



SIMATIC HMI KP8F PN, Key Panel, 8 short-stroke switches with multi-colored LEDs, PROFINET interfaces with PROFI-safe; 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"> Membrane keyboard <ul style="list-style-type: none"> — user-definable label membrane keys Function keys <ul style="list-style-type: none"> — Number of function keys Short-stroke keys <ul style="list-style-type: none"> — Number of short-stroke keys 	Yes 8 8
Expansions for operator control of the process	
<ul style="list-style-type: none"> DP direct LEDs (LEDs as S7 output I/O) Number of color modes for LED Direct keys (keys as S7 input I/O) 	8; Adjustable brightness 5; red, green, blue, yellow, white 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
Type of output	
LED colors	
<ul style="list-style-type: none"> red yellow green 	Yes Yes Yes

• white	Yes
• blue	Yes
Digital inputs	
Number of digital inputs	8; Total inputs and outputs max. 8 and 1x SIL 2 or 2x SIL 3
Input voltage	
• Rated value (DC)	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
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; 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
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	

<ul style="list-style-type: none"> • Limit class A, for use in industrial areas • Limit class B, for use in residential areas 	<p>Yes; Group 1, measured at a distance of 10 m</p> <p>No</p>
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
<ul style="list-style-type: none"> • Enclosure Type 4 at the front • Enclosure Type 4x at the front 	<p>No</p> <p>Yes; Incl. NEMA12</p>
Standards, approvals, certificates	
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
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 	<p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p>
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) 	<p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p>
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> • min. • max. 	<p>0 °C</p> <p>55 °C</p>
Operation (vertical installation)	
<ul style="list-style-type: none"> — For vertical installation, min. — For vertical installation, max. 	<p>0 °C</p> <p>55 °C</p>
Operation (max. tilt angle)	
<ul style="list-style-type: none"> — At maximum tilt angle, min. — At maximum tilt angle, max. 	<p>0 °C</p> <p>45 °C</p>
Operation (vertical installation, portrait format)	
<ul style="list-style-type: none"> — For vertical installation, min. — For vertical installation, max. 	<p>0 °C</p> <p>55 °C</p>
Operation (max. tilt angle, portrait format)	
<ul style="list-style-type: none"> — At maximum tilt angle, min. — At maximum tilt angle, max. 	<p>0 °C</p> <p>45 °C</p>
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> • min. • max. 	<p>-20 °C</p> <p>60 °C</p>
Relative humidity	
<ul style="list-style-type: none"> • Operation, max. 	95 %; no condensation
configuration / header	
Configuration software	
<ul style="list-style-type: none"> • STEP 7 Basic (TIA Portal) • STEP 7 Professional (TIA Portal) 	<p>Yes</p> <p>Yes</p>
Functionality under WinCC (TIA Portal)	
Process coupling	
<ul style="list-style-type: none"> • S7-1200 • S7-1500 	<p>Yes; with ET 200pro CPU and ET 200S CPU</p> <p>Yes</p>

• 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	68 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	129 mm
Overall depth	49 mm; Incl. angled SIMATIC Ethernet connector

Weights

Weight (without packaging)	280 g
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last modified: 3/2/2021 