



Figure similar

SIPLUS ET 200SP RQ 4x24VDC/2A ST TX rail based on 6ES7132-6GD51-0BA0 with conformal coating, -40...+70 °C, OT4 with ST1/2 (+85 °C for 10 minutes), signal relay module, suitable for BU type A0, color code CC00, substitute value output, module diagnostics for: supply voltage

General information	
Product type designation	RQ CO 4x24VDC/2A ST
Firmware version	
• FW update possible	No
based on	<a href="#">6ES7132-6GD51-0BA0</a>
usable BaseUnits	BU type A0
Color code for module-specific color-coded label	CC00
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)	50 mA
Power loss	
Power loss, typ.	1.2 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
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
<b>Parallel switching of two outputs</b>	
• for logic links	Yes
• for uprating	No
• for redundant control of a load	Yes
<b>Switching frequency</b>	
• with resistive load, max.	2 Hz
<b>Total current of the outputs</b>	
• Current per channel, max.	2 A
• Current per module, max.	8 A
<b>Total current of the outputs (per module)</b>	
horizontal installation	
— up to 40 °C, max.	8 A
— up to 50 °C, max.	6 A
— up to 60 °C, max.	4 A
— up to 70 °C, max.	2 A
vertical installation	
— up to 30 °C, max.	8 A
— up to 40 °C, max.	6 A
— up to 50 °C, max.	4 A
<b>Relay outputs</b>	
• Number of relay outputs	4
• Rated supply voltage of relay coil L+ (DC)	24 V
• Current consumption of relays (coil current of all relays), max.	40 mA
• Number of operating cycles, max.	500 000
<b>Switching capacity of contacts</b>	
— with resistive load, max.	2 A
— Thermal continuous current, max.	2 A
— Switching current, min.	1 mA; 5 V DC
— Rated switching voltage (DC)	24 V
— Rated switching voltage (AC)	24 V
<b>Cable length</b>	
• shielded, max.	1 000 m
• unshielded, max.	200 m
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
Substitute values connectable	Yes
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnoses</b>	
• Monitoring the supply voltage	Yes
• Wire break	No
• Short-circuit	No
<b>Diagnostics indication LED</b>	
• Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
• Channel status display	Yes; green LED
• for channel diagnostics	No
• for module diagnostics	Yes; green/red DIAG LED
<b>Potential separation</b>	
Potential separation channels	
• between the channels	Yes
• between the channels and backplane bus	Yes
• between the channels and the power supply of the	Yes

electronics

Isolation	
Isolation tested with	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"> <li>• EN 50121-3-2</li> <li>• EN 50121-4</li> <li>• EN 50121-5</li> <li>• EN 50124-1</li> <li>• EN 50125-1</li> <li>• EN 50125-2</li> <li>• EN 50125-3</li> <li>• EN 50155</li> <li>• EN 61373</li> <li>• Fire protection acc. to EN 45545-2</li> </ul>	<p>Yes; EMC for rail vehicles</p> <p>Yes; EMC for signal and telecommunications systems</p> <p>Yes; EMC for fixed installations and railway power supply equipment (shielded cables required)</p> <p>Yes; Railway applications - overvoltage category OV2; pollution degree PD2; rated surge voltage UNi = 0.5 kV; UNm = 24 V DC</p> <p>Yes; Rail vehicles - see ambient conditions</p> <p>Yes; Stationary electrical equipment - see ambient conditions</p> <p>Yes; Signal and telecommunications systems - see ambient conditions; vibrations and shocks: Application point outside of tracks (1 m to 3 m away from track)</p> <p>Yes; Rail vehicles - temperature class OT4, ST1/ST2, horizontal mounting position</p> <p>Yes; Rail vehicles - vibrations and shocks: Category 1 Class A/B</p> <p>Yes; For proof of conformity, see Service &amp; Support</p>
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> <li>• horizontal installation, min.</li> <li>• horizontal installation, max.</li> <li>• vertical installation, min.</li> <li>• vertical installation, max.</li> </ul>	<p>-40 °C; = Tmin (incl. condensation/frost)</p> <p>70 °C; = Tmax; +85 °C for 10 min (OT4, ST1/ST2 acc. to EN 50155)</p> <p>-40 °C; = Tmin</p> <p>50 °C; = Tmax</p>
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> <li>• Installation altitude above sea level, max.</li> <li>• Ambient air temperature-barometric pressure-altitude</li> </ul>	<p>2 000 m</p> <p>Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)</p>
Relative humidity	
<ul style="list-style-type: none"> <li>• With condensation, tested in accordance with IEC 60068-2-38, max.</li> </ul>	<p>100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation</p>
Resistance	
Coolants and lubricants	
<ul style="list-style-type: none"> <li>— Resistant to commercially available coolants and lubricants</li> </ul>	<p>Yes; Incl. diesel and oil droplets in the air</p>
Use in stationary industrial systems	
<ul style="list-style-type: none"> <li>— to biologically active substances according to EN 60721-3-3</li> <li>— to chemically active substances according to EN 60721-3-3</li> <li>— to mechanically active substances according to EN 60721-3-3</li> <li>— Against mechanical environmental conditions acc. to EN 60721-3-3</li> </ul>	<p>Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request</p> <p>Yes; Class 3C4 (RH &lt; 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *</p> <p>Yes; Class 3S4 incl. sand, dust, *</p> <p>Yes; Class 3M8 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)</p>
Use on land craft, rail vehicles and special-purpose vehicles	
<ul style="list-style-type: none"> <li>— to biologically active substances according to EN 60721-3-5</li> <li>— to chemically active substances according to EN 60721-3-5</li> <li>— to mechanically active substances according to EN 60721-3-5</li> <li>— Against mechanical environmental conditions acc. to EN 60721-3-5</li> <li>— against mechanical environmental conditions in agriculture acc. to ISO 15003</li> </ul>	<p>Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request</p> <p>Yes; Class 5C3 (RH &lt; 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *</p> <p>Yes; Class 5S3 incl. sand, dust; *</p> <p>Yes; Class 5M2 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)</p> <p>Yes; level 1 (Location LE) using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)</p>
Usage in industrial process technology	
<ul style="list-style-type: none"> <li>— Against chemically active substances acc. to EN 60654-4</li> <li>— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04</li> </ul>	<p>Yes; Class 3 (excluding trichlorethylene)</p> <p>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)</p>
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"> <li>Coatings for printed circuit board assemblies acc. to EN 61086</li> <li>Protection against fouling acc. to EN 60664-3</li> <li>Electronic equipment on rolling stock acc. to EN 50155</li> <li>Military testing according to MIL-I-46058C, Amendment 7</li> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A</li> </ul>	<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	15 mm
Height	73 mm
Depth	58 mm

Weights	
Weight, approx.	30 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



[China RoHS](#)



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