SIEMENS

Data sheet 3RF2390-3AA06

	Solid-state contactor 1-phase 3RF2 AC 51 / 88 A / 40 °C 48-600 V / 24 V DC Ring cable connection Phased-out product, no successor available!
product brand name	SIRIUS
product designation	solid-state contactor
product type designation	3RF23
manufacturer's article number	
_1 of the accessories that can be ordered	3RF2900-3PA88
_3 of the accessories that can be ordered	3RF2900-0EA18
_4 of the accessories that can be ordered	3RF2990-0GA16
product designation	
_1 of the accessories that can be ordered	terminal cover
_3 of the accessories that can be ordered	converter
_4 of the accessories that can be ordered	load monitoring
General technical data	
product function	zero-point switching
power loss [W] for rated value of the current	
at AC in hot operating state	117 W
at AC in hot operating state per pole	117 W
without load current share typical	0.4 W
insulation voltage rated value	600 V
degree of pollution	3
type of voltage of the control supply voltage	DC
surge voltage resistance of main circuit rated value	6 kV
shock resistance according to IEC 60068-2-27	15g / 11 ms
vibration resistance according to IEC 60068-2-6	2g
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	07/01/2006
Main circuit	
number of poles for main current circuit	1
number of NO contacts for main contacts	1
number of NC contacts for main contacts	0
operating voltage at AC	
at 50 Hz rated value	48 600 V
at 60 Hz rated value	48 600 V
operating frequency rated value	50 60 Hz
operating range relative to the operating voltage at AC	
● at 50 Hz	40 660 V
● at 60 Hz	40 660 V
operational current	
at AC-51 rated value	88 A
at AC-51 according to IEC 60947-4-3	88 A
 according to UL 508 rated value 	80 A
operational current minimum	500 mA
rate of voltage rise at the thyristor for main contacts maximum permissible	1 000 V/µs
blocking voltage at the thyristor for main contacts maximum permissible	1 600 V
reverse current of the thyristor	10 mA
derating temperature	40 °C
surge current resistance rated value	1 150 A
I2t value maximum	6 600 A²·s
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage 1	
 at DC rated value 	30 V

