



SIPLUS S7-1200 SM 1226 F-DQ 4x24VDC based on 6ES7226-6DA32-0XB0 with conformal coating, -25...+55 °C, F-DQ 4x DC 24V 2A, PROFIsafe, 70 mm width, up to PL e (ISO 13849-1)/ SIL3 (IEC 61508)

General information	
Product type designation	SM 1226, F-DQ 4x24 V DC/0.5 A
based on	6ES7226-6DA32-0XB0
Supply voltage	
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.	125 mA
Digital outputs	
<ul style="list-style-type: none"> from load voltage L+, max. 	170 mA
Power loss	
Power loss, typ.	8 W
Digital outputs	
Number of digital outputs	4
<ul style="list-style-type: none"> in groups of 	1
Short-circuit protection	Yes
Switching capacity of the outputs	
<ul style="list-style-type: none"> with resistive load, max. 	30 Hz
<ul style="list-style-type: none"> on lamp load, max. 	10 Hz
Output voltage	
<ul style="list-style-type: none"> Rated value (DC) 	24 V
Output current	
<ul style="list-style-type: none"> for signal "1" rated value 	2 A
<ul style="list-style-type: none"> for signal "1" permissible range, max. 	10 mA to 2.4 A
<ul style="list-style-type: none"> for signal "0" residual current, max. 	P-switch: 0.5 mA, maximum; M-switch: 0.5 mA, maximum
Cable length	
<ul style="list-style-type: none"> shielded, max. 	200 m
<ul style="list-style-type: none"> unshielded, max. 	200 m
Interrupts/diagnostics/status information	
Diagnostics indication LED	
<ul style="list-style-type: none"> for status of the outputs 	Yes
Degree and class of protection	
IP degree of protection	IP20
Standards, approvals, certificates	
Highest safety class achievable in safety mode	
<ul style="list-style-type: none"> Performance level according to ISO 13849-1 	Category 4, PL e
<ul style="list-style-type: none"> SIL acc. to IEC 61508 	SIL 3
Probability of failure (for service life of 20 years and repair time of 100 hours)	

— Low demand mode: PFDavg in accordance with SIL3	< 1.00E-05
— High demand/continuous mode: PFH in accordance with SIL3	< 4.00E-09

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
• permissible temperature change	5°C to 55°C, 3°C / minute
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Air pressure acc. to IEC 60068-2-13	
• Storage/transport, min.	660 hPa
• Storage/transport, max.	1 140 hPa
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)
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 ships/at sea	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on 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; *
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	
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A
Mechanics/material	
Enclosure material (front)	
• plastic	Yes
Dimensions	

Width	70 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	270 g

Classifications			
		Version	Classification
	eClass	16	27-24-22-04
	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	10	EC001419
	ETIM	9	EC001419
	ETIM	8	EC001419
	ETIM	7	EC001419
	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**

[China RoHS](#)



For use in hazardous locations **Functional Safety**



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