



SIPLUS ET 200SP RQ 4x120VDC/230 TX rail based on 6ES7132-6HD01-0BB1 with conformal coating, -40...+70 °C, OT4 with ST1/2 (+85 °C for 10 minutes), relay module normally open, suitable for BU type B0 or B1, color code CC40, substitute value output, module diagnostics for: supply voltage

General information	
Product type designation	RQ 4x120 VDC ... 230 VAC/5 A NO ST
Firmware version	
• FW update possible	No
based on	6ES7132-6HD01-0BB1
usable BaseUnits	BU type B0, B1
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	No
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	see entry ID: 109746275
Operating mode	
• DQ	Yes
• DQ with energy-saving function	No
• PWM	No
• Oversampling	No
• MSO	No
Redundancy	
• Redundancy capability	Yes
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Input current	
Current consumption (rated value)	55 mA; without load
Output voltage	
Rated value (AC)	230 V
Power loss	
Power loss, typ.	1.5 W
Address area	
Address space per module	
• Inputs	+ 1 byte for QI information
• Outputs	1 byte
Hardware configuration	
Automatic encoding	Yes
• Mechanical coding element	Yes
• Type of mechanical coding element	type C
Selection of BaseUnit for connection variants	

<ul style="list-style-type: none"> • 2-wire connection 	BU type B1
<ul style="list-style-type: none"> • 3-wire connection 	BU type B0
Digital outputs	
Type of digital output	Relays
Number of digital outputs	4
Current-sinking	Yes
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	No
Parallel switching of two outputs	
<ul style="list-style-type: none"> • for logic links 	Yes
<ul style="list-style-type: none"> • for uprating 	No
<ul style="list-style-type: none"> • for redundant control of a load 	Yes
Switching frequency	
<ul style="list-style-type: none"> • with resistive load, max. 	2 Hz
<ul style="list-style-type: none"> • with inductive load (acc. to IEC 60947-5-1, DC13), max. 	0.5 Hz; provide one freewheeling diode for switching frequencies higher than 0.1 Hz
<ul style="list-style-type: none"> • with inductive load (acc. to IEC 60947-5-1, AC15), max. 	0.5 Hz
<ul style="list-style-type: none"> • on lamp load, max. 	2 Hz
Total current of the outputs	
<ul style="list-style-type: none"> • Current per channel, max. 	5 A; > +60 °C max. continuous current per relay 3 A
<ul style="list-style-type: none"> • Current per module, max. 	20 A
Total current of the outputs (per module)	
horizontal installation	
— up to 50 °C, max.	20 A
— up to 60 °C, max.	16 A
— up to 70 °C, max.	12 A
vertical installation	
— up to 40 °C, max.	20 A
— up to 50 °C, max.	16 A; in all other mounting positions
Relay outputs	
<ul style="list-style-type: none"> • Number of relay outputs 	4
<ul style="list-style-type: none"> • Rated supply voltage of relay coil L+ (DC) 	24 V
<ul style="list-style-type: none"> • Current consumption of relays (coil current of all relays), max. 	40 mA
<ul style="list-style-type: none"> • external protection for relay outputs 	Yes, with miniature fuse max. 6 A tripping current and quick-response tripping characteristic
<ul style="list-style-type: none"> • Number of operating cycles, max. 	7 000 000; see additional description in the manual
Switching capacity of contacts	
— with inductive load, max.	2 A; see additional description in the manual
— with resistive load, max.	5 A; see additional description in the manual
— Thermal continuous current, max.	5 A; Max. 1 385 VA, 150 W
— Switching current, min.	100 mA; 5 V DC
— Rated switching voltage (DC)	24 V DC to 120 V DC
— Rated switching voltage (AC)	24V AC to 230V AC
Cable length	
<ul style="list-style-type: none"> • shielded, max. 	1 000 m
<ul style="list-style-type: none"> • unshielded, max. 	200 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes
Diagnoses	
<ul style="list-style-type: none"> • Monitoring the supply voltage 	Yes
<ul style="list-style-type: none"> • Wire break 	No
<ul style="list-style-type: none"> • Short-circuit 	No
Diagnostics indication LED	
<ul style="list-style-type: none"> • Monitoring of the supply voltage (PWR-LED) 	Yes; green PWR LED
<ul style="list-style-type: none"> • Channel status display 	Yes; green LED