* alt DC initial value for signal <1> detection at DC initial value for signal <1> detection at DC initial value for signal <1> detection control current at minimum control supply voltage at DC control current at minimum control supply voltage at DC control current at minimum control supply voltage at DC control current at DC rated value DN-delay time 1 ms, additionally max. one half-wave Auxiliary clotacts number of NC contacts for auxiliary contacts number of NC contacts for auxiliary and control contact number of NC contacts for auxiliary and control contacts number of NC contacts for auxiliary and control contacts number of NC number	. = -	
a DC Cinital value for signal <1-> edecidin a DC Control current at minimum control supply voltage a DC Control current at DC rated value CO-control current at DC rated value CO-delay time CF-delay time CF-delay time 1 ms, additionally max. one half-wave Auxillary circuit number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts of the contact for auxiliary contacts number of NO contacts for auxiliary contacts of the contact for auxiliary contacts number of NO contacts for auxiliary contacts of the contact for auxiliary contacts number of NO contacts for auxiliary contacts of the number of NO contacts with screw-type terminals object of the candiary and control contacts of the number of NO contacts of NO contacts of the number of NO contacts of NO contacts of the number of NO c		15 24 V
a ti DC full-scale value for signal-ob recognition control current at minimum control supply voltage a ti DC control current at DC rated value ON-delay time Auditary circuit number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of NC poster manufacts Installation munting if dimensions Isastening method a side-by-side mounting design of the thread of the screw for securing the equipment height width a side by-side mounting design of the thread of the screw for securing the equipment height yes Type of electrical connection • for main current circuit you of connectable conductor cross-sections • for auxiliary and control circuit you of connectable conductor cross-sections • for auxiliary and control contacts - solid — finely stranded with core end processing — finely stranded with core end processing • at AWG cables for auxiliary and control contacts tightening torque • for main contacts with screw-type terminals design of the thread of the connection screw • for main contacts • for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • for auxiliary and control contacts • for auxiliary and control contacts • for auxiliary and control contacts • for auxiliary and control contacts • for auxiliary and control contacts • for auxiliary and control contacts • for auxiliary and control contacts • for auxiliary and control contacts • for auxiliary and control contacts • for main contacts • for		4-14
control current at minimum control supply voltage al DC control current al DC rated value OFF-delay time OF	_	
* at DC control current at DC rated value 15 mA 1 ms; additionally max, one half-wave 1 ms; additionally max		5 V
Control current at DC rated value ON-delay time OFF-delay time 1 ms: additionally max, one half-wave 1 ms: additionally max. one half-wave 1 ms: a		12 mA
ON-felay time 1 ms; additionally max, one half-wave 1 ms; additionally max, one half-wave 1 ms; additionally max, one half-wave 2 mumber of NC contacts for auxiliary contacts 0 mumber of NC contacts for auxiliary contacts 0 mumber of CO contacts for auxiliary contacts 1 mumber of CO contacts for auxiliary contacts 1 mumber of CO contacts for auxiliary and control contacts 1 mumber of CO contacts for auxiliary and control contacts 1 mumber of CO contacts for auxiliary and control contacts 1 mumber of CO contacts for auxiliary and control contacts 1 mumber of CO contacts 1 mumber of C		
OFF-delay time 1 ms; additionally max, one half-wave Auxillary cloud: number of NC contacts for auxillary contacts number of NC contacts for auxillary contacts 0 Installation/ mounting/ dimensions Tastening method • side-by-side mounting diseasing of the thread of the screw for securing the equipment height width		
Auxiliary circuit number of NC contacts for auxiliary contacts fastening method a side-by-side mounting design of the thread of the screw for securing the equipment height width depth 200 mm width depth 180 mm Connections/ Terminals 190 of one factivat in contacts of or main current circuit of or suxiliary and control circuit type of connectable conductor cross-sections of ormain contacts or Jis Cable lug of no DN cable lug for main contacts — solid — finely stranded with core end processing — finely stranded with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals of or auxiliary and control contacts of the fire auxiliary and	-	
number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts stening method • side-by-side mounting design of the thread of the screw for securing the equipment height width 180 mm depth Connections/ Terminals type of electrical connection • for main contacts for JIS cable lug • for auxiliary and control contacts • for main contacts for JIS cable lug - finely stranded without core end processing - finely stranded without core end processing • at AWG cables for auxiliary and control contacts * of or main contacts with screw-type terminals of or auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts with screw-type terminals design of the thread of the connection screw • for main contacts • for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • for auxiliary and control contacts • for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • for auxiliary and control contacts • for auxiliary and control contacts • for auxiliary and control contacts • for fauxiliary and control contacts • for auxiliary and control contacts • for fauxiliary and control c		This, additionally max. one half wave
number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts on a side-by-side mounting design of the thread of the screw for securing the equipment height width 40 mm 183 mm 20 m		0
Interination / mounting / dimensions fastening method	-	
Satellation/mounting/ dimensions Satellation/mounting/ dimensions Satellation/mounting/ dimensions Satellation/mounting/ design of the thread of the screw for securing the equipment M4 Satellation M4 Satellation M4 Satellation M6 M6 M6 M6 M6 M6 M6 M	_	
