

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
Control elements	
With parameterizable keys	Yes
Keyboard fonts	
<ul style="list-style-type: none"> Membrane keyboard <ul style="list-style-type: none"> — user-definable label membrane keys Function keys <ul style="list-style-type: none"> — Number of function keys Short-stroke keys <ul style="list-style-type: none"> — Number of short-stroke keys 	Yes 32 32
Expansions for operator control of the process	
<ul style="list-style-type: none"> DP direct LEDs (LEDs as S7 output I/O) Number of color modes for LED Direct keys (keys as S7 input I/O) 	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
Type of output	
LED colors	
<ul style="list-style-type: none"> red yellow 	Yes Yes

• green	Yes
• white	Yes
• blue	Yes
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
Digital outputs	
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
Interfaces	
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
Protocols	
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
Test commissioning functions	
Illuminant test	Yes; During switch on
Key and signal lamp test	Yes; automatically when switching on
EMC	

Emission of radio interference acc. to EN 55 011	
<ul style="list-style-type: none"> • Limit class A, for use in industrial areas • Limit class B, for use in residential areas 	<p>Yes; Group 1, measured at a distance of 10 m</p> <p>No</p>
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
<ul style="list-style-type: none"> • Enclosure Type 4 at the front • Enclosure Type 4x at the front 	<p>No</p> <p>Yes; Incl. NEMA12</p>
Standards, approvals, certificates	
CE mark	Yes
Suitable for safety functions	Yes
Marine approval	
<ul style="list-style-type: none"> • Germanischer Lloyd (GL) • American Bureau of Shipping (ABS) • Bureau Veritas (BV) • Det Norske Veritas (DNV) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (Class NK) • Polski Rejestr Statkow (PRS) 	<p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p>
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> • min. • max. 	<p>-20 °C; = Tmin (incl. condensation/frost)</p> <p>55 °C; = Tmax</p>
Operation (vertical installation)	
— For vertical installation, min.	-20 °C
— For vertical installation, max.	55 °C
Operation (max. tilt angle)	
— At maximum tilt angle, min.	-20 °C
— At maximum tilt angle, max.	45 °C
Operation (vertical installation, portrait format)	
— For vertical installation, min.	-20 °C
— For vertical installation, max.	55 °C
Operation (max. tilt angle, portrait format)	
— At maximum tilt angle, min.	-20 °C
— At maximum tilt angle, max.	45 °C
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> • min. • max. 	<p>-20 °C</p> <p>60 °C</p>
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> • Installation altitude above sea level, max. • Ambient air temperature-barometric pressure-altitude 	<p>2 000 m</p> <p>Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)</p>
Relative humidity	
<ul style="list-style-type: none"> • With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
Resistance	
Coolants and lubricants	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
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, fungal and dry rot spores (excluding fauna)
— 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; *
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	
<ul style="list-style-type: none"> • Coatings for printed circuit board assemblies acc. to EN 61086 	Yes; Class 2 for high reliability
<ul style="list-style-type: none"> • Protection against fouling acc. to EN 60664-3 	Yes; Type 1 protection
<ul style="list-style-type: none"> • Military testing according to MIL-I-46058C, Amendment 7 	Yes; Discoloration of coating possible during service life
<ul style="list-style-type: none"> • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A 	Yes; Conformal coating, Class A
configuration / header	
Configuration software	
<ul style="list-style-type: none"> • STEP 7 Basic (TIA Portal) 	Yes
<ul style="list-style-type: none"> • STEP 7 Professional (TIA Portal) 	Yes
Functionality under WinCC (TIA Portal)	
Process coupling	
<ul style="list-style-type: none"> • S7-1200 	Yes; with ET 200pro CPU and ET 200S CPU
<ul style="list-style-type: none"> • S7-1500 	Yes
<ul style="list-style-type: none"> • S7-200 	No
<ul style="list-style-type: none"> • S7-300/400 	Yes; with F-CPU: STEP 7 V11 SP1 or higher and Safety V11 (or higher), without F-CPU STEP 7 or SIMATIC STEP 7 Basic V11 (or higher)
<ul style="list-style-type: none"> • LOGO! 	No
<ul style="list-style-type: none"> • WinAC 	Yes
<ul style="list-style-type: none"> • SINUMERIK 	No
<ul style="list-style-type: none"> • SIMOTION 	No
<ul style="list-style-type: none"> • Allen Bradley (EtherNet/IP) 	No
<ul style="list-style-type: none"> • Allen Bradley (DF1) 	No
<ul style="list-style-type: none"> • Mitsubishi (MC TCP/IP) 	No
<ul style="list-style-type: none"> • Mitsubishi (FX) 	No
<ul style="list-style-type: none"> • OMRON (FINS TCP) 	No
<ul style="list-style-type: none"> • OMRON (LINK/Multilink) 	No
<ul style="list-style-type: none"> • Modicon (Modbus TCP/IP) 	No
<ul style="list-style-type: none"> • Modicon (Modbus) 	No
Mechanics/material	
Enclosure material (front)	
<ul style="list-style-type: none"> • Plastic 	No
<ul style="list-style-type: none"> • Aluminum 	Yes
<ul style="list-style-type: none"> • Stainless steel 	No
Service life	
<ul style="list-style-type: none"> • Short-stroke keys (in switching cycles) 	1 500 000
<ul style="list-style-type: none"> • LEDs (ON period) 	100 %
Dimensions	
Width of the housing front	295 mm
Height of housing front	155 mm
Mounting cutout, width	277 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	137 mm
Overall depth	69 mm; Incl. angled SIMATIC Ethernet connector
Weights	
Weight (without packaging)	1 220 g
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