

SIMATIC HMI KP8 PN Key Panel, 8 short-stroke switches with multi-colored LEDs, PROFINET interfaces 8 configurable DI/DO pins, 24 V DC can be looped through parameterizable as of STEP 7 V5.5



### General information

Product type designation      KP8 PN

### Control elements

With parameterizable keys      Yes

### Keyboard fonts

- Membrane keyboard
  - user-definable label membrane keys      Yes
- Function keys
  - Number of function keys      8
- Short-stroke keys
  - Number of short-stroke keys      8

### 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)      8

### Installation type/mounting

Mounting type      Clamp terminals

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 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)	0.3 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	8; Max. 8 inputs and outputs (total)
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### Input voltage

• Rated value (DC)	24 V
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### Digital outputs

Number of digital outputs	8; Max. 8 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
• Current per group, max.	800 mA

### 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; also 3rd party PLC
Supports protocol for PROFINET IO	Yes
PROFINET CBA	No
IRT	Yes
PROFIsafe	No
PROFIBUS	No
MPI	No
AS-Interface	No
EIB/KNX	No
Protocols (Ethernet)	
• TCP/IP	No
Redundancy mode	
• 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)	
<ul style="list-style-type: none"> <li>• Enclosure Type 4 at the front</li> <li>• Enclosure Type 4x at the front</li> </ul>	No Yes; Incl. NEMA12

Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
Suitable for safety functions	No

Use in hazardous areas	
<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>	Yes Yes No Yes Yes

Marine approval	
<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>	No No No No No No No

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

— At maximum tilt angle, min.	45 °C
<b>Ambient temperature during storage/transportation</b>	
• min.	-20 °C
• max.	60 °C
<b>Relative humidity</b>	
• Operation, max.	95 %; no condensation
<b>Configuration</b>	
<b>Configuration software</b>	
• STEP 7 Basic (TIA Portal)	Yes
• STEP 7 Professional (TIA Portal)	Yes
<b>Functionality under WinCC (TIA Portal)</b>	
<b>Process coupling</b>	
• S7-1200	Yes; with ET 200pro CPU and ET 200S CPU
• S7-1500	Yes
• S7-200	No
• S7-300/400	Yes; 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
<b>Mechanics/material</b>	
<b>Enclosure material (front)</b>	
• Plastic	Yes
• Aluminum	No
• Stainless steel	No
<b>Service life</b>	
• Short-stroke keys (in switching cycles)	1 500 000
• LEDs (ON period)	100 %
<b>Dimensions</b>	
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
<b>Weights</b>	
Weight without packaging	270 g
<b>last modified:</b>	12/18/2019