fastening method • side-by-side mounting design of the thread of the screw for securing the equipment height width depth Connections/ Terminals type of electrical connection • for main content for uilking and control contacts tightening torque • for auxiliary and control contacts tightening torque [IbF-in] • for auxiliary and control contacts with screw-type terminals • for main contacts with screw-type terminals • for main contacts • for main contacts with screw-type terminals • for auxiliary and control contacts tightening torque [IbF-in] • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for main contacts • of the thread of the connection screw • for main contacts • of the auxiliary and control contacts • of the protection class iP on the front according to IEC 60529 touch protection on the front according to IEC 60529 touch protection on the front according to IEC 60529 touch protection on the front according to IEC 6000-45 • due to bonductor-earth surge according to IEC 61000-45 • due to conductor-earth surge according to IEC 61000-45 • due to conductor-earth surge according to IEC 61000-45 • due to conductor-earth surge according to IEC 61000-45 • due to conductor-earth surge according to IEC 61000-45 • due to conductor-earth surge according to IEC 61000-45 • due to conductor-earth surge according to IEC	·	Ü
e side-by-side mounting design of the thread of the screw for securing the equipment height 200 mm 130 mm 1		and the first of
design of the thread of the screw for securing the equipment height width depth 200 mm (abopth 180 mm (be)th 180 m		•
equipment height width depth 180 mm 180 mm 180 mm 180 mm 160 mm 180 mm 1		
height width depth 200 mm width depth 180 mm Connections/ Terminals type of electrical connection 6 for main current circuit * for main contectable conductor cross-sections 6 for main contacts for JIS cable lug * for main contectable conductor cross-sections 9 for main contacts for JIS cable lug * for DIN cable lug for main contacts JIS C 2805 R 2-5, 5-5, 8-5, 14-5 * per of DIN cable lug for main contacts DIN 46234 -5-2,5, 5-6, -5-10, -5-16, -5-25 * per of or auxiliary and control contacts 1 x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) * finely stranded without core end processing 1 x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) * at AIVC sables for auxiliary and control contacts with screw-type terminals 1 x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) * for auxiliary and control contacts with screw-type terminals 2 2.5 mm²), 2x (0.5 1.0 mm²) * design of the thread of the connection screw 4.5 5.3 lbf-in * of the auxiliary and control contacts M5 * of the auxiliary and control contacts M5 * of or auxiliary and control contacts M5 * of the auxiliary and control contacts M5 * of the auxiliary and control contacts 10 mm * for prain contacts 10 mm * for prain contacts 10 mm * for prain contacts		IVI4
width depth 183 mm Connections/ Torminals type of electrical connection • for main current circuit • for auxiliary and control circuit type of connectable conductor cross-sections • for frain contacts for JIS cable lug • for DIN cable lug for main contacts — solid — finely stranded with core end processing — finely stranded with core end processing • at AVMC cables for auxiliary and control contacts tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • for auxiliary and control contacts design of the thread of the connection screw • for main contacts • for auxiliary and control contacts ### Application of the cable • for main contacts • for auxiliary and control contacts ### Application of the cable • for main contacts • for auxiliary and control contacts ### Application of the cable • for main contacts • for auxiliary and control contacts ### Application of the front according to IEC 60529 ### Application of the front according to IEC 60529 ### Application of the front according to IEC 60529 ### Application of the front according to IEC 60529 ### Application of the front according to IEC 60529 ### Application of the front according to IEC 60529 ### Application of the front according to IEC 60529 ### Application of the front according to IEC 60529 ### Application of the front according to IEC 61000-4-4 • due to conductor-arth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • d		200 mm
type of electrical connection	_	180 mm
type of electrical connection	depth	163 mm
type of electrical connection • for main current circuit • for main contract for the control circuit type of connectable conductor cross-sections • for main contacts for JJS cable lug • for DINI cable lug for main contacts type of connectable conductor cross-sections • for main contacts for JJS cable lug • for DINI cable lug for main contacts type of connectable conductor cross-sections • for auxiliary and control contacts — solid — finely stranded with core end processing • finely stranded without core end processing • at AWG cables for auxiliary and control contacts tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type • for main contacts • of the auxiliary and control contacts • for main contacts • for auxiliary and control contacts * tripped length of the cable • for main contacts • for auxiliary and control contacts * for auxiliary and control contacts * tripped length of the cable • for main contacts • for auxiliary and control contacts * tripped length of the cable • for main contacts • for auxiliary and control contacts * for auxiliary and control contacts • for auxiliary and control contacts • for auxiliary and control contacts • for auxiliary and control contacts * for auxiliary and control contacts • for auxiliary and control contacts	-	
• for auxillary and control circuit type of connectable conductor cross-sections • for main contacts for JIS cable lug • for DIN cable lug for main contacts type of connectable conductor cross-sections • for auxillary and control contacts - solid - finely stranded with core end processing - finely stranded without core end processing • at AWG cables for auxillary and control contacts tightening torque • for main contacts with screw-type terminals • for auxillary and control contacts with screw-type terminals • for auxillary and control contacts with screw-type terminals tightening torque [lbFin] • for auxillary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • for main contacts or of the auxillary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • for auxillary and control contacts ###	type of electrical connection	
