



SIMATIC S7-1200, Digital input SM 1226, F-DI 16X 24 V DC, PROFIsafe, 70 mm overall width, up to PL E (ISO 13849-1)/ SIL3 (IEC 61508)

General information	
Product type designation	SM 1226, F-DI 16x24 V DC
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
power supply according to NEC Class 2 required	No
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
Number of simultaneously controllable inputs	
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	
• 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
• for signal "1", typ.	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
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)
Interrupts/diagnostics/status information	
Diagnostics indication LED	
• for status of the inputs	Yes
Degree and class of protection	

IP degree of protection	IP20		
Standards, approvals, certificates			
CE mark	Yes		
cULus	Yes		
FM approval	Yes		
Highest safety class achievable in safety mode			
- Performance level according to ISO 13849-1 - SIL acc. to IEC 61508	1-channel, Category 3, PL d; 2-channel, Category 3 or 4, PL e SIL 2 (single-channel), SIL 3 (two-channel)		
Probability of failure (for service life of 20 years and repair time of 100 hours)			
Low demand mode: PFDavg in accordance with SIL2	< 5.00E-04		
Low demand mode: PFDavg in accordance with SIL3	< 1.00E-05		
High demand/continuous mode: PFH in accordance with SIL2	< 1.00E-08 1/h		
High demand/continuous mode: PFH in accordance with SIL3	< 1.00E-10 1/h		
Ambient conditions			
Free fall			
Fall height, max.	0.3 m; five times, in product package		
Ambient temperature during operation			
- min. - max. - permissible temperature change	0 °C 55 °C 5°C to 55°C, 3°C / minute		
Ambient temperature during storage/transportation			
- min. - max.	-40 °C 70 °C		
Air pressure acc. to IEC 60068-2-13			
- Storage/transport, min. - Storage/transport, max.	660 hPa 1 080 hPa		
Relative humidity			
Operation at 25 °C without condensation, max.	95 %		
Mechanics/material			
Enclosure material (front)			
Plastic	Yes		
Dimensions			
Width	70 mm		
Height	100 mm		
Depth	75 mm		
Weights			
Weight, approx.	250 g		
Classifications			
		Version	Classification
	eClass	14	27-24-22-04
	eClass	12	27-24-22-04
	eClass	9.1	27-24-22-04
	eClass	9	27-24-22-04
	eClass	8	27-24-22-04
	eClass	7.1	27-24-22-04
	eClass	6	27-24-22-04
	ETIM	9	EC001419
	ETIM	8	EC001419
	ETIM	7	EC001419
	IDEA	4	3566
	UNSPSC	15	32-15-17-05
Approvals / Certificates			
General Product Approval		EMV	For use in hazardous locations



For use in hazardous locations

Functional Safety



[EM](#)



[CCC-Ex](#)



Functional Safety

[Type Examination Certificate](#)

last modified:

3/12/2024