conductor final cutting		0.5 ... 2.5 mm ²
• for AWG conductors / for auxiliary and control contacts		0.5 ... 2.5 mm ²
		1x (AWG 20 ... 12)
Skinning length / of the cable		
• for main contacts	mm	10
• for auxiliary and control contacts	mm	10

Certificates/ approvals:

Verification of suitability

CE / UL / CSA / CCC / C-TICK

General Product Approval

EMC

Declaration of Conformity



CCC



CSA



UL



C-TICK



EG-Konf.

Test Certificates

other

[Type Test Certificates/Test Report](#)

[Environmental Confirmations](#)

UL/CSA ratings:

yielded mechanical performance [hp] / for three-phase squirrel cage motors

- at 200/208 V / rated value
- at 220/230 V / rated value
- at 460/480 V / rated value

hp 2
hp 2
hp 5

Full-load current (FLA) / for 3-phase motor

- at 480 V / rated value

A 7.6

Further information:

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

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

Industry Mall (Online ordering system)

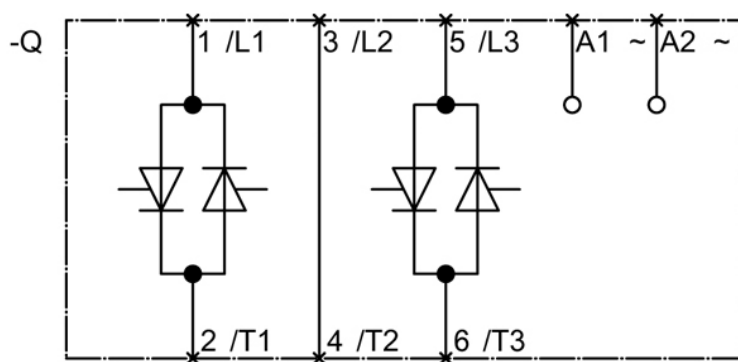
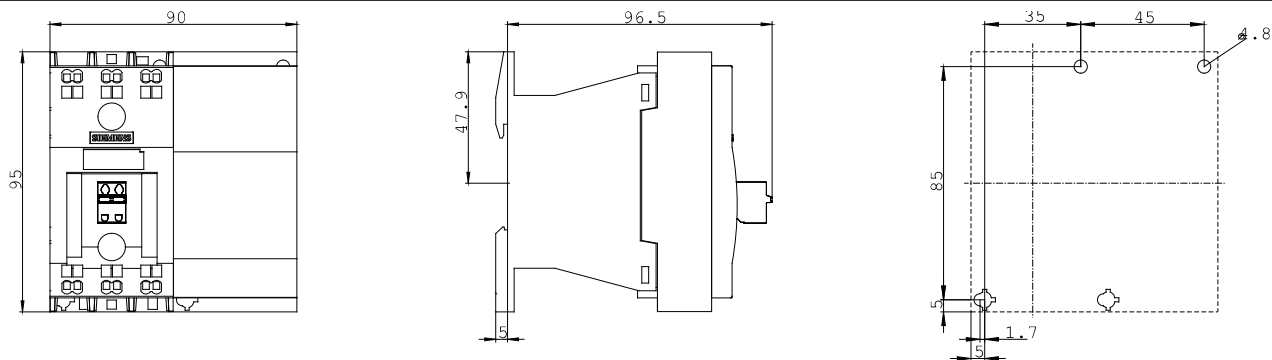
<https://mall.industry.siemens.com/>

Cax online generator

<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RF3412-2BB24/all>



last change:

Aug 4, 2014