Data sheet

SIMATIC HMI KP8 PN Key Panel, 8 short-stroke switches with multicolored 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	Mounting clip
Mounting position	vertical

Front mounting Rail mounting No Mounting in portrait format possible Mounting in portrait format possible Mounting in inadscape in inadscape in inadscape Mounting in inadscape format possible Mounting in inadscape in	Rack mounting	No
Wall mounting/direct mounting Mounting in portrait format possible Mounting in portrait format possible maximum permissible angle of inclination without external ventilation Number of slots for command devices and signaling units Supply voltage Type of output LED colors • red • yellow • green • white • blue Digital inputs Number of digital inputs Input voltage • Rated value (DC) Polital outputs Number of digital outputs Short-circuit protection Switching capacity of the outputs • with resistive load, max. Output voltage • Rated value (DC) Total current per group, max. Interfaces	Front mounting	Yes; Compatible with Extension Units dimensions
Mounting in portrait format possible Mounting in landscape format possible maximum permissible angle of inclination without external ventilation Number of slots for command devices and signaling units Supply voltage Type of supply voltage Rated value (DC) Permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) permissible range with the publication of supper limit (DC) permissible range with the publication of supper limit (DC) permissible range with the publication of supper limit (DC) permissible range with the publication of supper limit (DC) permissible range with the publication of supper limit (DC) permissible range with the publication of supper limit (DC) permissible range with the publication of supper limit (DC) permissible range with the publication of supper limit (DC) permissible range with the publication of supper limit (DC) permissible range with the publication of supper limit (DC) permissible range with the supper limit (DC) permissible range with supper limit (DC) permissible range with the supper limit (DC) permissible	Rail mounting	No
Mounting in landscape format possible maximum permissible angle of inclination without external ventilation Number of slots for command devices and signaling units Supply voltage Type of supply voltage Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) 28.8 V Input current Current consumption (rated value) Ves yes yellow green white yes white blue Ves Digital inputs Number of digital inputs Number of digital outputs Short-circuit protection Passible range and the supply solution Switching capacity of the outputs with resistive load, max. Output voltage Rated value (DC) 24 V; Non-isolated Interfaces Interfaces Interfaces Interfaces Interfaces Veurent per channel, max. Current per channel, max. Current per group, max. Interfaces	Wall mounting/direct mounting	No
maximum permissible angle of inclination without external ventilation Number of slots for command devices and signaling units Supply voltage Type of supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Input current Current consumption (rated value) Pere of output LED colors Pere of uplow Pes Pes Pes Pes Pes Pes Pes Pe	Mounting in portrait format possible	Yes
external ventilation Number of slots for command devices and signaling units Supply voltage Type of supply voltage Rated value (DC) Permissible range, lower limit (DC) permissible range, upper limit (DC) 28.8 V Input current Current consumption (rated value) Ves perd yes yellow yes green yes white blue Ves Digital inputs Number of digital inputs Number of digital inputs Rated value (DC) 24 V Digital outputs Number of digital outputs Stort-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 Interfaces	Mounting in landscape format possible	Yes
Units Supply voltage Type of supply voltage Rated value (DC) Rated value (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Input current Current consumption (rated value) Unit current Current consumption (rated value) Type of output LED colors Pere Yes Pere Yes Pere Yes Pere Pere Yes Pere Pere Pere Pere Pere Pere Pere Pere	_	30°; To the front/rear
Type of supply voltage Rated value (DC) Rated value (DC) Rated value (DC) Permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) 28.8 V Input current Current consumption (rated value) 10.3 A Type of output LED colors red yes yellow green Yes white blue Pes blue Pes Digital inputs Number of digital inputs Number of digital outputs Rated value (DC) Pigital outputs Short-circuit protection Yes with resistive load, max. Output voltage • Rated value (DC) 24 V; Non-isolated Total current of the outputs • Current per group, max. 100 mA Interfaces		0
