



Figure similar

SIPLUS ET 200SP DI 8xNAMUR HF based on 6ES7131-6TF00-0CA0 with conformal coating, -40...+70 °C, digital input module, suitable for BU type A0, color code CC01, channel diagnostics

General information	
Product type designation	DI 8xNAMUR HF
Firmware version	
• FW update possible	Yes
based on	6ES7131-6TF00-0CA0
usable BaseUnits	BU type A0
Color code for module-specific color-coded label	CC01
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	Yes
• Oversampling	No
• MSI	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.	70 mA
Encoder supply	
Number of outputs	8
Short-circuit protection	Yes
24 V encoder supply	
• 24 V	No
• Short-circuit protection	No
NAMUR encoder supply	
• 8.2 V	Yes
• Short-circuit protection	Yes
• Output current per channel, max.	8 mA
• Output current per module, max.	64 mA
Power loss	
Power loss, typ.	1.5 W

Address area	
Address space per module	
• Address space per module, max.	1 byte
• Inputs	42 byte; 1 byte + 1 byte for QI information in DI mode; 42 bytes in Counter mode
• Outputs	20 byte; 0 in DI mode; 20 bytes in Counter mode
Hardware configuration	
Automatic encoding	Yes
• Mechanical coding element	Yes
• Type of mechanical coding element	Type A
Submodules	
• Number of configurable submodules, max.	1
Selection of BaseUnit for connection variants	
• 2-wire connection	BU type A0
• 3-wire connection	BU type A0
Digital inputs	
Number of digital inputs	8; NAMUR
Digital inputs, parameterizable	Yes
Sourcing/sinking input	P-reading
Pulse extension	Yes; 0.5 s, 1 s, 2 s
Edge evaluation	Yes; rising edge, falling edge, edge change
Signal change flutter	Yes; 2 to 32 signal changes
Flutter observation window	Yes; 0.5 s, 1 s to 100 s in 1-s steps
Digital input functions, parameterizable	
• Gate start/stop	Yes
• Freely usable digital input	Yes
• Counter	Yes
— Number, max.	4; See manual for details
— Counting frequency, max.	5 kHz
— Counting width	32 bit
— Counting direction up/down	Yes
Input voltage	
• Rated value (DC)	8.2 V
Input current	
for 10 k switched contact	
— for signal "0", min.	0.35 mA
— for signal "0", max.	1.2 mA
— for signal "1", min.	2.1 mA
— for signal "1", max.	7 mA
for unswitched contact	
— for signal "0", max. (permissible quiescent current)	0.5 mA
— for signal "1", typ.	8 mA
for NAMUR encoders	
— for signal "0", min.	0.35 mA
— for signal "0", max.	1.2 mA
— for signal "1", min.	2.1 mA
— for signal "1", max.	7 mA
Input delay (for rated value of input voltage)	
• tolerated changeover time for changeover contacts	300 ms
for standard inputs	
— parameterizable	No
for NAMUR inputs	
— at "0" to "1", max.	20 ms; See manual for details
— at "1" to "0", max.	20 ms; See manual for details
Cable length	
• shielded, max.	200 m; 50 m for Counter mode
Encoder	
Connectable encoders	
• NAMUR encoder/changeover contact according to EN	Yes

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- Single contact / changeover contact unconnected
- Single contact / changeover contact connected with 10 kΩ

Yes
Yes

Interrupts/diagnostics/status information

Diagnostics function Yes

Alarms

- Diagnostic alarm Yes; channel by channel
- Hardware interrupt Yes; Parameterizable, channels 0 to 7

Diagnoses

- Diagnostic information readable Yes
- Monitoring the supply voltage
 - Parameterizable Yes
- Monitoring of encoder power supply No
- Wire break Yes; channel by channel
- short-circuit Yes; channel by channel

Diagnostics indication LED

- Monitoring of the supply voltage (PWR-LED) Yes; green PWR LED
- Channel status display Yes; green LED
- for channel diagnostics Yes; red LED
- 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 load voltage L+ Yes
- between the channels and the power supply of the electronics Yes

Isolation

Isolation tested with 707 V DC (type test)

Standards, approvals, certificates

Suitable for safety functions No

Ambient conditions

Ambient temperature during operation

- horizontal installation, min. -40 °C; = Tmin (incl. condensation/frost); start-up @ -25 °C
- horizontal installation, max. 70 °C; = Tmax; > +60 °C number of simultaneously controllable inputs max. 4 (no adjacent points)
- vertical installation, min. -40 °C; = Tmin
- vertical installation, max. 50 °C; = Tmax

Altitude during operation relating to sea level

- Installation altitude above sea level, max. 5 000 m
- Ambient air temperature-barometric pressure-altitude 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)

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 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 Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on

60721-3-6	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	
<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.	32 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	10	EC001599
	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	EMV	For use in hazardous locations	Maritime application
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[CCC-Ex](#)



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