

Operator panels

Basic HMI

Key Panels

Overview

SIMATIC HMI Key Panels

The Key Panels, PROFINET successors to the PROFIBUS-based Pushbutton Panels, are operator panels which are ready-to-run without any configuration effort at all.

Alternatives to individually wired long-stroke keys. They are designed for direct operator control of the machine.

Key Panels provide many basic functions for direct operator control and monitoring instead of machine operator control, a cost-effective, versatile and space-saving combination, and they reduce configuration and installation costs to a minimum. Furthermore, additional actuators and sensors can also be optionally connected directly on the rear of the devices. For applications directly next to a monitor, a very slim KP8 option is available (KP8 PN LX with 8 keys on top of each other).

The Key Panels can be used directly in line and ring topologies thanks to an integrated switch and two RJ45 PN sockets.

In addition there are two fully configured IP65 installation enclosures for KP8(F) available.

Exact cutouts included. Even supply cables with plugs can easily be connected in IP65 without any drilling or milling. These ready-made enclosures can be used as small local operator stations.

They can be found under Accessories -> Fixing elements, and depending on the option can come supplied with features such as emergency off pushbuttons.

- SIMATIC HMI blank front design
- SIMATIC HMI KP8 PN
- SIMATIC HMI KP8 PN LX
- SIMATIC HMI KP8F PN (shared device with GSD file possible)
- SIMATIC HMI KP32F PN (PROFIsafe can be switched off)
- Installation enclosure KP8 (Accessories -> Fixing elements)
- Installation enclosure KP8F (Accessories -> Fixing elements)

More information is available at

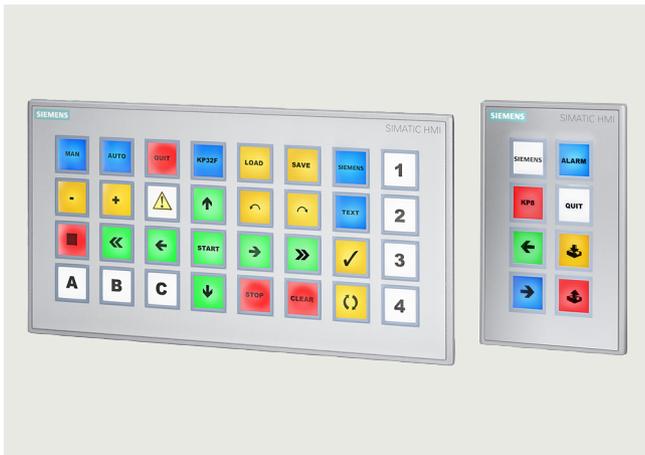
<http://www.siemens.com/key-panels>

Operator panels

Basic HMI
Key Panels

SIMATIC HMI KP8/KP8F/KP32F

Overview



SIMATIC HMI KP8 PN LX, 8 short-stroke keys, long, 1–6 mm sheet thickness, PN interfaces, black neutral design, 8 configurable DI/DQ pins



Key Panel, blank front, at the front, populated



Key Panel, blank front, at the back, not populated

SIMATIC HMI Key Panels

- Optimum operability thanks to large mechanical keys and multi-colored LED backlighting (daylight readable)
- Over 60% time savings for wiring and installation (Plug&Play)
- More than 30% savings in material costs compared to conventional keypad operator panels
- 2 PROFINET ports (incl. switch) already integrated for setting up line and ring topologies
- Freely configurable digital I/Os on the rear for connecting key-operated switches, indicator lights, etc.
- Connection of fail-safe emergency stop buttons or other fail-safe signals with KP8F and KP32F (in SIL2 or SIL3)
- Functionally compatible with all standard PROFINET master CPUs, also non-Siemens
- KP8 PN LX is suitable for direct installation next to monitors
- KP8 and blank front design, also optimized for installation in IPC Extension Units in IP65
- Maximum flexibility due to parameterization
- Blank front design for standardized assembly of flexible operator panels
- Installation enclosure, fully-enclosed IP65, no drilling or milling necessary, KP8(F) not included; for accessories see technical specifications for installation enclosure

Operator panels

Basic HMI

Key Panels

SIMATIC HMI KP8/KP8F/KP32F

Ordering data

Article No.

