



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 yellow green | Yes Yes 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 | <p>Yes; Group 1, measured at a distance of 10 m</p> <p>No</p> |
| 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 | <p>No</p> <p>Yes; Incl. NEMA12</p> |
| 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 | <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p> |
| 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) | <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> |
| Ambient conditions | |
| Ambient temperature during operation | |
| <ul style="list-style-type: none"> • min. • max. | <p>0 °C</p> <p>55 °C</p> |
| Operation (vertical installation) | |
| <ul style="list-style-type: none"> — For vertical installation, min. — For vertical installation, max. | <p>0 °C</p> <p>55 °C</p> |
| Operation (max. tilt angle) | |
| <ul style="list-style-type: none"> — At maximum tilt angle, min. — At maximum tilt angle, max. | <p>0 °C</p> <p>45 °C</p> |
| Operation (vertical installation, portrait format) | |
| <ul style="list-style-type: none"> — For vertical installation, min. — For vertical installation, max. | <p>0 °C</p> <p>55 °C</p> |
| Operation (max. tilt angle, portrait format) | |
| <ul style="list-style-type: none"> — At maximum tilt angle, min. — At maximum tilt angle, max. | <p>0 °C</p> <p>45 °C</p> |
| Ambient temperature during storage/transportation | |
| <ul style="list-style-type: none"> • min. • max. | <p>-20 °C</p> <p>60 °C</p> |
| 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) | <p>Yes</p> <p>Yes</p> |
| Functionality under WinCC (TIA Portal) | |
| Process coupling | |
| <ul style="list-style-type: none"> • S7-1200 • S7-1500 | <p>Yes; with ET 200pro CPU and ET 200S CPU</p> <p>Yes</p> |

| | |
|-------------------------------|--|
| • 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 |
|----------------------------|-------|

last modified: 3/2/2021 