

SIPLUS PCS 7 SM 321 16DI for medial exposure with conformal coating based on 6ES7321-7TH00-0AB0 . Digital "input ""16 DI; 24 V DC, 1x ""40-pole, "" diagnostics-capable," for contacts (wired/ not wired), NAMUR encoder, 3/4-wire "BERO, with chatter ""monitoring;" "Pulse"" extension, Open-circuit" detection Connection IM 153-2 required



Figure similar

Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
• Reverse polarity protection	Yes
Input current	
from load voltage L+ (without load), max.	100 mA
from backplane bus 5 V DC, max.	100 mA
Encoder supply	
Number of outputs	4
Type of output voltage	1Vs1/2Vs1: 18 V, 1Vs2/2Vs2: 8.2 V
Short-circuit protection	Yes; Electronic
additional (redundant) feed	No
Output current	
• Rated value	190 mA; at 18V: 190mA, at 8.2V: 60mA
• permissible range, upper limit	Up to 60 degree: at 18V: 0 to 110mA, at 8.2V: 0 to 60mA; Up to 40 degree: at 18V: 0 to 190mA, at 8.2V: 0 to 60mA

Power loss	
Power loss, typ.	11 W
Digital inputs	
Number of digital inputs	16
Input characteristic curve in accordance with IEC 61131, type 1	No
Input characteristic curve in accordance with IEC 61131, type 2	Yes
Number of simultaneously controllable inputs	
horizontal installation	
— up to 60 °C, max.	16
vertical installation	
— up to 40 °C, max.	16
Input voltage	
• Type of input voltage	DC
• Rated value (DC)	8.2 V; 8.2V/18V
Input current	
• for signal "0", min.	0.35 mA
• for signal "0", max. (permissible quiescent current)	1.2 mA
• for signal "1", typ.	10 mA; for NAMUR: 2.1 to 7 mA, for 10k ohm/47k ohm contact: typical 10mA, for 4 wire BEROs: typical 10 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— at "0" to "1", min.	2.5 ms
— at "0" to "1", max.	3.5 ms
— at "1" to "0", min.	2.5 ms
— at "1" to "0", max.	3.5 ms
Cable length	
• shielded, max.	400 m; max. 200m with 8.2 V sensor, max. 400m with 18 V sensor
• unshielded, max.	Not permitted
Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostics function	Yes
Alarms	
• Diagnostic alarm	Yes
• Hardware interrupt	Yes
Diagnoses	
• Diagnostic information readable	Yes
• Wire-break	Yes
Diagnostics indication LED	

• Group error SF (red)	Yes
• Status indicator digital input (green)	Yes
• Encoder supply Vs (green)	Yes

### Potential separation

#### Potential separation digital inputs

• between the channels	Yes
• between the channels, in groups of	8
• between the channels and backplane bus	Yes

### Isolation

Isolation tested with	600 V DC
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### Standards, approvals, certificates

CE mark	Yes
UL approval	Yes; File E239877
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes

### Ambient conditions

#### Ambient temperature during operation

• min.	0 °C
• max.	60 °C

#### Ambient temperature during storage/transportation

• min.	-40 °C
• max.	70 °C

#### 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 under condensation conditions)
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#### Resistance

##### 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 ships/at sea

- to biologically active substances according to EN 60721-3-6
- to chemically active substances according to EN 60721-3-6
- to mechanically active substances according to EN 60721-3-6

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

Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); \*

Yes; Class 6S3 incl. sand, dust; \*

**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!

**Connection method**

required front connector      40-pin

**Dimensions**

Width	40 mm
Height	125 mm
Depth	120 mm

**last modified:**      10/13/2020