SIMATIC HMI KP8 PN Key Panel, 8 short-stroke keys with multi-colored LEDs, PROFINET interfaces, 2 x parameterizable with STEP 7 V5.5 or higher SIEMENS Design (4 x 2 pairs of keys)	6AV3688-3AY36-0AX0
SIMATIC HMI KP8 PN LX Neutral design black LX (8 keys on top of each other); Short-stroke keys long, 1-6 mm sheet thickness, PN interfaces, 8 configurable DI/DO pins, 24 V DC can be looped through, parameterizable with STEP 7 V5.5 or higher	6AV2127-1AB00-0LX1
SIMATIC HMI KP8F PN Key Panel, 8 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, parameterizable with STEP 7 V5.5 or higher; 4 additional fail-safe inputs. Can be used as 2 x SIL 2 or 1 x SIL 3 <ul style="list-style-type: none"> • SIEMENS design • As neutral design without Siemens imprint • Blank front design for standard 22.5 mm operator controls, same mounting dimensions as KP8 	6AV3688-3AF37-0AX0 6AV3688-3XY38-3AX0
SIMATIC HMI KP32F PN Key Panel, SIEMENS design; 32 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, parameterizable with STEP 7 V5.5 or higher; including 8 fail-safe inputs. Can be used as 4 x SIL 2 or 2 x SIL 3	6AV3688-3EH47-0AX0
Documentation You can find the Equipment Manual for the Key Panels on the internet at:	http://support.automation.siemens.com/WW/view/en/56652789
Accessories	See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

Technical specifications

Article number	6AV3688-3AY36-0AX0	6AV2127-1AB00-0LX1
	SIMATIC HMI KP8 PN	SIMATIC HMI KP8 PN LX 6mm
General information		
Product type designation	KP8 PN	Key Panel KP8 PN LX (1 ... 6 mm)
Control elements		
With parameterizable keys	Yes	Yes
Keyboard fonts		
<ul style="list-style-type: none"> • Membrane keyboard - user-definable label membrane keys 	Yes	No; possible via adjacent display with L-pattern at key edge
<ul style="list-style-type: none"> • Function keys - Number of function keys 	8	8; 19 x 19 mm per button
<ul style="list-style-type: none"> • Short-stroke keys - Number of short-stroke keys 	8	8
Expansions for operator control of the process		
<ul style="list-style-type: none"> • DP direct LEDs (LEDs as S7 output I/O) 	8; Adjustable brightness	8; Adjustable brightness
<ul style="list-style-type: none"> • Number of color modes for LED 	5; red, green, blue, yellow, white	5; red, green, blue, yellow, white
<ul style="list-style-type: none"> • Direct keys (keys as S7 input I/O) 	8	8
Installation type/mounting		
Mounting type	Clamp terminals	clamp fastening with additional mounting clips
Front mounting	Yes; Compatible with Extension Units dimensions	Yes; mounting clip - Torx T20 tighten to 0.2 Nm; enclosure - Torx T10 tighten to 0.2 Nm
Rail mounting	No	No
Mounting in portrait format possible	Yes	Yes
Mounting in landscape format possible	Yes	Yes
maximum permissible angle of inclination without external ventilation	30°; To the front/rear	30°; To the front/rear
Number of slots for command devices and signaling units	0	0
Supply voltage		
Rated value (DC)	24 V; 24 V looped through at connector, no interruption on pulling	
Digital inputs		
Number of digital inputs	8; Max. 8 inputs and outputs (total)	
Input voltage		
<ul style="list-style-type: none"> • Rated value (DC) 	24 V	24 V

