SIEMENS

Data sheet 6AG2131-6FD00-4BB1

SIPLUS ET 200SP DI 4X120/230VAC TX RAIL -40 ... +70 °C TX with 85 °C for 10 minutes with conformal coating Based on: 6ES7131-6FD00-0BB1 . DI 4x 120..230V AC Standard suitable for BU type B1, Color code 41 Module diagnostics

General information	
Product type designation	DI 4x120 ... 230 V AC ST
Firmware version	
• FW update possible	Yes
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
Operating mode	
• DI	Yes
• Counter	No
• Oversampling	No
• MSI	No
Supply voltage	
Rated value (AC)	230 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
24 V encoder supply	
• 24 V	No
• Short-circuit protection	No
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
• Inputs	1 byte
Hardware configuration	
Selection of BaseUnit for connection variants	
• 1-wire connection	BU type B1
• 2-wire connection	BU type B1
• 3-wire connection	BU type B1
• 4-wire connection	BU type B1 + external terminals
Digital inputs	
Number of digital inputs	4
Source/sink input	No
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Pulse extension	No
Input voltage	
• Type of input voltage	120/230 V AC (47 Hz to 63 Hz)
• 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
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No
Interrupts/diagnostics/status information	
Alarms	
• Diagnostic alarm	No

• Hardware interrupt	No
Diagnostic messages	
• Wire-break	No
• Short-circuit	No
• 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	2 300 V AC for 1 minute (type test) and according to EN 50155 (routine test)

Standards, approvals, certificates

Railway application	
• EN 50121-3-2	Yes; EMC for rail vehicles
• EN 50121-4	Yes; EMC for signal and telecommunications systems
• EN 50124-1	Yes; Railway applications - overvoltage category OV2; pollution degree PD2; rated surge voltage UNi = 0.5 kV; UNm = 24 V DC
• EN 50125-1	Yes; Rail vehicles - see ambient conditions
• EN 50125-2	Yes; Stationary electrical equipment - see ambient conditions
• EN 50125-3	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 Tx, horizontal mounting position, salt spray Class ST2
• EN 61373	Yes; Rail vehicles - vibrations and shocks: Category 1 Class A/B
• Fire protection acc. to EN 45545-2	Yes; Rail vehicles - verification on request

Ambient conditions

Ambient temperature during operation	
• horizontal installation, min.	-40 °C; = Tmin
• horizontal installation, max.	70 °C; = Tmax; +85 °C for 10 min (Tx acc. to EN 50155)
Altitude during operation relating to sea level	
• 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
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, *
Use on land craft, rail vehicles and special-purpose vehicles	
— to biologically active substances according to EN 60721-3-5	Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request
— to chemically active substances according to EN 60721-3-5	Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 50155 (ST2); *
— to mechanically active substances according to EN 60721-3-5	Yes; Class 5S3 incl. sand, dust; *
from supply voltage 1L+	
— Note regarding classification of environmental conditions acc. to EN 60721	* The supplied plug covers must remain in place over the unused interfaces during operation!

Dimensions	
Width	20 mm
Height	73 mm
Depth	58 mm

Weights	
Weight, approx.	36 g

Other	
Note:	For use in railway applications, also observe the product information "SIPLUS extreme RAIL" A5E37661960A Online Support article 109736776

last modified: 05/16/2018