

SIMATIC HMI KP32F PN, KEY PANEL, 32 SHORT-STROKE KEYS WITH MULTI-COLOR LED'S, PROFINET INTERFACES WITH PROFISAFE, 16DI+16DI/DO, 4 SAFETY DI PINS, 24V DC LOOP THROUGH CONFIGURABLE FROM STEP7 V5.5



General information

Product type designation SIMATIC HMI KP32F PN

Control elements

With parameterizable keys Yes

Keyboard fonts

- Membrane keyboard
 - user-definable label membrane keys Yes
- Function keys
 - Number of function keys 32
- Short-stroke keys
 - Number of short-stroke keys 32

Expansions for operator control of the process

- DP direct LEDs (LEDs as S7 output I/O) 8; Adjustable brightness
- Number of color modes for LED 5; Red, green, blue, yellow, white
- Direct keys (keys as S7 input I/O) 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
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Type of output

LED colors	
• red	Yes
• yellow	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
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Input voltage

• Rated value (DC)	24 V
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Digital outputs

Number of digital outputs	16; Max. 32 inputs and outputs (total)
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Short-circuit protection	Yes
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Switching capacity of the outputs

• with resistive load, max.	100 mA
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Output voltage

• Rated value (DC)	24 V; Non-isolated
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Total current of the outputs

• Current per channel, max.	100 mA
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• Current per group, max.	800 mA
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Interfaces

Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch
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Number of PROFINET interfaces	2; Incl. switch
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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
MRP	Yes
PROFIsafe	Yes; 2x SIL 2 (two-channel) or 4x SIL 3 (single channel) emergency stop sensor
PROFIBUS	No
MPI	No
AS-Interface	No
EIB/KNX	No

Protocols (Ethernet)

• TCP/IP	No
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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
Enclosure Type 4 at the front	No
Enclosure Type 4x at the front	Yes; Incl. NEMA12
IP (rear)	IP20

Standards, approvals, certificates

CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	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) 	<ul style="list-style-type: none"> No No No No No No No
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Use in hazardous areas

<ul style="list-style-type: none"> • ATEX Zone 2 • ATEX Zone 22 • cULus Class I Zone 1 • cULus Class I Zone 2, Division 2 • FM Class I Division 2 	<ul style="list-style-type: none"> No; On request No; On request No No; On request No; On request
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Ambient conditions

Ambient temperature during operation

<ul style="list-style-type: none"> • min. • max. • Operation (vertical installation) <ul style="list-style-type: none"> — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle) <ul style="list-style-type: none"> — At maximum tilt angle, min. — At maximum tilt angle, min. • Operation (vertical installation, portrait format) <ul style="list-style-type: none"> — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle, portrait format) <ul style="list-style-type: none"> — At maximum tilt angle, min. — At maximum tilt angle, min. 	<ul style="list-style-type: none"> 0 °C 55 °C 0 °C 55 °C 0 °C 45 °C 0 °C 45 °C 0 °C 45 °C
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Ambient temperature during storage/transportation

• min.	-20 °C
• max.	60 °C
Relative humidity	
• Operation, max.	95 %; no condensation

Configuration	
Configuration software	
• STEP 7 Basic (TIA Portal)	Yes
• STEP 7 Professional (TIA Portal)	Yes

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), without F-CPU STEP 7 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	No
• Aluminum	Yes
• Stainless steel	No

Service life	
• Short-stroke keys (in switching cycles)	1 500 000
• 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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