2

Operator panels

Basic HMI
Key Panels

SIMATIC HMI KP8/KP8F/KP32F

Technical specifications

Article number	6AV3688-3AY36-0AX0 SIMATIC HMI KP8 PN	6AV2127-1AB00-0LX1 SIMATIC HMI KP8 PN LX 6mm
Digital outputs		
Number of digital outputs	8; Max. 8 inputs and outputs (total)	
Short-circuit protection	Yes	Yes
Switching capacity of the outputs		
• with resistive load, max.	100 mA	100 mA
Output voltage		
• Rated value (DC)	24 V; Non-isolated	24 V; Non-isolated
Total current of the outputs		
• Current per channel, max.	100 mA	100 mA
• Current per group, max.	800 mA	800 mA
Interfaces		
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch	2; Incl. switch
Industrial Ethernet		
• Number of ports of the integrated switch	2; Per port	2; Per port
Protocols		
PROFINET	Yes; also 3rd party PLC	Yes; also 3rd party PLC
PROFINET CBA	No	No
IRT	Yes	Yes
PROFIsafe	No	No
PROFIBUS	No	No
Redundancy mode		
Media redundancy		
- MRP	Yes	Yes
Test commissioning functions		
Illuminant test	Yes; During switch on	Yes; During switch on
Key and signal lamp test	Yes; automatically when switching on	Yes; automatically when switching on
Degree and class of protection		
IP (at the front)	IP65	IP64
IP (rear)	IP20	IP20
NEMA (front)		
• Enclosure Type 4x at the front	Yes; Incl. NEMA12	No
• Enclosure Type 12 at the front		No

Article number	6AV3688-3AY36-0AX0 SIMATIC HMI KP8 PN	6AV2127-1AB00-0LX1 SIMATIC HMI KP8 PN LX 6mm
Standards, approvals, certificates		
CE mark	Yes	Yes
CSA approval		No
UL approval		No
cULus	Yes	No
FM approval		No
RCM (formerly C-TICK)	Yes	No
KC approval	Yes	No
EAC (formerly Gost-R)		No
CCC		No; not necessary
Suitable for safety functions	No	No
Marine approval		No
Use in hazardous areas		
• ATEX Zone 2	Yes	No
• ATEX Zone 22	Yes	No
• cULus Class I Zone 2, Division 2	Yes	No
• FM Class I Division 2	Yes	No
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	55 °C	60 °C
Relative humidity		
• Operation, max.	95 %; no condensation	95 %; no condensation
Configuration		
Configuration software		
• STEP 7 Basic (TIA Portal)	Yes	Yes
• STEP 7 Professional (TIA Portal)	Yes	Yes
Functionality under WinCC (TIA Portal)		
Process coupling		
• S7-1200	Yes; with ET 200pro CPU and ET 200S CPU	Yes; with ET 200pro CPU and ET 200S CPU
• S7-1500	Yes	Yes
• S7-200	No	No
• S7-300/400	Yes; STEP 7 or SIMATIC STEP 7 Basic V11 or higher	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	No
• WinAC	Yes	Yes
• SIMOTION	No	No
• Allen Bradley (EtherNet/IP)	No	No
• Allen Bradley (DF1)	No	No
• Mitsubishi (MC TCP/IP)	No	No
• Mitsubishi (FX)	No	No
• OMRON (FINS TCP)	No	No
• OMRON (LINK/Multilink)	No	No
• Modicon (Modbus TCP/IP)	No	No
• Modicon (Modbus)	No	No

