



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 	Yes

• yellow	Yes
• green	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 	Yes; Group 1, measured at a distance of 10 m No
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 	No Yes; Incl. NEMA12
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 	Yes Yes No Yes Yes
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) 	No No No No No No No
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> min. max. 	0 °C 55 °C
Operation (vertical installation)	
<ul style="list-style-type: none"> For vertical installation, min. For vertical installation, max. 	0 °C 55 °C
Operation (max. tilt angle)	
<ul style="list-style-type: none"> At maximum tilt angle, min. At maximum tilt angle, min. 	0 °C 45 °C
Operation (vertical installation, portrait format)	
<ul style="list-style-type: none"> For vertical installation, min. For vertical installation, max. 	0 °C 55 °C
Operation (max. tilt angle, portrait format)	
<ul style="list-style-type: none"> At maximum tilt angle, min. At maximum tilt angle, min. 	0 °C 45 °C
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> min. max. 	-20 °C 60 °C
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) 	Yes 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) 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 