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Data sheet 6AG1131-6FD01-7BB1



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...230VAC ST
Firmware version	
● FW update possible	No
based on	6ES7131-6FD01-0BB1
usable BaseUnits	BU type B1
Color code for module-specific color-coded label	CC41
Product function	
● I&M data	Yes; I&M0 to I&M3
● Isochronous mode	No
● suitable for operation on PROFINET R1 IMs	Yes
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, 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	
● 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 C
Selection of BaseUnit for connection variants	

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● 1-wire connection	BU type B1
● 2-wire connection	BU type B1
● 3-wire connection	BU type B1
● 4-wire connection	BU type B1 + potential distributor module
Digital inputs	
Number of digital inputs	4
Digital inputs, parameterizable	Yes
Sourcing/sinking input	P-reading
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Input voltage	
● Rated value (AC)	230 V
● for signal "0"	0V AC to 40V AC
● for signal "1"	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.	1 000 m
● unshielded, max.	600 m
Encoder	
Connectable encoders	
● 2-wire sensor	Yes
Interrupts/diagnostics/status information	
Alarms	
● Diagnostic alarm	No
● Maintenance interrupt	No
● Hardware interrupt	No
Diagnoses	
● Monitoring the supply voltage	No
● Wire break	No
● short-circuit	No
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	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.	-40 °C; = Tmin (incl. condensation/frost)
● horizontal installation, max.	70 °C; = Tmax
● vertical installation, min.	-40 °C; = Tmin
● vertical installation, max.	50 °C; = Tmax
Altitude during operation relating to sea level	

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● Installation altitude above sea level, max.	2 000 m
● Ambient air temperature-barometric pressure-altitude	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

Classifications

	Version	Classification
eClass	16	27-24-26-04
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

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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

China RoHS

EMV

Maritime application

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