type of connectable conductor cross-sections • for main contacts for JIS cable lug • for DIN cable lug for main contacts type of connectable conductor cross-sections • for auxiliary and control contacts — solid — finely stranded with core end processing • finely stranded without core end processing • at AWG cables for auxiliary and control contacts tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts **Stripped length of the cable • for main contacts • for auxiliary and control contacts **Stripped length of the cable • for main contacts • for main c	for main current circuit	Ring cable lug connection
• for main contacts for JIS cable lug • for DIN cable lug for main contacts type of connectable conductor cross-sections • for auxiliary and control contacts — solid — finely stranded with core end processing — finely stranded without core end processing • at AWG cables for auxiliary and control contacts tightening forque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals dosign of the thread of the connection screw • for main contacts • for the auxiliary and control contacts • for auxiliary and control contacts 10 mm Safety related data protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 touch protection altitude at height above sea level maximum ambient temperature • during operation • during storage Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2 1 kx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm² 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm² 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm² 1x (0.5 2.5 mm²)	 for auxiliary and control circuit 	
• for DIN cable lug for main contacts type of connectable conductor cross-sections • for auxiliary and control contacts — solid — finely stranded with core end processing — finely stranded without core end processing • at AWG cables for auxiliary and control contacts tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for main contacts • of the auxiliary and control contacts • for main contacts	type of connectable conductor cross-sections	
• for auxiliary and control contacts • for auxiliary and control contacts - solid - finely stranded with core end processing - finely stranded without core end processing - fix (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - fx (0.5 2.5 mm²), 2x (0.5 1.0 mm²) -	 for main contacts for JIS cable lug 	JIS C 2805 R 2-5, 5,5-5, 8-5, 14-5
• for auxiliary and control contacts — solid — finely stranded with core end processing — finely stranded without core end processing • at AWG cables for auxiliary and control contacts tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals tightening torque [lbf·in] • for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • for fauxiliary and control contacts stripped length of the cable • for main contacts • for auxiliary and control contacts • for for auxiliary and control contacts * stripped length of the cable • for main contacts • for auxiliary and control contacts * for auxiliary and control c	 for DIN cable lug for main contacts 	DIN 46234 -5-2,5, -5-6, -5-10, -5-16, -5-25
solid finely stranded with core end processing finely stranded without core end processing finely stranded without core end processing at AWG cables for auxiliary and control contacts tightening torque for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals tightening torque [Ibf-in] for auxiliary and control contacts with screw-type terminals tightening torque [Ibf-in] for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw for main contacts for main contacts for auxiliary and control contacts for ouxiliary and control contacts for auxiliary and control contacts for auxiliary and control contacts for auxiliary and control contacts for ouxiliary and control contacts for ouxiliary and control contacts for ouxiliary and control contacts for main contacts for main contacts for main contacts for auxiliary and control contacts for auxiliary a	type of connectable conductor cross-sections	
finely stranded with core end processing finely stranded without core end processing inely stranded without core end processing in finely stranded with screw-type i	 for auxiliary and control contacts 	
- finely stranded without core end processing • at AWG cables for auxiliary and control contacts tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for main contacts • of the auxiliary and control contacts • of main contacts • for main contacts • for main contacts • for main contacts • for auxiliary and control contacts • for main contacts • for auxiliary and control contacts • for main contacts • for main contacts • for auxiliary and control contacts • for auxiliary and control contacts 10 mm Safety related data protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front with cover ### Auxiliary and control contacts 1 000 m ### Auxiliary and control contacts 2 kW / 5 kHz behavior criterion 2 2 kV / 5 kHz behavior criterion 2 2 kV / 5 kHz behavior criterion 2 5 kV behavior criterion 2 1 kV behavior criterion 2		
• at AWG cables for auxiliary and control contacts tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals tightening torque [lbf-in] • for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts • of the auxiliary and control contacts • of the auxiliary and control contacts • of or main contacts • for main contacts • for main contacts • for for auxiliary and control contacts • for main contacts • for main contacts • for auxiliary and control contacts 10 mm Safety related data protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 touch protection on the front according to IEC 60529 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2 1 kV behavior criterion 2		
• for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals tightening torque [lbf-in] • for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts stripped length of the cable • for main contacts • for auxiliary and control contacts stripped length of the cable • for main contacts • for auxiliary and control contacts Safety related data protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2		
• for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals tightening torque [lbf-in] • for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • of main contacts • of the auxiliary and control contacts **M5 • of the auxiliary and control contacts **In mm **Stripped length of the cable • for main contacts • for auxiliary and control contacts **In mm **Safety related data **protection class IP on the front according to IEC **60529 **In the main contact is for vertical contact from the front with cover **Ambient conditions** installation altitude at height above sea level maximum ambient temperature • during operation • during storage **Electromagnetic compatibility** conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-carth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 KV behavior criterion 2		1x (AWG 20 12)
