

SIPLUS HMI KP8F PN -20...+55°C with Conformal Coating based on 6AV3688-3AF37-0AX0 . Key Panel, 8 short-stroke switches with multi-colored LEDs, PROFINET interfaces with PROFIsafe; 8 DI/DO and 2 safety DI pins, 24 V DC can be looped through parameterizable as of STEP 7 V5.5



Figure similar

General information	
Product type designation	KP8F 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 8 8
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 8
Installation type/mounting	

Mounting type	Mounting clip
Mounting position	vertical
Rack mounting	No
Front mounting	Yes; Compatible with Extension Units dimensions
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 can be looped through connector, interrupted when pulled
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V

Input current

Current consumption (rated value)	0.3 A
-----------------------------------	-------

Type of output

LED colors	
• red	Yes
• yellow	Yes
• green	Yes
• white	Yes
• blue	Yes

Digital inputs

Number of digital inputs	8; Total inputs and outputs max. 8 and 1x SIL 2 or 2x SIL 3
Input voltage	
• Rated value (DC)	24 V

Digital outputs

Number of digital outputs	8; Max. 8 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; also 3rd party PLC
Supports protocol for PROFINET IO	Yes
PROFINET CBA	No
IRT	Yes
PROFIsafe	Yes; 1x SIL 3 (two-channel) or 2x SIL 2 (single-channel) emergency stop sensors
PROFIBUS	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
• EtherNet/IP	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

- | | |
|---|--|
| • 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 |

Degree and class of protection

- | | |
|----------------------------------|-------------------|
| 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 |

Standards, approvals, certificates

- | | |
|-------------------------------|-----|
| CE mark | Yes |
| Suitable for safety functions | Yes |

Marine approval

- | | |
|-------------------------------------|----|
| • 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 |

Ambient conditions

Ambient temperature during operation

- | | |
|--|---|
| • min. | -20 °C; = Tmin (incl. condensation/frost) |
| • max. | 55 °C; = Tmax |
| • 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, min. | 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, min. | 45 °C |

Ambient temperature during storage/transportation

- | | |
|--------|--------|
| • min. | -20 °C |
| • max. | 60 °C |

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 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7 • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A 	<p>Yes</p> <p>Yes; Type 1 protection</p> <p>Yes; Discoloration of coating possible during service life</p> <p>Yes; Conformal coating, Class A</p>
Configuration	
Configuration software	
<ul style="list-style-type: none"> • STEP 7 Basic (TIA Portal) • STEP 7 Professional (TIA Portal) 	<p>Yes</p> <p>Yes</p>
Functionality under WinCC (TIA Portal)	

Process coupling	
• S7-1200	Yes; with ET 200pro CPU and ET 200S CPU
• S7-1500	Yes
• S7-200	No
• S7-300/400	Yes; with F-CPU: STEP 7 V11 SP1 (or higher) and Safety V11 (or higher) or SIMATIC STEP 7 Basic V11 (or higher)
• LOGO!	No
• WinAC	Yes
• SINUMERIK	No
• SIMOTION	No
• Allen Bradley (EtherNet/IP)	No
• Allen Bradley (DF1)	No
• Mitsubishi (MC TCP/IP)	No
• Mitsubishi (FX)	No
• OMRON (FINS TCP)	No
• OMRON (LINK/Multilink)	No
• Modicon (Modbus TCP/IP)	No
• Modicon (Modbus)	No

Mechanics/material	
Enclosure material (front)	
• Plastic	Yes
• Aluminum	No
• Stainless steel	No

Service life	
• Short-stroke keys (in switching cycles)	1 500 000
• LEDs (ON period)	100 %

Dimensions	
Width of the housing front	98 mm
Height of housing front	155 mm
Mounting cutout, width	68 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	129 mm
Overall depth	49 mm; Incl. angled SIMATIC Ethernet connector

Weights	
Weight without packaging	280 g

last modified: 05/28/2020