

SIPLUS S7-400 SM 432 8AQ based on 6ES7432-1HF00-0AB0 with conformal coating, 0...+60 °C,

General information	
based on	6ES7432-1HF00-0AB0
Supply voltage	
Load voltage L+	
<ul style="list-style-type: none"> Rated value (DC) 	24 V
<ul style="list-style-type: none"> Reverse polarity protection 	Yes
Input current	
from supply and load voltage L+ (without load), max.	200 mA; at rated load: max. 400 mA
from backplane bus 5 V DC, max.	150 mA
Power loss	
Power loss, typ.	9 W
Analog outputs	
Number of analog outputs	8
Voltage output, short-circuit protection	Yes
Voltage output, short-circuit current, max.	30 mA
Current output, no-load voltage, max.	19 V
Output ranges, voltage	
<ul style="list-style-type: none"> 0 to 10 V 	Yes
<ul style="list-style-type: none"> 1 V to 5 V 	Yes
<ul style="list-style-type: none"> -10 V to +10 V 	Yes
Output ranges, current	
<ul style="list-style-type: none"> 0 to 20 mA 	Yes
<ul style="list-style-type: none"> -20 mA to +20 mA 	Yes
<ul style="list-style-type: none"> 4 mA to 20 mA 	Yes
Connection of actuators	
<ul style="list-style-type: none"> for voltage output two-wire connection 	Yes; possible, without compensation of the line resistances
<ul style="list-style-type: none"> for voltage output four-wire connection 	Yes; possible
<ul style="list-style-type: none"> for current output two-wire connection 	Yes; possible
Load impedance (in rated range of output)	
<ul style="list-style-type: none"> with voltage outputs, min. 	1 kΩ
<ul style="list-style-type: none"> with voltage outputs, capacitive load, max. 	1 μF
<ul style="list-style-type: none"> with current outputs, max. 	500 Ω; 600 ohms if common-mode-voltage reduced to <1 V
Cable length	
<ul style="list-style-type: none"> shielded, max. 	200 m
Analog value generation for the outputs	
Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> Resolution with overrange (bit including sign), max. 	13 bit
<ul style="list-style-type: none"> Conversion time (per channel) 	420 μs; 420 μs in the ranges 1 to 5 V and 4 to 20 mA; 300 μs in all ranges
Settling time	
<ul style="list-style-type: none"> for resistive load 	0.1 ms
<ul style="list-style-type: none"> for capacitive load 	3.5 ms
<ul style="list-style-type: none"> for inductive load 	0.5 ms
Errors/accuracies	
Operational error limit in overall temperature range	
<ul style="list-style-type: none"> Voltage, relative to output range, (+/-) 	0.5 %; ±10 V, 0 to 10 V, 1 to 5 V
<ul style="list-style-type: none"> Current, relative to output range, (+/-) 	1 %; ±20 mA, 4 to 20 mA
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> Voltage, relative to output range, (+/-) 	0.5 %; ±10 V, 0 to 10 V, 1 to 5 V
<ul style="list-style-type: none"> Current, relative to output range, (+/-) 	0.5 %; ±20 mA, 0 to 20 mA

Interrupts/diagnostics/status information	
Diagnostics function	No
Potential separation	
Potential separation analog outputs	
• between the channels	No
• between the channels and backplane bus	Yes
Isolation	
Isolation tested with	2 120 V DC between bus and L+/M; 2 120 V DC between bus and analog section; 500 V DC between bus and local ground; 500 V DC between analog section and L+/M; 2 120 V DC between analog section and local ground; 2 120 V DC between L+/M and local ground
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C; = Tmin
• max.	60 °C; = Tmax
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)
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	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
Dimensions	
Width	25 mm
Height	290 mm
Depth	210 mm
Weights	

Weight, approx. 650 g

Classifications

	Version	Classification
eClass	14	27-24-22-01
eClass	12	27-24-22-01
eClass	9.1	27-24-22-01
eClass	9	27-24-22-01
eClass	8	27-24-22-01
eClass	7.1	27-24-22-01
eClass	6	27-24-22-01
ETIM	10	EC001420
ETIM	9	EC001420
ETIM	8	EC001420
ETIM	7	EC001420
IDEA	4	3562
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval



[Manufacturer Declaration](#)



[China RoHS](#)

[Metrological Approval](#)



General Product Approval EMV For use in hazardous locations

[China RoHS](#)



[CCC-Ex](#)



For use in hazardous locations



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