



Figure similar

SIPLUS ET 200SP DQ 4x24 V DC/2 A ST, based on 6ES7132-6BD21-0BA0 with conformal coating -40...+70 °C output module DQ 4x24 V DC/2 A standard, source output (PNP,sourcing output) packing unit: 1 unit, suitable for BU type A0, color code CC02, substitute value output, module diagnostics for: short circuit to L+ and M, wire break, supply voltage

General information	
Product type designation	DQ 4x24VDC/2A ST
Firmware version	
• FW update possible	Yes
based on	6ES7132-6BD21-0BA0
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC02
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
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, max.	20 mA; without load
output voltage / header	
Rated value (DC)	24 V
Power loss	
Power loss, typ.	1 W
Address area	
Address space per module	
• Address space per module, max.	1 byte; + 1 byte for QI information
Hardware configuration	
Automatic encoding	Yes
• Mechanical coding element	Yes
• Type of mechanical coding element	Type A
Selection of BaseUnit for connection variants	
• 1-wire connection	BU type A0
• 2-wire connection	BU type A0

- 3-wire connection

BU type A0 with AUX terminals or potential distributor module

Digital outputs

Type of digital output	Source output (PNP, current-sourcing)
Number of digital outputs	4
Current-sinking	No
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
output type acc. to IEC 61131, type 2	Yes
Short-circuit protection	Yes; Electronic
• Response threshold, typ.	2.8 to 5.2 A
Open-circuit detection	Yes
Limitation of inductive shutdown voltage to	Typ. L+ (-50 V)
Controlling a digital input	Yes; supports input type 3 according to IEC 61131-2

Switching capacity of the outputs	
• with resistive load, max.	2 A
• with inductive load, max.	2 A
• on lamp load, max.	10 W

Load resistance range	
• lower limit	12 Ω
• upper limit	3 400 Ω

Output current	
• for signal "1" rated value	2 A
• for signal "1" permissible range, max.	2 A
• for signal "0" residual current, max.	0.1 mA

Output delay with resistive load	
• "0" to "1", typ.	50 μs
• "1" to "0", typ.	100 μs

Parallel switching of two outputs	
• for uprating	No
• for redundant control of a load	Yes

Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	0.1 Hz; higher frequencies are possible, see Equipment Manual "Maximum permitted switching frequency of inductive loads"
• on lamp load, max.	10 Hz

Total current of the outputs	
• Current per channel, max.	2 A
• Current per module, max.	8 A; see Equipment Manual "Derating curve"

Total current of the outputs (per module)	
horizontal installation	
— up to 30 °C, max.	8 A
— up to 40 °C, max.	8 A
— up to 50 °C, max.	6 A
— up to 60 °C, max.	4 A

vertical installation	
— up to 30 °C, max.	8 A
— up to 40 °C, max.	6 A
— up to 50 °C, max.	4 A

Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m

Interrupts/diagnostics/status information

Diagnostics function	Yes
Substitute values connectable	Yes

Alarms	
• Diagnostic alarm	Yes

Diagnoses	
• Monitoring the supply voltage	Yes
— parameterizable	Yes
• Wire-break	Yes; Module-wise
• Short-circuit to M	Yes; Module-wise

<ul style="list-style-type: none"> • Short-circuit to L+ • Group error 	<p>Yes; Module-wise</p> <p>Yes</p>
Diagnostics indication LED	
<ul style="list-style-type: none"> • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics 	<p>Yes; green PWR LED</p> <p>Yes; green LED</p> <p>No</p> <p>Yes; green/red DIAG LED</p>
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> • between the channels • between the channels and backplane bus • Between the channels and load voltage L+ 	<p>No</p> <p>Yes</p> <p>No</p>
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety functions	No
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. 	<p>-40 °C; = Tmin (incl. condensation/frost)</p> <p>70 °C; = Tmax; > +60 °C max. total current 2 A</p> <p>-40 °C; = Tmin</p> <p>50 °C; = Tmax</p>
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 	<p>5 000 m</p> <p>Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)</p>
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 in bedewed state), horizontal installation
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//6AG1193-6AB00-0AA0)
Use on ships/at sea	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75%) incl. salt spray acc. to EN 60068-2-52 (severity degree 3).
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust
— Against mechanical environmental conditions acc. to EN 60721-3-6	Yes; class 6M4 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0//6AG1193-6AB00-0AA0)
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)
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 • 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; 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
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	9	EC001599
ETIM	8	EC001599
ETIM	7	EC001599

Approvals / Certificates

General Product Approval

[Miscellaneous](#)

[Manufacturer Declaration](#)



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