



SIPLUS ET 200SP DI 4x120...230 V AC ST based on 6ES7131-6FD01-0BB1 with conformal coating, -40...+70 °C, digital input module, suitable for BU type B1, color code CC41, module diagnostics

General information	
Product type designation	DI 4x120 ... 230 V AC ST
Firmware version	
• FW update possible	No
based on	6ES7131-6FD01-0BB1
usable BaseUnits	BU type B1
Color code for module-specific color identification plate	CC41
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	
• DI	Yes
• Counter	No
• Oversampling	No
• MSI	No
Supply voltage	
Rated value (AC)	230 V
permissible range, lower limit (AC)	187 V
permissible range, upper limit (AC)	264 V
Reverse polarity protection	No
Input current	
Current consumption (rated value)	10 mA
Encoder supply	
Number of outputs	4
Short-circuit protection	No; when using BU type B1, a fuse with 10 A tripping current must be provided
Output current	
• up to 60 °C, max.	10 A
Power loss	
Power loss, typ.	1 W; Active power, load voltage 230 V, all inputs connected with 230 V, 50 Hz
Address area	
Address space per module	
• Inputs	1 byte; + 1 byte for QI information
Hardware configuration	
Automatic encoding	Yes
• Mechanical coding element	Yes
Selection of BaseUnit for connection variants	
• 1-wire connection	BU type B1
• 2-wire connection	BU type B1

• 3-wire connection • 4-wire connection	BU type B1 BU type B1 + potential distributor module
Digital inputs	
Number of digital inputs	4
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Input voltage	
• Rated value (AC) • for signal "0" • for signal "1"	230 V 0V AC to 40V AC 74 V AC to 264 V AC
Input current	
• for signal "1", typ.	10.8 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	No
— at "0" to "1", min.	1.5 ms
— at "0" to "1", max.	4 ms
— at "1" to "0", min.	10 ms
— at "1" to "0", max.	10 ms
Cable length	
• shielded, max. • unshielded, max.	1 000 m 600 m
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
Interrupts/diagnostics/status information	
Alarms	
• Diagnostic alarm • Hardware interrupt	No No
Diagnoses	
• Monitoring the supply voltage • Wire-break • Short-circuit	No No No
Diagnostics indication LED	
• Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics	Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
• between the channels • between the channels and backplane bus • between the channels and the power supply of the electronics	No Yes No
Isolation	
Isolation tested with	2 545 V DC/2 s (routine test)
Standards, approvals, certificates	
Suitable for safety functions	No
Ambient conditions	
Ambient temperature during operation	
• horizontal installation, min. • horizontal installation, max.	-40 °C; = Tmin (incl. condensation/frost) 70 °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 %; incl. condensation / frost permitted (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 ships/at sea	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
— 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)
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	
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A
Dimensions	
Width	20 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	36 g

last modified:

5/29/2024 