



SIMATIC HMI KP8F PN, 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

General information	
Product type designation	KP8F 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> </ul>	Yes
<ul style="list-style-type: none"> <li>Function keys                             <ul style="list-style-type: none"> <li>— Number of function keys</li> </ul> </li> </ul>	8
<ul style="list-style-type: none"> <li>Short-stroke keys                             <ul style="list-style-type: none"> <li>— Number of short-stroke keys</li> </ul> </li> </ul>	8
Expansions for operator control of the process	
<ul style="list-style-type: none"> <li>DP direct LEDs (LEDs as S7 output I/O)</li> </ul>	8; Adjustable brightness
<ul style="list-style-type: none"> <li>Number of color modes for LED</li> </ul>	5; red, green, blue, yellow, white
<ul style="list-style-type: none"> <li>Direct keys (keys as S7 input I/O)</li> </ul>	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
Digital inputs	
Number of digital inputs	8; total inputs and outputs max. 8 and 2x SIL 2 or 1x SIL 3
Input voltage	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	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
<b>Interfaces</b>	
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
<b>Protocols</b>	
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
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
<b>Test commissioning functions</b>	
Illuminant test	Yes; During switch on
Key and signal lamp test	Yes; automatically when switching on
<b>EMC</b>	
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
<b>Degree and class of protection</b>	
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
<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>	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• cULus Class I Zone 1	No
• cULus Class I Zone 2, Division 2	Yes
• FM Class I Division 2	Yes
<b>Marine approval</b>	
• 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
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• min.	0 °C
• max.	55 °C
<b>Operation (vertical installation)</b>	
— For vertical installation, min.	0 °C
— For vertical installation, max.	55 °C
<b>Operation (max. tilt angle)</b>	
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, max.	45 °C
<b>Operation (vertical installation, portrait format)</b>	
— For vertical installation, min.	0 °C
— For vertical installation, max.	55 °C
<b>Operation (max. tilt angle, portrait format)</b>	
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, max.	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 / header</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; 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	67.7 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	129.7 mm
Overall depth	49 mm; Incl. angled SIMATIC Ethernet connector

### Weights

Weight (without packaging)	280 g
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### Classifications

	Version	Classification
eClass	14	27-33-02-04
eClass	12	27-33-02-04
eClass	9.1	27-33-02-04
eClass	9	27-33-02-04
eClass	8	27-24-23-05
eClass	7.1	27-24-23-05
eClass	6	27-24-23-05
ETIM	9	EC001415
ETIM	8	EC001415
ETIM	7	EC001415
IDEA	4	5266
UNSPSC	15	39-12-22-21

### Approvals / Certificates

#### General Product Approval

EMV



[KC](#)



#### For use in hazardous locations

[EM](#)



[CCC-Ex](#)

[EM](#)



#### For use in hazardous locations

#### Functional Safety

#### Marine / Shipping



[Miscellaneous](#)

[Type Examination Certificate](#)



#### Marine / Shipping



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)



**other** | **Industrial Communication**

[PROFINET](#)

[PROFIsafe](#)

[PROFINET](#)

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