2

Operator panels

Basic HMI
Key Panels

SIMATIC HMI KP8/KP8F/KP32F

Technical specifications

Article number	6AV3688-3AY36-0AX0 SIMATIC HMI KP8 PN	6AV2127-1AB00-0LX1 SIMATIC HMI KP8 PN LX 6mm
Mechanics/material		
Enclosure material (front)		Bayblend FR3010 enclosure, Autotex F150 front membrane
• Plastic	Yes	Yes; neutral enclosure, black RAL 9005
• Aluminum	No	No
Service life		
• Short-stroke keys (in switching cycles)	1 500 000	1 500 000
• LEDs (ON period)	100 %	100 %
Dimensions		
Width of the housing front	98 mm	40.7 mm
Height of housing front	155 mm	252.4 mm
Mounting cutout, width	67.7 mm; Max. thickness of mounting plate 2 - 6 mm	24 mm; tolerances +0.5 mm, not including connection plug (depending on connector type)
Mounting cutout, height	129.7 mm	244 mm; tolerances +0.5 mm, not including connection plug (depending on connector type)
Overall depth	49 mm; Incl. angled SIMATIC Ethernet connector	68.15 mm; mounting plate thickness max. 1 ... 6 mm
Weights		
Weight (without packaging)	270 g	297 g
Other		
Merchandise		Yes; KS28603
Manufacturer name		GETT Gerätetechnik GmbH
Manufacturer's address		Mittlerer Ring 1, 08233 Treuen (Vogtland), Germany
Note:		Key Panel must be configured as 6AV3688-3AY36-0AX0 Key Panel, compatible with 6AV2127-1AB00-0LX0

Article number	6AV3688-3AF37-0AX0 SIMATIC HMI KP8F PN
General information	
Product type designation	KP8F 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
Front mounting	Yes; Compatible with Extension Units dimensions
Rail 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	
Rated value (DC)	24 V; 24 V can be looped through connector, interrupted when pulled
Digital inputs	
Number of digital inputs	8; total inputs and outputs max. 8 and 2x SIL 2 or 1x SIL 3
Input voltage	
• Rated value (DC)	24 V

2

Operator panels

Basic HMI Key Panels

SIMATIC HMI KP8/KP8F/KP32F

Technical specifications

Article number	6AV3688-3AF37-0AX0 SIMATIC HMI KP8F PN
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	
• Number of ports of the integrated switch	2; Per port
Protocols	
PROFINET	Yes; also 3rd party PLC
PROFINET CBA	No
IRT	Yes
PROFIsafe	Yes; 1x SIL 3 (two-channel) or 2x SIL 2 (single-channel) emergency stop sensors
PROFIBUS	No
Redundancy mode	
Media redundancy	
- MRP	Yes
Test commissioning functions	
Illuminant test	Yes; During switch on
Key and signal lamp test	Yes; automatically when switching on
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• 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
CCC	No; not necessary
Suitable for safety functions	Yes
Use in hazardous areas	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• cULus Class I Zone 2, Division 2	Yes
• FM Class I Division 2	Yes

Article number	6AV3688-3AF37-0AX0 SIMATIC HMI KP8F PN
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Relative humidity	
• Operation, max.	95 %; no condensation
configuration / header	
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
• WinAC	Yes
• 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
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	67.7 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	129.7 mm
Overall depth	49 mm; Incl. angled SIMATIC Ethernet connector
Weights	
Weight (without packaging)	280 g

Operator panels

Basic HMI
Key Panels

SIMATIC HMI KP8/KP8F/KP32F

Technical specifications

Article number	6AV3688-3EH47-0AX0 SIMATIC HMI KP32F PN
General information	
Product type designation	KP32F PN
Control elements	
With parameterizable keys	Yes
Keyboard fonts	
• Membrane keyboard	
- user-definable label membrane keys	Yes
• Function keys	
- Number of function keys	32
• Short-stroke keys	
- Number of short-stroke keys	32
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)	32
Installation type/mounting	
Mounting type	Mounting clip
Front mounting	Yes
Rail 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	
Rated value (DC)	24 V; 24 V looped through at connector, no interruption on pulling
Digital inputs	
Number of digital inputs	32; Total inputs and outputs max. 32 and 2x SIL 2 or 4x SIL 3
Input voltage	
• Rated value (DC)	24 V
Digital outputs	
Number of digital outputs	16; Max. 32 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

