SIEMENS

Data sheet 6AG1226-6BA32-5XB0

SIPLUS S7-1200 SM 1226 F-DI 16x24VDC based on 6ES7226-6BA32-0XB0 with conformal coating, -25…+55 °C, F-DI 16x 24 V DC, PROFIsafe, 70 mm width, up to PL e (ISO 13849-1)/ SIL3 (IEC 61508)

General information	
Product type designation	SM 1226, F-DI 16x24 V DC
based on	6ES7226-6BA32-0XB0
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	
Highest safety class achievable in safety mode	
● Performance level according to ISO 13849-1	1-channel, Category 3, PL d; 2-channel, Category 3 or 4, PL e
● SIL acc. to IEC 61508	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.	-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.	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	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					EMV
Manufacturer Declaration	CE EG-Konf.	UKCA	China RoHS	UL	KC

EMV	For use in hazardous locations			Functional Saftey
RCM	ATEX	IECEx	CCC	TÜV

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