Certificate Number Report Reference Issue Date 20130903 - E44653 E44653 - 20090911 2013-September-03

Issued to:

SIEMENS AG

I IA CE CP R&D-VI 4, WERNER-VON-SIEMENS-STRASSE 48, 92220 AMBERG GERMANY

This is to certify that representative samples of **Auxiliary Devices**

Auxiliary Devices, Current Monitoring Relays, Types 3RR2, followed by 1, 2, or 4 followed by 4, followed by 1 or 2, followed by -1 or -2, followed by A or F, followed by A or W, followed by 3 or 4 and may be followed by suffix numbers and/or characters.

Accessory: Sealable Cover: 3RR2940 Connecting support 3RU2916-3AA01, 3RU2926-3AA01, 3RU2916-3AC01, 3RU2926-3AC01 (See following pages for additional model information.)

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety:	UL 508, Industrial Control Equipment CSA 22.2 No. 14-05, Industrial Control Equipment
Additional Information:	See the UL Online Certifications Directory at <u>www.ul.com/database</u> for additional information

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.

The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with "C" and "US" identifiers: ⁽¹⁾ the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product.

William R. Carney

William R. Carney, Director, North American Certification Programs UL LLC



Certificate Number Report Reference Issue Date 20130903 - E44653 E44653 - 20090911 2013-September-03

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

General:

These devices are open type monitoring relays, for use in industrial applications. These units are used to monitor the 2 or 3 phase current and cable break of the line voltage, also load current overshooting and undershooting of the current threshold will be shown to the operator.

For the 3RR22 types the phase sequence of the line voltage will be additionally monitored and fault current valuation, blocking current faults. These devices are intended for use in combination with these manufacturers 3RT2 contactors or for separate mounting. For separate mounting Connecting support type 3RU29.6-3A.01 listed in File E44653 may be used. The 3RR24 types are additionally provided with IO-Link interface.

Ratings:

Main voltage:90V through 600V acControl Voltage:24V up to 240V ac/dcOutput, pilot duty:B300, R30020 mA at 24V up to 240V ac/dc, solid-state output for 3RR224.-.FCurrent measuring range:3RR2.411.6A through 16A20 mA at 24V up to 240V ac/dc, solid-state output for 3RR224.-.F

3RR2.41 1.6A through 16A 3RR2.42 4.0A through 40A 3RR2..1: 1.6 through 16A when used with 3RT2 contactor 3RR2..2: 4.0 through 36A when used with 3RT2 contactor

Setting Ranges and Short Circuit ratings with Fuses

Size	Current range	Max. Fuse	Fuse Classes	Short Circuit	Voltage
S00	1.6 - 16 A	60 A	CC, J, K5, RK1 or RK5	5 kA	600 V
S0	4 – 40 A	100 A	CC, K5, RK1 or RK5	5 kA	600 V
ЛЧГЛ		150 A	CC, J	5 kA	600 V

William R. Carney

William R. Carney, Director, North American Certification Programs



Certificate Number Report Reference Issue Date 20130903 - E44653 E44653 - 20090911 2013-September-03

High Capacity Short Circuit Ratings with Fuses

Size	Current range	Max. Fuse	Fuse Classes	Short Circuit	Voltage
S00	1.6 – 16 A	60 A	CC, J, K5, RK1 or RK5	100 kA	600 V
S0	4 – 40 A	100 A	CC, K5, RK1 or RK5	100 kA	600 V
		150 A	CC, J	100 kA	600 V

Setting Ranges and Short Circuit ratings with Combination Motor Controller or Circuit Breaker

*Size	Current range	Comb. Motor Contr. 3RV201 or 3RV202	Circuit Breaker (TM) 3RV1742	Circuit Breaker (TM) 3RV1721, 3RV1821	Circuit Breaker (TM) 3RV27, 3RV28	Circuit Breaker (TM) CG frame, Types NCXA or HCXA	Short Circuit	Voltage
S00	1.6 - 16 A	16 A	5.7	22 A	22 A		5 kA	480 V
лч	L A YL	12.5 A	=70 A	8 A	12.5 A	LAUL	5 kA	600 V
S0	4 – 40 A	32 A					5 kA	480 V
1.1		40 A ¹⁾	-			No.	5 kA	480 V
M UI		12.5 A	U 1 - U 1	XUIN	U I - X U	150 A	5 kA	600 V

William R. Carney

William R. Carney, Director, North American Certification Programs



Certificate Number Report Reference Issue Date 20130903 - E44653 E44653 - 20090911 2013-September-03

High Capacity Short Circuit Ratings with Combination Motor Controller or Circuit Breaker

Size	Current range	Comb. Motor Contr. 3RV201 or 3RV202	Circuit Breaker (TM) 3RV1742	Circuit Breaker (TM) 3RV1721, 3RV1821	Circuit Breaker (TM) 3RV27, 3RV28	Short Circuit	Voltage
S00	1.6 – 16 A	REAL			22 A	50 kA	480 V
		16 A	60 A ¹⁾		15 A	65 kA	480 V
	LX.	K 'L K 'L	20 A ²⁾	8 A	12.5 A	10 kA	600 V
<	\times	$\times \times$	30 A ¹⁾	\leq		20 kA	600 V
		12.5 A	11\/1	L VIII		30 kA	600 V
S0	4 – 40 A	25 A	70 A ¹⁾	J. J. U.	15 A	65 kA	480 V
		32 A	35 A ²⁾	22 A	22 A	50 kA	480 V
			50 A ²⁾			20 kA	480 V
		40 A ³⁾			Vel In SVe	12 kA	480 V
		Y YY	70 A ¹⁾ 50 A ²⁾	8 A	12.5 A	10 kA	600 V
	I. VII.	VII. VII.	60 A ¹⁾	- VII-	VII.V	20 kA	600 V
LA	LYL	12.5 A	V LV	LVL	VULY	30 kA	600 V