Article number	6AV3688-3EH47-0AX0 SIMATIC HMI KP32F PN
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	
• Number of ports of the integrated switch	2; Per port
Protocols	
PROFINET	Yes; incl. shared device, 3rd party PLC
PROFINET CBA	No
IRT	Yes
PROFIsafe	Yes; 2x SIL 3 (two-channel) or 4x SIL 2 (single-channel) emergency stop sensors
PROFIBUS	No
Redundancy mode	
Media redundancy	
- MRP	Yes
Test commissioning functions	
Illuminant test	Yes; During switch on
Key and signal lamp test	Yes; automatically when switching on
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• 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
CCC	No; not necessary
Suitable for safety functions	Yes
Use in hazardous areas	
• ATEX Zone 2	No
• ATEX Zone 22	No
• cULus Class I Zone 2, Division 2	No
• FM Class I Division 2	No
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Relative humidity	
• Operation, max.	95 %; no condensation
Configuration	
Configuration software	
• STEP 7 Basic (TIA Portal)	Yes
• STEP 7 Professional (TIA Portal)	Yes

2

Operator panels

Basic HMI

Key Panels

SIMATIC HMI KP8/KP8F/KP32F

Technical specifications

Article number	6AV3688-3EH47-0AX0 SIMATIC HMI KP32F PN
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), without F-CPU STEP 7 or SIMATIC STEP 7 Basic V11 (or higher)
• LOGO!	No
• WinAC	Yes
• 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	No
• Aluminum	Yes
Service life	
• Short-stroke keys (in switching cycles)	1 500 000
• LEDs (ON period)	100 %
Dimensions	
Width of the housing front	295 mm
Height of housing front	155 mm
Mounting cutout, width	277 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	137 mm
Overall depth	37 mm; Incl. angled SIMATIC Ethernet connector
Weights	
Weight (without packaging)	1 220 g

Article number	6AV3688-3XY38-3AX0 KP8 Design blank Front
General information	
Product type designation	Empty front design
Installation type/mounting	
Mounting type	Clamp terminals
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	180°; To the front/rear
Number of slots for command devices and signaling units	5; Max. 5 possible
Supply voltage	
Design of the power supply	external
Interfaces	
Number of industrial Ethernet interfaces	0
Number of PROFINET interfaces	0
Number of USB interfaces	0
Protocols	
PROFINET	No
PROFIsafe	No
Redundancy mode	
Media redundancy	
- MRP	No
Test commissioning functions	
Key and signal lamp test	No
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4x at the front	No
Standards, approvals, certificates	
CE mark	Yes
cULus	No
RCM (formerly C-TICK)	No
KC approval	No
Use in hazardous areas	
• ATEX Zone 2	No
• ATEX Zone 22	No
• cULus Class I Zone 1	No
• cULus Class I Zone 2, Division 2	No
• FM Class I Division 2	No
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

Operator panels

Basic HMI

Key Panels

SIMATIC HMI KP8/KP8F/KP32F

Technical specifications

Article number	6AV3688-3XY38-3AX0 KP8 Design blank Front
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Relative humidity	
• Operation, max.	95 %
Mechanics/material	
Enclosure material (front)	
• Plastic	No
• Aluminum	Yes
• Stainless steel	No
Dimensions	
Width	98 mm
Height	155 mm
Mounting cutout, width	68 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	129 mm
Overall depth	49 mm
Weights	
Weight (without packaging)	240 g
Other	
Merchandise	Yes
Manufacturer name	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany

More information

More information is available on the internet at <http://www.siemens.com/key-panels>

For accessories see "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

Note:

Do you need a specific modification or option for the products described here? Then look up "Customized Automation", where you will find information about additional sector-specific products that can be ordered as well as about options for customer-specific modification and adaptation.

