

Overview



- Digital inputs as supplement to the integral I/O of the CPUs
- Integrated into the overall automation for the implementation of safety-related requirements
- With integrated safety functions
- Communication with fail-safe CPUs via PROFIsafe mechanisms
- For flexible adaptation of the controller to the corresponding task
- For subsequent expansion of the system with additional inputs
- Operable exclusively in the central system

3

Technical specifications

Article number	6ES7226-6BA32-0XB0 DIGITAL INPUT SM 1226, F-DI 16X 24VDC
General information	
Product type designation	SM 1226 F-DI 16x24VDC
Supply voltage	
Rated value (DC)	
• 24 V DC	Yes
Input current	
from backplane bus 5 V DC, max.	155 mA; Current consumption (SM Bus, 5 V DC): 155 mA
Digital inputs	
• from load voltage L+ (without load), max.	130 mA; 130 mA + 6 mA / input used + any Vs1/Vs2 current used
Power loss	
Power loss, typ.	7 W
Digital inputs	
Number of digital inputs	16; 16 (1oo1) or 8 (1oo2); Note: You can individually assign each pair of inputs "a.x" and "b.x" as a single (1oo2)-channel or as 2 separate (1oo1)-channels
horizontal installation	
- up to 50 °C, max.	16; 16 inputs at 55 °C horizontal
vertical installation	
- up to 40 °C, max.	16; 16 inputs at 45 °C vertical
Input voltage	
• Type of input voltage	DC
• for signal "0"	-30 V DC to +5 V DC
• for signal "1"	15 V DC to 30 V DC
Input current	
• for signal "0", max. (permissible quiescent current)	0.5 mA
Input delay (for rated value of input voltage) for standard inputs	
- parameterizable	Yes; 0.8 / 1.6 / 3.2 / 6.4 / 12.8 ms

Article number	6ES7226-6BA32-0XB0 DIGITAL INPUT SM 1226, F-DI 16X 24VDC
Cable length	
• shielded, max.	200 m; Unshielded with input filter time of 1.6 ms to 12.6 ms (With an input delay of 0.8 ms, shielded cables must be used for the digital inputs and the sensor supply)
• unshielded, max.	200 m; Shielded with input filter time of 0.8 ms to 12.6 s (With an input delay of 0.8 ms, shielded cables must be used for the digital inputs and the sensor supply)
Diagnostics indication LED	
• for status of the inputs	Yes
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
FM approval	Yes
Highest safety class achievable in safety mode	
• SIL acc. to IEC 61508	SIL 2 (single-channel), SIL 3 (two-channel)
Ambient conditions	
Free fall	
• Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Mechanics/material	
Enclosure material (front)	
• Plastic	Yes
Dimensions	
Width	70 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	250 g

Overview

- Digital inputs as supplement to the integral I/O of the CPUs
- Integrated into the overall automation for the implementation of safety-related requirements
- With integrated safety functions
- Communication with fail-safe CPUs via PROFIsafe mechanisms
- For flexible adaptation of the controller to the corresponding task
- For subsequent expansion of the system with additional inputs
- Operable exclusively in the central system

Note

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the corresponding standard products. SIPLUS extreme-specific information was added.

Technical specifications

Article number	6AG1226-6BA32-5XB0
Based on	6ES7226-6BA32-0XB0 SIPLUS S7-1200 SM 1226 F-DI 16x24VDC
Ambient conditions	
Free fall	
• Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• min.	-25 °C; = Tmin
• max.	55 °C; = Tmax
Extended ambient conditions	
• relative to ambient temperature-atmospheric pressure-installation altitude	Tmin ... Tmax at 1080 hPa ... 795 hPa (-1000 m ... +2000 m)
Relative humidity	
- With condensation, tested in accordance with IEC 60068-2-38, max.	100%; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
- against biologically active substances / conformity with EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna). The supplied connector covers must remain on the unused interfaces during operation!
- against chemically active substances / conformity with EN 60721-3-3	Yes; Class 3C4 (RH < 75%) incl. salt spray according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!
- against mechanically active substances / conformity with EN 60721-3-3	Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!

Ordering data**Article No.**

SIPLUS SM 1226 fail-safe digital input signal module (Extended temperature range and environmental stress) 16 inputs, 24 V DC (SIL 2/category 3/PL d) or 8 inputs 24 V DC (SIL 3/category 3 or category 4/PL e) or a combination of both	6AG1226-6BA32-5XB0
Accessories	See SIMATIC SM 1226 fail-safe digital input signal module, page 3/158