

SIMATIC HMI KP32F PN, Key Panel, 32 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, 16 DI+16 DI/DO, 4 safety DI pins, 24 V DC can be looped through parameterizable as of STEP 7 V5.5



General information	
Product type designation	KP32F PN
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
Type of output	
LED colors	
<ul style="list-style-type: none"> <li>red</li> <li>yellow</li> <li>green</li> <li>white</li> <li>blue</li> </ul>	Yes Yes Yes Yes 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	
• 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)	
<ul style="list-style-type: none"> <li>Enclosure Type 4 at the front</li> <li>Enclosure Type 4x at the front</li> </ul>	<p>No</p> <p>Yes; Incl. NEMA12</p>
<b>Standards, approvals, certificates</b>	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
CCC	No; not necessary
Suitable for safety functions	Yes
<b>Use in hazardous areas</b>	
<ul style="list-style-type: none"> <li>ATEX Zone 2</li> <li>ATEX Zone 22</li> <li>cULus Class I Zone 1</li> <li>cULus Class I Zone 2, Division 2</li> <li>FM Class I Division 2</li> </ul>	<p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p>
<b>Marine approval</b>	
<ul style="list-style-type: none"> <li>Germanischer Lloyd (GL)</li> <li>American Bureau of Shipping (ABS)</li> <li>Bureau Veritas (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Lloyds Register of Shipping (LRS)</li> <li>Nippon Kaiji Kyokai (Class NK)</li> <li>Polski Rejestr Statkow (PRS)</li> </ul>	<p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p>
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
<ul style="list-style-type: none"> <li>min.</li> <li>max.</li> </ul>	<p>0 °C</p> <p>55 °C</p>
<b>Operation (vertical installation)</b>	
<ul style="list-style-type: none"> <li>For vertical installation, min.</li> <li>For vertical installation, max.</li> </ul>	<p>0 °C</p> <p>55 °C</p>
<b>Operation (max. tilt angle)</b>	
<ul style="list-style-type: none"> <li>At maximum tilt angle, min.</li> <li>At maximum tilt angle, max.</li> </ul>	<p>0 °C</p> <p>45 °C</p>
<b>Operation (vertical installation, portrait format)</b>	
<ul style="list-style-type: none"> <li>For vertical installation, min.</li> <li>For vertical installation, max.</li> </ul>	<p>0 °C</p> <p>55 °C</p>
<b>Operation (max. tilt angle, portrait format)</b>	
<ul style="list-style-type: none"> <li>At maximum tilt angle, min.</li> <li>At maximum tilt angle, max.</li> </ul>	<p>0 °C</p> <p>45 °C</p>
<b>Ambient temperature during storage/transportation</b>	
<ul style="list-style-type: none"> <li>min.</li> <li>max.</li> </ul>	<p>-20 °C</p> <p>60 °C</p>
<b>Relative humidity</b>	
<ul style="list-style-type: none"> <li>Operation, max.</li> </ul>	95 %; no condensation
<b>configuration / header</b>	
<b>Configuration software</b>	
<ul style="list-style-type: none"> <li>STEP 7 Basic (TIA Portal)</li> <li>STEP 7 Professional (TIA Portal)</li> </ul>	<p>Yes</p> <p>Yes</p>
<b>Functionality under WinCC (TIA Portal)</b>	
<b>Process coupling</b>	
<ul style="list-style-type: none"> <li>S7-1200</li> <li>S7-1500</li> <li>S7-200</li> <li>S7-300/400</li> <li>LOGO!</li> <li>WinAC</li> <li>SINUMERIK</li> <li>SIMOTION</li> <li>Allen Bradley (EtherNet/IP)</li> </ul>	<p>Yes; with ET 200pro CPU and ET 200S CPU</p> <p>Yes</p> <p>No</p> <p>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)</p> <p>No</p> <p>Yes</p> <p>No</p> <p>No</p> <p>No</p>

- 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

**last modified:** 3/2/2021 