

SIPLUS HMI KP32F PN based on 6AV3688-3EH47-0AX0 with conformal coating, -20...+55 °C, Key Panel, 32 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, 16 DI+16 DI/DQ, 4 safety DI pins, 24 V DC can be looped through, parameterizable as of STEP 7 V5.5



Figure similar

General information	
Product type designation	KP32F PN
based on	<a href="#">6AV3688-3EH47-0AX0</a>
Control elements	
With parameterizable keys	Yes
Keyboard fonts	
<ul style="list-style-type: none"> <li>Membrane keyboard                             <ul style="list-style-type: none"> <li>— user-definable label membrane keys</li> </ul> </li> <li>Function keys                             <ul style="list-style-type: none"> <li>— Number of function keys</li> </ul> </li> <li>Short-stroke keys                             <ul style="list-style-type: none"> <li>— Number of short-stroke keys</li> </ul> </li> </ul>	Yes  32  32
Expansions for operator control of the process	
<ul style="list-style-type: none"> <li>DP direct LEDs (LEDs as S7 output I/O)</li> <li>Number of color modes for LED</li> <li>Direct keys (keys as S7 input I/O)</li> </ul>	8; Adjustable brightness 5; red, green, blue, yellow, white 32
Installation type/mounting	
Mounting type	Mounting clip
Mounting position	vertical
Rack mounting	No
Front mounting	Yes
Rail mounting	No
Wall mounting/direct mounting	No
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	30°; To the front/rear
Number of slots for command devices and signaling units	0
Supply voltage	
Type of supply voltage	DC
Rated value (DC)	24 V; 24 V looped through at connector, no interruption on pulling
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
Current consumption (rated value)	1 A
Digital inputs	
Number of digital inputs	32; Total inputs and outputs max. 32 and 2x SIL 2 or 4x SIL 3
Input voltage	

• Rated value (DC)	24 V
<b>Digital outputs</b>	
Number of digital outputs	16; Max. 32 inputs and outputs (total)
Short-circuit protection	Yes
Switching capacity of the outputs	
• with resistive load, max.	100 mA
Output voltage	
• Rated value (DC)	24 V; Non-isolated
Total current of the outputs	
• Current per channel, max.	100 mA
• Current per group, max.	800 mA
<b>Interfaces</b>	
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch
Industrial Ethernet	
• Industrial Ethernet status LED	2; Per port
• Number of ports of the integrated switch	2; Per port
<b>Protocols</b>	
PROFINET	Yes; incl. shared device, 3rd party PLC
Supports protocol for PROFINET IO	Yes
PROFINET CBA	No
IRT	Yes
PROFIsafe	Yes; 2x SIL 3 (two-channel) or 4x SIL 2 (single-channel) emergency stop sensors
PROFIBUS	No
EtherNet/IP	No
MPI	No
AS-Interface	No
EIB/KNX	No
Protocols (Ethernet)	
• TCP/IP	No
Redundancy mode	
Media redundancy	
— MRP	Yes
Further protocols	
• AS-Interface Safety at Work	No
• CAN	No
• Data-Highway	No
• DeviceNet	No
• DeviceNet Safety	No
• Foundation Fieldbus	No
• INTERBUS	No
• INTERBUS-Safety	No
• Local Operating Network	No
• MODBUS	No
• SafetyBUS p	No
• SERCOS	No
• SUCOnet	No
• other bus systems	No
<b>Test commissioning functions</b>	
Illuminant test	Yes; During switch on
Key and signal lamp test	Yes; automatically when switching on
<b>EMC</b>	
Emission of radio interference acc. to EN 55 011	
• Limit class A, for use in industrial areas	Yes; Group 1, measured at a distance of 10 m
• Limit class B, for use in residential areas	No
<b>Degree and class of protection</b>	
IP (at the front)	IP65
IP (rear)	IP20

NEMA (front)	
• Enclosure Type 4 at the front	No
• Enclosure Type 4x at the front	Yes; Incl. NEMA12
<b>Standards, approvals, certificates</b>	
Suitable for safety functions	Yes
<b>Ecological footprint</b>	
• environmental product declaration	Yes
<b>Global warming potential</b>	
— global warming potential, (total) [CO2 eq]	113 kg
— global warming potential, (during production) [CO2 eq]	38.5 kg
— global warming potential, (during operation) [CO2 eq]	82.3 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-8.27 kg
<b>Marine approval</b>	
• Germanischer Lloyd (GL)	No
• American Bureau of Shipping (ABS)	No
• Bureau Veritas (BV)	No
• Det Norske Veritas (DNV)	No
• Lloyds Register of Shipping (LRS)	No
• Nippon Kaiji Kyokai (Class NK)	No
• Polski Rejestr Statkow (PRS)	No
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• min.	-20 °C; = Tmin (incl. condensation/frost)
• max.	55 °C; = Tmax
<b>Operation (vertical installation)</b>	
— For vertical installation, min.	-20 °C; = Tmin
— For vertical installation, max.	55 °C; = Tmax
<b>Operation (max. tilt angle)</b>	
— At maximum tilt angle, min.	-20 °C; = Tmin
— At maximum tilt angle, max.	45 °C; = Tmax
<b>Operation (vertical installation, portrait format)</b>	
— For vertical installation, min.	-20 °C; = Tmin
— For vertical installation, max.	55 °C; = Tmax
<b>Operation (max. tilt angle, portrait format)</b>	
— At maximum tilt angle, min.	-20 °C; = Tmin
— At maximum tilt angle, max.	45 °C; = Tmax
<b>Ambient temperature during storage/transportation</b>	
• min.	-20 °C
• max.	60 °C
<b>Altitude during operation relating to sea level</b>	
• Installation altitude above sea level, max.	2 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)
<b>Relative humidity</b>	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
<b>Resistance</b>	
<b>Coolants and lubricants</b>	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
<b>Use in stationary industrial systems</b>	
— 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, *
<b>Use on ships/at sea</b>	
— to biologically active substances according to EN	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)



eClass	9.1	27-33-02-04
eClass	9	27-33-02-04
eClass	8	27-24-23-05
eClass	7.1	27-24-23-05
eClass	6	27-24-23-05
ETIM	10	EC001415
ETIM	9	EC001415
ETIM	8	EC001415
ETIM	7	EC001415
IDEA	4	5266
UNSPSC	15	39-12-22-21

**Approvals / Certificates**

<b>General Product Approval</b>	<b>EMV</b>	<b>Functional Safety</b>
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[China RoHS](#)

[Manufacturer Declaration](#)



[TUEV](#)

**Environment**



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