

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

- | | |
|---|------------------------------|
| <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 | <p>Yes</p> <p>8</p> <p>8</p> |
|---|------------------------------|

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
-----------------------------------	-------

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)
--------------------------	--------------------------------------

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	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
Enclosure Type 4 at the front	No
Enclosure Type 4x at the front	Yes; Incl. NEMA12
IP (rear)	IP20

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	
• 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

Marine approval	
• 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

Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
• Operation (vertical installation)	
— For vertical installation, min.	0 °C
— For vertical installation, max.	55 °C
• Operation (max. tilt angle)	
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, min.	45 °C
• Operation (vertical installation, portrait format)	
— For vertical installation, min.	0 °C
— For vertical installation, max.	55 °C
• Operation (max. tilt angle, portrait format)	
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, min.	45 °C

Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	60 °C

Relative humidity	
• Operation, max.	95 %; no condensation

Configuration

Configuration software	
• STEP 7 Basic (TIA Portal)	Yes
• STEP 7 Professional (TIA Portal)	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; 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

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	270 g
--------------------------	-------

last modified: 04/06/2019