High Capacity Short Circuit Ratings Type 2 co-ordination according UL 60947-4-1A

Size	Current range	Comb. Motor Contr. 3RV201 or 3RV202	Circuit Breaker (TM) 3RV1742	Circuit Breaker (TM) 3RV27, 3RV28	Short Circuit	Voltage
S00	16-16A	<u>, X, UL X, U</u> I	XUX	22 A	50 kA	480 V
000	1.0 - 10 A	XX	\sim	15 A	65 kA	480 V
	(Un XU	<u>XԿ-X</u> Կ	<u>X</u> 4	12.5 A	10 kA	600 V
S0	4 – 40 A			15 A	65 kA	480 V
		- V I I -	<u>-</u>	22 A	50 kA	480 V
				12.5 A	10 kA	600 V
	\times			$\sim - >$		S

William R. Carney

William R. Carney, Director, North American Certification Programs UL LLC



Certificate Number Report Reference Issue Date 20130903 - E44653 E44653 - 20090911 2013-September-03

- 1) Only with Overload relays with screw terminals
- 2) Only with Overload relays with spring terminals
- 3) 3RV2 shall be used as Branch Circuit Protective Device for combinations up to 32A. The appropriate BCPD need to be determined in accordance with the National Electrical Code, Article 430-53 and the application. The following devices are permitted:

In combination with monitoring relays type 3RR2 and contactor

			0	CB			
			The	ermal magne	tic1)		\sim
Contactor	OLR	OLR Current range	NGG	NEG/HEG	ED63B	Current	Voltage
	-11.						-1/-
\sim	\leq	\times \times \times	\sim	\sim	\times	\geq	\times >
3RT2018	3RR2	1.6 - 16 A	30 A	30 A	11: \	25 kA	480 V
3RT2028	3RR2	4.0 - 40.0 A	70 A	70 A	80 A	25 kA	480 V

1) Siemens listed Circuit breaker types NGG, NEG, HEG, ED63B

Setting Ranges and Short Circuit ratings Circuit Breaker, Type 2 co-ordination according UL 60947-4-1A

Size	Current range	Circuit Breaker 5SJ ¹⁾	Short Circuit	Voltage
S00	1.6 – 16 A	15 A	5 kA	480 V
S0	4 – 40 A	40 A	5 kA	480 V

1) Siemens listed Circuit Breaker Type 5SJ43...-7HG42 (max. 40A)

Setting Ranges and High Capacity Short Circuit ratings Circuit Breaker

Size	Current range	Circuit Breaker 5SJ ¹⁾	Short Circuit	Voltage
S00	1.6 – 16 A	15 A	10 kA	480 V
S0	4 – 40 A	40 A	10 kA	480 V

William R. Carney

William R. Carney, Director, North American Certification Programs UL LLC



Certificate Number Report Reference Issue Date 20130903 - E44653 E44653 - 20090911 2013-September-03

Size	Current range	Circuit Breaker 5SJ ¹⁾	Short Circuit	Voltage
S00	1.6 – 16 A	15 A	10 kA	240 V
S0	4 – 40 A	40 A	10 kA	240 V
XU			LAULA	PET

1) Siemens listed Circuit Breaker Type 5SJ43...-7HG42 (max. 40A)

Fuses: Classes RK1, RK5, J, G, T, CC or

Circuit breakers: Listed Siemens type, with a marked short-circuit rating equal or larger than the available short-circuit current rating

These devices were tested for group installation use at the above levels without any upstream branch circuit device.

Short circuit ratings apply to both, monitoring relays and monitoring relays used with Listed 3RT2 contactors.

William R. Carney

William R. Carney, Director, North American Certification Programs UL LLC



Certificate Number Report Reference Issue Date 20130903 - E44653 E44653 - 20090911 2013-September-03

NOMENCLATURE BREAKDOWN

<u>3RR2</u> I	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Yu	Basic Type 3RR2 - Monitoring relay
) Մ	Setting 1 - analog setting, 2-phase ac-current 2 - digital setting, 3-phase ac-current 4 - digital setting, 3-phase ac-current, IO-Link interface
III	Function
IV	4 - load monitoring Size 1 - S00 from 1.6A up to 16A
V	Type of Terminals -1 - Screw terminals -2 - Spring loaded terminals
VI	Type of Output Contact A - Changeover contact, one output F - Changeover contact, one output, one solid state output contact
VII	Supply Power Range A - 24V ac/dc W - 24V up to 240V ac/dc
VIII	Kind of Signal of Power Supply 3 - 50/60Hz ac 4 - dc
IX	Suffix
	Suffix numbers and/or characters specifies commercial variations

Accessory:

3RR2940 3RU2916-3AA01 3RU2916-3AC01 3RU2926-3AA01 3RU2926-3AC01

Sealable Cover

Connecting support adapter screw terminal size S00 Connecting support adapter spring force size S00 Connecting support adapter screw terminal size S0 Connecting support adapter spring force size S0

William R. Carney

William R. Carney, Director, North American Certification Programs UL LLC

