SIEMENS

SIMATIC HMI KP8F PN, KEY PANEL, 8 SHORT-STROKE KEYS WITH MULTI-COLOR LED'S, PROFINET INTERFACE WITH PROFISAFE, 8 DI/DO AND 2 SAFETY DI PINS, 24V DC LOOP THROUGH CONFIGURABLE WITH STEP7 V5.5 AND LATER

Product type designation	
Control elements	
With parameterizable keys	Yes
With key and signal lamp test	Yes; Automatically when switching on
Keyboard	
● Membrane keyboard	
— freely inscribable membrane keys	Yes
● 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
● Number of color modes for LED	5; Red, green, blue, yellow, white
● Direct keys (keys as S7 input I/O)	8
Installation type/mounting	
Rack mounting possible	No
Front installation possible	Yes; Compatible with extension unit dimensions
Type of fitting, rail mounting	No
Wall mounting/direct mounting possible	No
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
Mounting position	vertical
maximum permissible angle of inclination without external ventilation	30°; To the front/rear
Mounting technology	Clamp terminals

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)
Load "resistive"	100 mA
Number of additional outputs	
• Output current (per output), max.	100 mA
• Total current (per group), max.	800 mA
• short-circuit protection	Yes
Output voltage	
• Rated value (DC)	24 V; Non-isolated

Interfaces

PROFINET IO	
• Number of PROFINET interfaces	2; Incl. switch
Industrial Ethernet	
• Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch
• Industrial Ethernet status LED	2; Per port
• Number of ports of the integrated switch	2; Per port

Protocols

PROFINET	Yes; also 3rd party PLC
PROFINET IO	Yes

IRT	Yes
MRP	Yes
PROFINET CBA	No
Supports protocol for PROFIsafe	Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor
PROFIBUS	No
MPI	No
AS-Interface	No
Protocols (Ethernet)	
• TCP/IP	No
Further protocols	
• Supports protocol for AS-Interface Safety at Work	No
• Supports protocol for SafetyBUS p	No
• CAN	No
• INTERBUS	No
• Supports protocol for INTERBUS-Safety	No
• EIB/KNX	No
• MODBUS	No
• Data highway	No
• DeviceNet	No
• Supports protocol for DeviceNet Safety	No
• Supports protocol for EtherNet/IP	No
• Local Operating Network	No
• SUCOnet	No
• Foundation Fieldbus	No
• SERCOS	No
• other bus systems	No

Test commissioning functions	
Illuminant test	Yes; During switch on
Pushbutton and lamp test	Yes; During switch 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
KC approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
Suitable for safety functions	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

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; Available soon

Ambient conditions

Ambient temperature in 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.	45 °C
● Operation (max. tilt angle, portrait format)	
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, min.	45 °C

Storage/transport temperature	
● Min.	-20 °C
● max.	60 °C

Relative humidity	
● Operation, max.	95 %

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; with F-CPU: STEP 7 V11 SP1 (or higher) and Safety V11 (or higher) or SIMATIC STEP 7 Basic V11 (or higher)
• LOGO!	No
• Win AC	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

Type of housing (front)

• plastic	Yes
• aluminum	No
• Stainless steel	No

Lifetime, typ.

• 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
Device depth	49 mm; Incl. angled SIMATIC Ethernet connector

Weights

Without packaging	280 g
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