



Figure similar

SIPLUS ET 200SP DI 8x48VUC TX rail based on 6ES7131-6CF00-0AU0 with conformal coating, -40...+70 °C, OT4 with ST1/2 (+85 °C for 10 minutes), digital input module, suitable for BU type U0, color code CC20, module diagnostics

General information	
Product type designation	DI 8x24VAC/48VUC BA
Firmware version	
• FW update possible	No
based on	6ES7131-6CF00-0AU0
usable BaseUnits	BU type U0
Product function	
• Isochronous mode	No
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	see entry ID: 109746275
Operating mode	
• DI	Yes
• Counter	No
• Oversampling	No
• MSI	No
Supply voltage	
Rated value (DC)	48 V
permissible range, lower limit (DC)	40.8 V
permissible range, upper limit (DC)	57.6 V
Rated value (AC)	48 V; 24 V/48 V; 50 Hz/60 Hz
permissible range, lower limit (AC)	40.8 V
permissible range, upper limit (AC)	52.8 V
Reverse polarity protection	Yes
Input current	
Current consumption, max.	70 mA; without sensor supply
Encoder supply	
Number of outputs	8
Short-circuit protection	Yes; Per module, 5x 20 mm fuse, 2 A/250 V, quick-response, replaceable
Output current	
• up to 70 °C, max.	1 A
24 V encoder supply	
• 24 V	No
Power loss	
Power loss, typ.	1.5 W
Address area	
Address space per module	
• Address space per module, max.	1 byte
Hardware configuration	
Automatic encoding	

• Mechanical coding element	Yes
Selection of BaseUnit for connection variants	
• 1-wire connection	BU type U0
• 2-wire connection	BU type U0
• 3-wire connection	BU type U0 + Potential distributor module
• 4-wire connection	BU type U0 + Potential distributor module
Digital inputs	
Number of digital inputs	8
Source/sink input	P-reading
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Input characteristic curve in accordance with IEC 61131, type 2	No
Input characteristic curve in accordance with IEC 61131, type 3	No
Pulse extension	No
Input voltage	
• for signal "0"	AC/DC < 10 V
• for signal "1"	AC > 14 V, DC > 34 V
Input current	
• for signal "1", typ.	3.5 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	No
— at "0" to "1", max.	15 ms
— at "1" to "0", max.	20 ms
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
• Diagnostic alarm	Yes
Diagnoses	
• Diagnostic information readable	Yes
• Monitoring the supply voltage	Yes
• Monitoring of encoder power supply	Yes
• Group error	Yes
Diagnostics indication LED	
• 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
Potential separation	
Potential separation channels	
• between the channels	No
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	No
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	
• EN 50121-3-2	Yes; EMC for rail vehicles
• EN 50121-4	Yes; EMC for signal and telecommunications systems
• EN 50121-5	Yes; EMC for fixed installations and railway power supply equipment (shielded cables required)
• EN 50124-1	Yes; Railway applications - overvoltage category OV2; pollution degree PD2; rated surge voltage UNi = 0.5 kV; UNm = 48 V AC/DC
• EN 50125-1	Yes; Rail vehicles - see ambient conditions

• EN 50125-2 • EN 50125-3	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)
• EN 50155	Yes; Rail vehicles - temperature class OT4, ST1/ST2, horizontal mounting position
• EN 61373	Yes; Rail vehicles - vibrations and shocks: Category 1 Class A/B
• Fire protection acc. to EN 45545-2	Yes; For proof of conformity, see Service & Support
Ambient conditions	
Ambient temperature during operation	
• 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	
• 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	
• 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 — to chemically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-3 — Against mechanical environmental conditions acc. to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 3S4 incl. sand, dust, * 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 — to chemically active substances according to EN 60721-3-5 — to mechanically active substances according to EN 60721-3-5 — Against mechanical environmental conditions acc. to EN 60721-3-5 — against mechanical environmental conditions in agriculture acc. to ISO 15003	Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 5S3 incl. sand, dust; * Yes; Class 5M2 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0) 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 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Class 3 (excluding trichlorethylene) 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	
• 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	Yes; Class 2 for high reliability Yes; Type 1 protection Yes; Class PC2 protective coating acc. to EN 50155:2017 Yes; Discoloration of coating possible during service life Yes; Conformal coating, Class A
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
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