

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



Product type designation

Control elements

With parameterizable keys	Yes
With key and signal lamp test	Yes; Automatically when switching on

Keyboard

<ul style="list-style-type: none"> Membrane keyboard <ul style="list-style-type: none"> — freely inscribable membrane keys 	Yes
<ul style="list-style-type: none"> Short stroke keys <ul style="list-style-type: none"> — Number of short-stroke keys 	32

Expansions for operator control of the process

<ul style="list-style-type: none"> DP direct LEDs (LEDs as S7 output I/O) 	32
<ul style="list-style-type: none"> Number of color modes for LED 	5; Red, green, blue, yellow, white
<ul style="list-style-type: none"> Direct keys (keys as S7 input I/O) 	32

Installation type/mounting

Rack mounting possible	No
Front installation possible	Yes
Type of fitting, rail mounting	No
Wall mounting/direct mounting possible	No
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
Mounting position	vertical
maximum permissible angle of inclination without external ventilation	30°; To the front/rear
Mounting technology	Clamp terminals

Number of slots for command devices and signaling units	0
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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)
Load "resistive"	100 mA
Number of additional outputs	
• Output current (per output), max.	100 mA
• Total current (per group), max.	800 mA
• short-circuit protection	Yes

Output voltage

• Rated value (DC)	24 V; Non-isolated
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Interfaces

PROFINET IO

• Number of PROFINET interfaces	2; Incl. switch
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Industrial Ethernet

• Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch
• 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
PROFINET IO	Yes
IRT	Yes

MRP	Yes
PROFINET CBA	No
Supports protocol for PROFIsafe	Yes; 2x SIL 2 (two-channel) or 4x SIL 3 (single channel) emergency stop sensor
PROFIBUS	No
MPI	No
Protocols (Ethernet)	
• TCP/IP	No
Further protocols	
• AS-i	No
• Supports protocol for AS-Interface Safety at Work	No
• Supports protocol for SafetyBUS p	No
• CAN	No
• INTERBUS	No
• Supports protocol for INTERBUS-Safety	No
• EIB/KNX	No
• MODBUS	No
• Data highway	No
• DeviceNet	No
• Supports protocol for DeviceNet Safety	No
• Supports protocol for EtherNet/IP	No
• Local Operating Network	No
• SUCOnet	No
• Foundation Fieldbus	No
• SERCOS	No
• other bus systems	No
Test commissioning functions	
Illuminant test	Yes; During switch on
Pushbutton and lamp test	Yes; During switch 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

KC approval	Yes
cULus	Yes
RCM (formerly C-TICK)	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
Use in hazardous areas	
• ATEX Zone 2	No; On request
• ATEX Zone 22	No; On request
• cULus Class I Zone 1	No
• cULus Class I Zone 2, Division 2	Yes
• FM Class I Division 2	Yes
Ambient conditions	
Ambient temperature in operation	
• Min.	0 °C
• max.	55 °C
• Operation (vertical installation)	
— in vertical mounting position, minimum	0 °C
— in vertical mounting position, maximum	55 °C
• Operation (max. tilt angle)	
— at maximum tilt angle, minimum	0 °C
— at maximum tilt angle, maximum	45 °C
• Operation (vertical installation, portrait format)	
— in vertical mounting position, minimum	0 °C
— in vertical mounting position, maximum	45 °C
• Operation (max. tilt angle, portrait format)	
— at maximum tilt angle, minimum	0 °C
— at maximum tilt angle, maximum	45 °C
Storage/transport temperature	
• Min.	-20 °C
• max.	60 °C
Relative humidity	
• Operation, max.	95 %
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
- Win AC 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

Type of housing (front)

- plastic No
- aluminum Yes
- Stainless steel No

Lifetime, typ.

- 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
Device depth	69 mm; Incl. angled SIMATIC Ethernet connector

Weights

Without packaging	1 220 g
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