<ul style="list-style-type: none"> • for channel diagnostics • for module diagnostics 	No Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> • between the channels • between the channels and backplane bus • between the channels and the power supply of the electronics 	Yes Yes Yes
Permissible potential difference	
between channels and backplane bus/supply voltage	240 V AC
Isolation	
Isolation tested with	2 545 V DC (type test) and according to EN 50155 (routine test)
tested with	
<ul style="list-style-type: none"> • between channels and backplane bus/supply voltage • between backplane bus and supply voltage 	2 545 V DC (type test) and according to EN 50155 (routine test) 750 V DC (type test) and according to EN 50155 (routine test)
Standards, approvals, certificates	
Suitable for safety functions	No
Railway application	
<ul style="list-style-type: none"> • EN 50121-3-2 • EN 50121-4 • EN 50121-5 • EN 50124-1 • EN 50125-1 • EN 50125-2 • EN 50125-3 • EN 50155 • EN 61373 • Fire protection acc. to EN 45545-2 	Yes; EMC for rail vehicles Yes; EMC for signal and telecommunications systems Yes; EMC for fixed installations and railway power supply equipment (shielded cables required) Yes; Railway applications - overvoltage category OV3; pollution degree PD2; UNm = 230 V AC Yes; Rail vehicles - see ambient conditions Yes; Stationary electrical equipment - see ambient conditions Yes; Signal and telecommunications systems - see ambient conditions; vibrations and shocks: Application point outside of tracks (1 m to 3 m away from track) Yes; Rail vehicles - temperature class OT4, ST1/ST2, horizontal mounting position Yes; Rail vehicles - vibrations and shocks: Category 1 Class A/B Yes; For proof of conformity, see Service & Support
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. 	-40 °C; = Tmin (incl. condensation/frost) 70 °C; = Tmax; +85 °C for 10 min (OT4, ST1/ST2 acc. to EN 50155) -40 °C; = Tmin 50 °C; = Tmax
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> • Installation altitude above sea level, max. • Ambient air temperature-barometric pressure-altitude 	2 000 m Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)
Relative humidity	
<ul style="list-style-type: none"> • With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
Coolants and lubricants	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
— Against mechanical environmental conditions acc. to EN 60721-3-3	Yes; Class 3M8 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)
Use on land craft, rail vehicles and special-purpose vehicles	
— to biologically active substances according to EN 60721-3-5	Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request
— to chemically active substances according to EN 60721-3-5	Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *

— to mechanically active substances according to EN 60721-3-5	Yes; Class 5S3 incl. sand, dust; *
— Against mechanical environmental conditions acc. to EN 60721-3-5	Yes; Class 5M2 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)
— against mechanical environmental conditions in agriculture acc. to ISO 15003	Yes; level 1 (Location LE) using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)
Usage in industrial process technology	
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)

Remark	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!

Conformal coating	
<ul style="list-style-type: none"> • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against fouling acc. to EN 60664-3 • Electronic equipment on rolling stock acc. to EN 50155 • Military testing according to MIL-I-46058C, Amendment 7 • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A 	<p>Yes; Class 2 for high reliability</p> <p>Yes; Type 1 protection</p> <p>Yes; Class PC2 protective coating acc. to EN 50155:2017</p> <p>Yes; Discoloration of coating possible during service life</p> <p>Yes; Conformal coating, Class A</p>

Dimensions	
Width	20 mm
Height	73 mm
Depth	58 mm

Weights	
Weight, approx.	40 g

Other	
Note:	for use in railway applications, also observe the product information "SIPLUS extreme RAIL" A5E37661960A, Online Support article 109736776

Classifications			
		Version	Classification
	eClass	14	27-24-26-04
	eClass	12	27-24-26-04
	eClass	9.1	27-24-26-04
	eClass	9	27-24-26-04
	eClass	8	27-24-26-04
	eClass	7.1	27-24-26-04
	eClass	6	27-24-26-04
	ETIM	10	EC001599
	ETIM	9	EC001599
	ETIM	8	EC001599
	ETIM	7	EC001599
	IDEA	4	3566
	UNSPSC	15	32-15-17-05

Approvals / Certificates	
General Product Approval	

[Manufacturer Declaration](#)



[China RoHS](#)



General Product Approval	EMV	Railway
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[Confirmation](#)

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