SIEMENS

Data sheet

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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
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	
• 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	No
PROFIBUS	No
EtherNet/IP	No
MPI	No
AS-Interface	No
EIB/KNX	No
Protocols (Ethernet)	
• TCP/IP	No
Redundancy mode	
Media redundancy	Mar.
— MRP	Yes
Further protocols	No
 AS-Interface Safety at Work CAN 	No No
	No
 Data-Highway DeviceNet 	No
DeviceNet 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	
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° 0
• max.	55 °C
Operation (vertical installation)	
 For vertical installation, min. 	0° 0
 For vertical installation, max. 	55 °C
Operation (max. tilt angle)	
— At maximum tilt angle, min.	0° 0
— At maximum tilt angle, min.	45 °C
Operation (vertical installation, portrait format)	
— For vertical installation, min.	0° 0
— 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	00.40
• min.	-20 °C
• max.	60 °C
Relative humidity	QE %: no condensation
Operation, max.	95 %; no condensation
configuration / header	
Configuration software	Vac
STEP 7 Basic (TIA Portal)	Yes
STEP 7 Professional (TIA Portal)	Yes
Functionality under WinCC (TIA Portal)	
Process coupling	
• \$7-1200	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)

• WinAC	No Yes No
	No
SINUMERIK	
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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