for auxiliary and control contacts with screw-type terminals tightening torque [lbf-in]		0.051
terminals tightening torque [lbf-in] • for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts * for main contacts • for main contacts • for main contacts • for auxiliary and control contacts 10 mm Safety related data protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 touch protection on the front according to IEC 60529 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • due to conductor-carith surge according to IEC 61000-4-4 • due to conductor-carith surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2		
tightening torque [lbf-in] • for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts **M5 • of the auxiliary and control contacts • for main contacts • for writian contacts • for vertical contact from the front with cover • finger-safe, for vertical contact from the front with cover • finger-safe, for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cover • for vertical contact from the front with cov	· · · · · · · · · · · · · · · · · · ·	0.5 0.0 N·III
for auxiliary and control contacts with screw-type terminals design of the thread of the connection screw for main contacts of the auxiliary and control contacts for main contacts of the auxiliary and control contacts for main contacts for main contacts for main contacts for main contacts for auxiliary and control contacts for expectation contacts for auxiliary and control contacts for main contacts for auxiliary and control contacts for main contacts for auxiliary and control contacts for main contacts for		
design of the thread of the connection screw • for main contacts • of the auxiliary and control contacts * tripped length of the cable • for main contacts • for auxiliary and control contacts • for auxiliary and control contacts 10 mm Safety related data protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2		4.5 5.3 lbf·in
• for main contacts • of the auxiliary and control contacts stripped length of the cable • for main contacts • for auxiliary and control contacts • for auxiliary and control contacts • for auxiliary and control contacts • for auxiliary and control contacts I 0 mm Safety related data protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front with cover Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2	, , , , , , , , , , , , , , , , , , , ,	
of the auxiliary and control contacts stripped length of the cable of or main contacts of or auxiliary and control contacts of or auxiliary and control contacts	design of the thread of the connection screw	
stripped length of the cable • for main contacts • for auxiliary and control contacts 10 mm Safety related data protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 installation altitude at height above sea level maximum ambient temperature • during operation • during storage Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-cardth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2		M5
• for main contacts • for auxiliary and control contacts 10 mm Safety related data protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 IP00; IP20 with cover finger-safe, for vertical contact from the front with cover Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 10 mm 2 levo; IP20 with cover finger-safe, for vertical contact from the front with cover 10 00 m 2	•	M3
• for auxiliary and control contacts Safety related data protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front with cover Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation		
protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 installation altitude at height above sea level maximum ambient temperature		
protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 installation altitude at height above sea level maximum ambient temperature • during operation • during storage • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC • due to conductor-conductor surge according to IEC • IP00; IP20 with cover finger-safe, for vertical contact from the front with cover 1 000 m 1 000 m 2 25 +60 °C -25 +80 °C Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2		10 mm
touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front with cover Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2		
touch protection on the front according to IEC 60529 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2		IP00; IP20 with cover
installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage -25 +60 °C • during storage -25 +80 °C Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2		finger-safe, for vertical contact from the front with cover
installation altitude at height above sea level maximum ambient temperature • during operation • during storage -25 +60 °C • during storage -55 +80 °C Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2		go. Jaio, for vortical contact from the front with cover
ambient temperature • during operation • during storage • during storage -25 +60 °C • 55 +80 °C Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2		1,000 m
 during operation during storage -25 +60 °C Electromagnetic compatibility conducted interference due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 1 kV behavior criterion 2 1 kV behavior criterion 2 	-	, 000
 ◆ during storage -55 +80 °C Electromagnetic compatibility conducted interference due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 1 kV behavior criterion 2 	•	-25 +60 °C
Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 1 kV behavior criterion 2		
 conducted interference due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 1 kV behavior criterion 2 1 kV behavior criterion 2 		
 due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 1 kV behavior criterion 2 1 kV behavior criterion 2 		
 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 1 kV behavior criterion 2 1 kV behavior criterion 2 		2 kV / 5 kHz behavior criterion 2
61000-4-5 ◆ due to conductor-conductor surge according to IEC 1 kV behavior criterion 2		
61000-4-5		1 kV behavior criterion 2
	61000-4-5	

• due to high-frequency radiation according to IEC 61000-4-6

field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 conducted HF interference emissions according to CISPR11

field-bound HF interference emission according to CISPR11

140 dBuV in the frequency range 0.15 ... 80 MHz, behavior criterion 1

80 MHz ... 1 GHz 10 V/m, behavior criterion 1

4 kV contact discharging / 8 kV air discharging, behavior criterion 2 Class A for industrial environment

Class B for the domestic, business and commercial environments

Short-circuit protection, design of the fuse link

manufacturer's article number

- of full range R fuse link for semiconductor protection at NH design usable
- of back-up R fuse link for semiconductor protection at NH design usable
- of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable

<u>3NE1020-2</u>; These fuses have a smaller rated current than the semiconductor relays

3NE8021-1

<u>3NC2280</u>; These fuses have a smaller rated current than the semiconductor relays

Certificates/ approvals

General Product Approval

EMC

Declaration of Conformity



Confirmation









Declaration of Conformity

Test Certificates

other



Type Test Certificates/Test Report

Confirmation



Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF2390-3AA06

Cax online generator

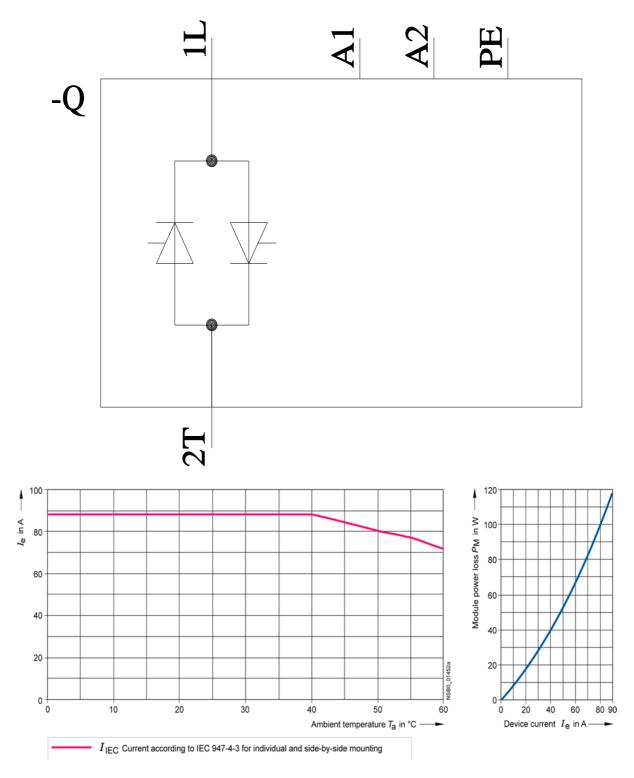
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2390-3AA06

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

https://support.industry.siemens.com/cs/ww/en/ps/3RF2390-3AA06

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2390-3AA06&lang=en



last modified: 1/26/2022 🖸