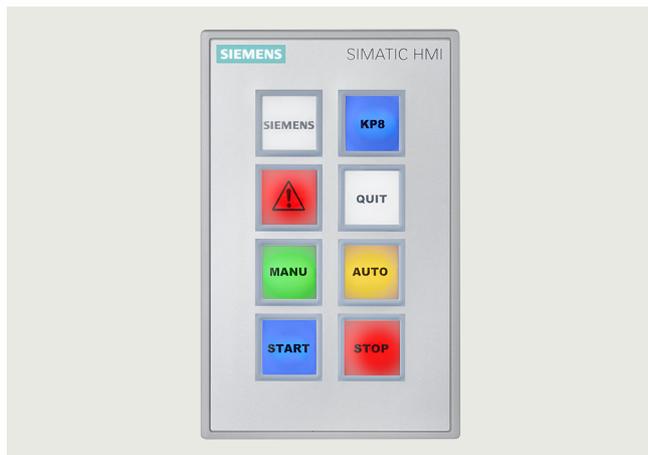
2

Operator panels

Basic HMI
Key Panels

SIPLUS HMI KP8/KP8F/KP32F

Overview



SIPLUS HMI KP8 PN



Blank front

SIPLUS HMI Key Panels

- Optimum operability thanks to large mechanical keys and multi-colored LED backlighting (daylight readable)
- Over 60% time savings for wiring and installation (Plug&Play)
- More than 30% savings in material costs compared to conventional keypad operator panels
- 2 PROFINET ports (incl. switch) already integrated for setting up line and ring topologies
- Freely configurable digital I/Os on the rear for connecting key-operated switches, indicator lights, etc.
- Connection of fail-safe emergency stop buttons or other fail-safe signals with KP8F and KP32F (in SIL 2 or SIL 3)
- Functionally compatible with all standard PROFINET master CPUs, also from other manufacturers
- KP8 and blank front design, also optimized for installation in IPC Extension Units in IP65
- Maximum flexibility due to parameterization
- Blank front design for standardized assembly of flexible operator panels

Note:

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

Ordering data

Article No.

SIPLUS HMI KP8 PN

6AG1688-3AY36-2AX0

(extended temperature range and exposure to environmental substances)

Key Panel, 8 short-stroke keys with multi-colored LEDs, PROFINET interfaces, 2 x parameterizable with STEP 7 V5.5 or higher

SIPLUS HMI KP8F PN

6AG1688-3AF37-2AX0

(extended temperature range and exposure to environmental substances)

Key Panel, 8 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, parameterizable with STEP 7 V5.5 or higher; 4 additional fail-safe inputs. Can be used as 2 x SIL 2 or 1 x SIL 3

SIPLUS HMI KP32F PN

6AG1688-3EH47-2AX0

(extended temperature range and exposure to environmental substances)

Key Panel, 32 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, parameterizable with STEP 7 V5.5 or higher; including 8 fail-safe inputs. Can be used as 4 x SIL 2 or 2 x SIL 3

Blank front design

(Exposure to environmental substances)

For standard 22.5 mm operator controls, same mounting dimensions as KP8

6AG1688-3XY38-2AX0

Documentation

You can find the Equipment Manual for the Key Panels on the Internet at:

<http://support.automation.siemens.com/WW/view/en/56652789>

Accessories

See SIMATIC HMI accessories

Operator panels

Basic HMI
Key Panels

SIPLUS HMI KP8/KP8F/KP32F

Technical specifications

Article number	6AG1688-3AY36-2AX0 SIPLUS HMI KP8 PN	6AG1688-3AF37-2AX0 SIPLUS HMI KP8F PN	6AG1688-3EH47-2AX0 SIPLUS HMI KP32F PN
General information			
Product type designation	KP8 PN	KP8F PN	KP32F PN
Ambient conditions			
Ambient temperature during operation			
• min.	-40 °C; = Tmin; Startup @ -25 °C	-20 °C; = Tmin (incl. condensation/frost)	-20 °C; = Tmin (incl. condensation/frost)
• max.	60 °C; = Tmax	55 °C; = Tmax	55 °C; = Tmax
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	5 000 m	2 000 m	2 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)
Relative humidity			
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
Resistance			
Coolants and lubricants			
- Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems			
- to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
- to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
- to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea			
- to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)
- to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
- to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology			
- Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)		
- Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)		
Remark			
- Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating			
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A