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Input current Current consumption (rated value) Type of output LED colors • red • yellow • green • white • blue Pyes • blue Pyes Digital inputs Number of digital inputs Input voltage • Rated value (DC) Positial outputs Short-circuit protection Switching capacity of the outputs • with resistive load, max. Output voltage • Rated value (DC) Pyes Switching capacity of the outputs • with resistive load, max. 100 mA Output voltage • Rated value (DC) Total current of the outputs • Current per channel, max. • Current per group, max. Interfaces	permissible range, lower limit (DC)	20.4 V
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Current consumption (rated value) Itype of output LED colors I red I yes I	Input current	
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Number of digital inputs Rated value (DC) 24 V	• blue	Yes
Input voltage • Rated value (DC) 24 V Digital outputs Number of digital outputs Short-circuit protection Switching capacity of the outputs • with resistive load, max. Output voltage • Rated value (DC) Total current of the outputs • Current per channel, max. • Current per group, max. Interfaces	Digital inputs	
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Digital outputs Number of digital outputs Short-circuit protection Yes Switching capacity of the outputs • with resistive load, max. Output voltage • Rated value (DC) Total current of the outputs • Current per channel, max. • Current per group, max. Interfaces	Input voltage	
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Number of digital outputs Short-circuit protection Yes Switching capacity of the outputs • with resistive load, max. Output voltage • Rated value (DC) Total current of the outputs • Current per channel, max. • Current per group, max. Interfaces	Digital outputs	
Switching capacity of the outputs • with resistive load, max. Output voltage • Rated value (DC) Total current of the outputs • Current per channel, max. • Current per group, max. Interfaces		8; Max. 8 inputs and outputs (total)
 with resistive load, max. Output voltage Rated value (DC) Total current of the outputs Current per channel, max. Current per group, max. Interfaces 	Short-circuit protection	Yes
Output voltage • Rated value (DC) Total current of the outputs • Current per channel, max. • Current per group, max. 100 mA 100 mA 100 mA	Switching capacity of the outputs	
 Rated value (DC) Total current of the outputs Current per channel, max. Current per group, max. 100 mA 800 mA Interfaces	• with resistive load, max.	100 mA
Total current of the outputs • Current per channel, max. • Current per group, max. 100 mA 800 mA Interfaces	Output voltage	
 Current per channel, max. Current per group, max. 800 mA Interfaces	Rated value (DC)	24 V; Non-isolated
Current per group, max. 800 mA Interfaces	Total current of the outputs	
Interfaces	Current per channel, max.	100 mA
	• Current per group, max.	800 mA
Number of industrial Ethernet interfaces 2; For the construction of lines and rings without external switch	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	
Media redundancy	
— 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
	111
Test commissioning functions	Voc: During quitab on
Illuminant test Key and signal lamp test	Yes; During switch on Yes; automatically when switching on
rvey and signal family test	res, automatically when switching on
EMC	
Emission of radio interference acc. to EN 55 011	Voca Crown 1 management at a distance of 40 m
 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)		
 Enclosure Type 4 at the front 	No	
 Enclosure Type 4x at the front 	Yes; Incl. NEMA12	
Standards, approvals, certificates		
CE mark	Yes	
cULus	Yes	
RCM (formerly C-TICK)	Yes	
KC approval	Yes	
EAC (formerly Gost-R)	Yes	
Suitable for safety functions	Yes	
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	
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• Operation (max. tilt angle, portrait format)

At maximum tilt angle, min.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

• \$7-1500 Yes • \$7-200 No

• S7-300/400 Yes; with F-CPU: STEP 7 V11 SP1 (or higher) and Safety V11 (or

No

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)

Mitsubishi (MC TCP/IP)
 No

• OMRON (FINS TCP)

OMRON (LINK/Multilink)
 No

Modicon (Modbus TCP/IP)
 No

Modicon (Modbus)

Mechanics/material

Enclosure material (front)

• Mitsubishi (FX)

• 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

08/19/2020 last modified: