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SIMATIC HMI KP8/KP8F/KP32F

Overview

P_ST80_XX_01757
Key Panel, blank front, at the front, populated

P_ST80_XX_01755
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

Benefits

- Less planning and assembly work than in the case of discrete components, thanks to the modular design

- Savings in hardware costs: Distributed I/O, 2 PROFINET connections and I/Os are combined in one device

- Keys and lamps can be labeled in IP65 using a standard printer (black and white or color)

- High flexibility due to freely configurable colors, switch/button function and integrated diagnostics function

- Any key color can be adapted dynamically to the process

- Integrated standard inputs and outputs for actuators and sensors, and each pin can be used as input or output

- Blank front design can be used to reserve space for later system extensions and for easy mounting of standard 22.5 mm operator controls

- Functions and design are optimally matched in the SIMATIC HMI spectrum, e.g. in PRO device Extension Units

- SIL 2/3 safety with the "F" variants, e.g. EMERGENCY STOP can be connected directly

All further details can be viewed in the manual at:
http://support.automation.siemens.com/WW/view/en/56652789

Application

- Ideally suited to most verticals (automotive, F&B to oil & gas) thanks to the smooth and rugged front, even in hazardous areas (see technical specifications)

- For intuitive, fast and very easy operation with minimum wiring

- Language-neutral feedback with multi-color LEDs in the keys, even readable in sunlight

- Extensions possible when built-in, without the need for cutting tools

- Special-purpose machine manufacturing benefits from the high degree of flexibility

Design

SIMATIC HMI Key Panel – Blank front design

- Simple seamless installation with mounting clips

- Rugged design, suitable for harsh industrial environments

- Prepared for installation of 22.5 mm standard components

- Easy installation, or retrofitting during operation, of standard 22.5 mm operator controls

- IP65 installation enclosure for KP8(F); 22.5 mm operator controls partially included

SIMATIC HMI Key Panel – Basic functions

- Smooth front, therefore easy to clean

- Large mechanical illuminated pushbutton units can be programmed as switches or buttons

- Loop-through 24 V DC power supply, no additional terminals required

- Two PROFINET interfaces, perfect for line operation

- Suitable for ring operation thanks to media redundancy protocol (MRP), normal running even when the PROFINET power supply cable is unplugged

- Inputs and outputs on the rear, each pin can be used as an input or an output

- The F variants are also equipped with SIL 2/3 inputs

SIMATIC HMI KP8 PN

- 8 large mechanical illuminated pushbuttons with extremely good tactile feedback, thus also suitable for harsh industrial environments

- 8 freely configurable digital I/Os

- For standard CPUs

SIMATIC HMI KP8 PN LX

- 8 large mechanical illuminated pushbuttons with extremely good tactile feedback, thus also suitable for industrial environments

- Flexible installation

- 8 freely configurable digital I/Os

- For standard CPUs

- 1-to-1 configuring compatible to SIMATIC HMI KP8 PN

SIMATIC HMI KP8F PN

- Additional digital fail-safe inputs for connecting single-channel or 1 x 2-channel sensors, such as emergency stop

- For fail-safe CPUs

SIMATIC HMI KP32F PN

- 32 large mechanical illuminated pushbuttons with extremely good tactile feedback, thus also suitable for harsh industrial environments
- 16 freely configurable digital I/Os
- Additional digital fail-safe inputs for connecting 4 x 1-channel or 2 x 2-channel sensors, such as emergency stop
- For fail-safe and standard CPUs

Demo case

SIMATIC HMI Key Panel – low-cost demo and experiment case.

The case consists of a KP8 PN with a 1211C CPU including demo program, set on a small plexiglas stand ready for use.

- Content:

  - 1x case

  - 1x KP8 PN

  - 1x CPU1211C

  - 1x stand, permanently wired, including program

- Power supply possible with a standard laptop power supply unit (not included in scope of supply)

  Prices and delivery times are available on request

Can be ordered by fax:

Siemens AG, Mr. Michael Christ

Industry Sector, I IA CE SE MF RS FDS

Würzburger Str. 121, 90766 Fürth, Germany

Tel.: +49 911 750-4128 / Fax: +49 911 750-2411

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Technical specifications

Article number	6AV3688-3AY36-0AX0 SIMATIC HMI KP8 PN	6AV2127-1AB00-0LX1 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		
● Membrane keyboard		
— user-definable label membrane keys	Yes	No; possible via adjacent display
● Function keys		with L-pattern at key edge
— Number of function keys	8	8; 19 x 19 mm per button
● Short-stroke keys		
— Number of short-stroke keys	8	8
Expansions for operator control of the process		
● DP direct LEDs (LEDs as S7 output I/O)	8; Adjustable brightness	8; Adjustable brightness
● Number of color modes for LED	5; red, green, blue, yellow, white	5; red, green, blue, yellow, white
● Direct keys (keys as S7 input I/O)	8	8
Installation type/mounting		
Mounting type	Clamp terminals	clamp fastening with additional mounting clips
Mounting position	vertical	Horizontal, vertical
Rack mounting	No	No
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
Wall mounting/direct 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		
Type of supply voltage	DC	DC
Rated value (DC)	24 V; 24 V looped through at connector, no interruption on pulling	24 V; 24 V can be looped through connector, interrupted when pulled
permissible range, lower limit (DC)	20.4 V	20.4 V
permissible range, upper limit (DC)	28.8 V	28.8 V
Input current		
Current consumption (rated value)	0.3 A	0.3 A
Digital inputs		
Number of digital inputs	8; Max. 8 inputs and outputs (total)	8; Max. 8 inputs and outputs (total)
Input voltage		
● Rated value (DC)	24 V	24 V
Digital outputs		
Number of digital outputs	8; Max. 8 inputs and outputs (total)	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		
● Industrial Ethernet status LED	2; Per port	2; Per port
● 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
Article number	**6AV3688-3AY36-0AX0** SIMATIC HMI KP8 PN	**6AV2127-1AB00-0LX1** SIMATIC HMI KP8 PN LX 6mm
Supports protocol for PROFINET IO	Yes	Yes
PROFINET CBA	No	No
IRT	Yes	Yes
PROFIsafe	No	No
PROFIBUS	No	No
EtherNet/IP	No	No
MPI	No	No
AS-Interface	No	No
EIB/KNX	No	No
Protocols (Ethernet)		
● TCP/IP	No	No
Redundancy mode		
Media redundancy		
— MRP	Yes	Yes
Further protocols		
● AS-Interface Safety at Work	No	No
● CAN	No	No
● Data-Highway	No	No
● DeviceNet	No	No
● DeviceNet Safety	No	No
● Foundation Fieldbus	No	No
● INTERBUS	No	No
● INTERBUS-Safety	No	No
● Local Operating Network	No	No
● MODBUS	No	No
● SafetyBUS p	No	No
● SERCOS	No	No
● SUCOnet	No	No
● other bus systems	No	No
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
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	Yes; Group 1, measured at a distance of 10 m
● Limit class B, for use in residential areas	No	No
Degree and class of protection		
IP (at the front)	IP65	IP64
IP (rear)	IP20	IP20
NEMA (front)		
● Enclosure Type 4 at the front	No	No
● Enclosure Type 4x at the front	Yes; Incl. NEMA12	No
● Enclosure Type 12 at the front		No
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 1	No	No
● cULus Class I Zone 2, Division 2	Yes	No
● FM Class I Division 2	Yes	No
Marine approval		
● Germanischer Lloyd (GL)	No	No
● American Bureau of Shipping (ABS)	No	No
● Bureau Veritas (BV)	No	No
● Det Norske Veritas (DNV)	No	No
● Lloyds Register of Shipping (LRS)	No	No
● Nippon Kaiji Kyokai (Class NK)	No	No
● Polski Rejestr Statkow (PRS)	No	No
Ambient conditions		
Ambient temperature during operation		
● min.	0 °C	0 °C
● max.	55 °C	60 °C
Operation (vertical installation)		
— For vertical installation, min.	0 °C	0 °C
— For vertical installation, max.	55 °C	60 °C
Operation (max. tilt angle)		
— At maximum tilt angle, min.	0 °C	0 °C
	45 °C	60 °C

	6AV3688-3AY36-0AX0	6AV2127-1AB00-0LX1
— At maximum tilt angle, max.	45 °C	60 °C
Operation (vertical installation, portrait format)		

Article number	**6AV3688-3AY36-0AX0**	**6AV2127-1AB00-0LX1**
	SIMATIC HMI KP8 PN	SIMATIC HMI KP8 PN LX 6mm
— For vertical installation, min.	0 °C	0 °C
— For vertical installation, max.	55 °C	60 °C
Operation (max. tilt angle, portrait format)		
— At maximum tilt angle, min.	0 °C	0 °C
— At maximum tilt angle, max.	45 °C	60 °C
Ambient temperature during storage/transportation		
● min.	-20 °C	-20 °C
● max.	60 °C	70 °C
Relative humidity		
● Operation, max.	95 %; no condensation	95 %; no condensation
configuration / header		
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
● SINUMERIK	No	No
● 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
Mechanics/material		
Enclosure material (front)		Bayblend FR3010 enclosure, Autotex F150 front membrane
● Plastic	Yes	Yes; neutral enclosure, black RAL 9005
● Aluminum	No	No
● Stainless steel	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
Weight (with packaging)		475 g; incl. 1x 12-pole connector and 6x mounting clips
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

Article number	**6AV3688-3AF37-0AX0**
	SIMATIC HMI KP8F PN
● 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

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

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

● 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)	

Article number	**6AV3688-3AF37-0AX0**
	SIMATIC HMI KP8F PN
● 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
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 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, max.	45 °C
Operation (vertical installation, portrait format)	
— For vertical installation, min.	0 °C
— For vertical installation, max.	55 °C
Operation (max. tilt angle, portrait format)	
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, max.	45 °C

Ambient temperature during storage/transportation	
● min.	-20 °C
● max.	60 °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
● 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

Article number	**6AV3688-3AF37-0AX0**
	SIMATIC HMI KP8F PN
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

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
Mounting position	vertical
Rack mounting	No
Front mounting	Yes
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 looped through at connector, no interruption on pulling
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V

Input current

Current consumption (rated value)	1 A

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

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; incl. shared device, 3rd party PLC
Supports protocol for PROFINET IO	Yes
PROFINET CBA	No
IRT	Yes
PROFIsafe	Yes; 2x SIL 3 (two-channel) or 4x 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

Article number	**6AV3688-3EH47-0AX0**
	SIMATIC HMI KP32F PN
● 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

● 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
CCC	No; not necessary
Suitable for safety functions	Yes

Ecological footprint

● environmental product declaration	Yes

Global warming potential

— global warming potential, (total) [CO2 eq]	113 kg
— global warming potential, (during production) [CO2 eq]	38.5 kg
— global warming potential, (during operation) [CO2 eq]	82.3 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-8.27 kg

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

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, max.	45 °C

Operation (vertical installation, portrait format)

— For vertical installation, min.	0 °C
— For vertical installation, max.	55 °C

Operation (max. tilt angle, portrait format)

— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, max.	45 °C

Ambient temperature during storage/transportation

● min.	-20 °C
● max.	60 °C

Relative humidity

● Operation, max.	95 %; no condensation

configuration / header

Configuration software

● STEP 7 Basic (TIA Portal)	Yes

● STEP 7 Professional (TIA Portal)	Yes

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
● 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	No
● Aluminum	Yes
● Stainless steel	No

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
Mounting position	any
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 4 at the front	No
● Enclosure Type 4x at the front	No

Standards, approvals, certificates

CE mark	Yes
cULus	No
RCM (formerly C-TICK)	No
KC approval	No
Suitable for safety functions	Yes; e.g. installation of emergency stop

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

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● FM Class I Division 2	No
Marine approval	
Article number	**6AV3688-3XY38-3AX0** KP8 Design blank Front
● 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, max.	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, max.	45 °C
Ambient temperature during storage/transportation	
● min.	-20 °C
● max.	60 °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

Dimensional drawings

All dimensions in mm. For installation cutout, see technical specifications.
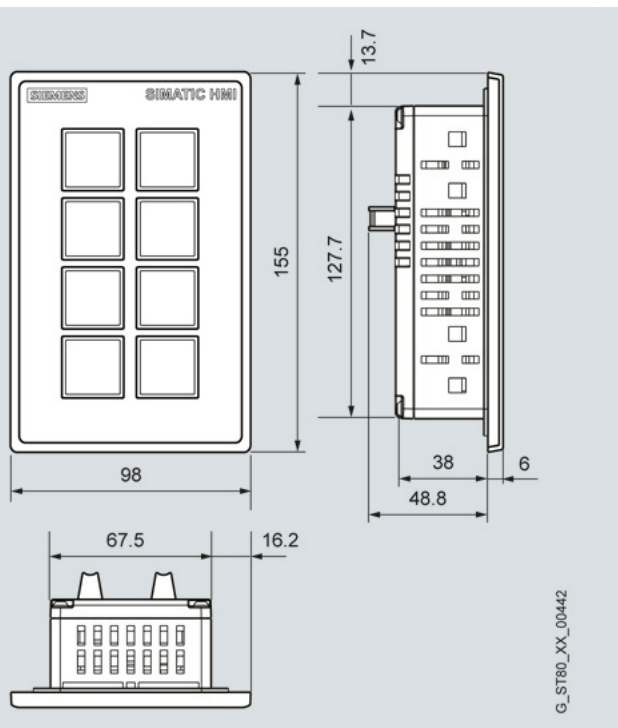
G_ST80_XX_00442
SIMATIC HMI Key Panel KP8; installation dimensions also valid for blank front design
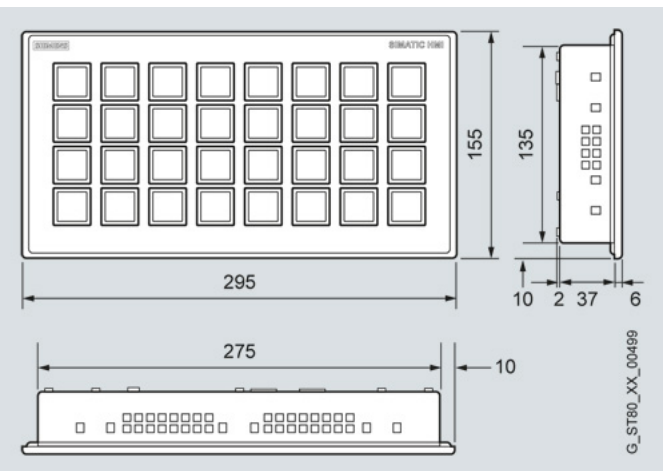
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SIMATIC HMI Key Panel KP32F

More information

More information is available on the internet at this link

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

<u>Note:</u>

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.

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