## **Data sheet**

6AV3688-3AY36-0AX0



SIMATIC HMI KP8 PN Key Panel, 8 short-stroke switches with multi-colored LEDs, PROFINET interfaces 8 configurable DI/DO pins, 24 V DC can be looped through parameterizable as of STEP 7 V5.5

Product type designation  Control elements  With parameterizable keys  • Membrane keyboard  — user-definable label membrane keys  • Function keys  • Number of function keys  • Short-stroke keys  — Number of short-stroke keys  • DP direct LEDs (LEDs as S7 output I/O)  • Number of color modes for LED  • Pinet keys (keys as S7 input I/O)  • Number of store modes for LED  • Sred, green, blue, yellow, white  • Installation type/mounting  Mounting type  Mounting bestion  Rack mounting  Front mounting  Rail mounting  Wall mounting/direct mounting  No  Wall mounting/direct mounting  No  Mounting in landscape format possible  maximum permissible angle of inclination without external vertilation  Number of slots for command devices and signaling units  DC  Rated value (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  • red  • yes  • yes  • yes  • yes  • yellow  • yes  • white	General information	
With parameterizable keys  Keyboard fonts  • Membrane keyboard — user-definable label membrane keys • Function keys — Number of function keys — Number of short-stroke keys — Number of short-stroke keys — Politicet LEDs (LEDs as S7 output I/O) • Number of color modes for LED • Direct keys (keys as S7 input I/O) • Number of color modes for LED • Direct keys (keys as S7 input I/O) • Number of color modes for LED • Direct keys (keys as S7 input I/O) • Number of color modes for LED • Direct keys (keys as S7 input I/O) • Number of color modes for LED • Direct keys (keys as S7 input I/O) • Number of color modes for LED • Direct keys (keys as S7 input I/O) • Number of color modes for LED • Direct keys (keys as S7 input I/O) • Nounting type  Mounting type  Mounting clip  Mounting position  Pront 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  Tyes  maximum permissible angle of inclination without external  verification  Number of slots for command devices and signaling units  DC  Rated value (DC)  24 V; 24 V can be looped through connector, interrupted when pulled  permissible range, upper limit (DC)  24 V; 24 V can be looped through connector, interrupted when pulled  permissible range, upper limit (DC)  permissible range	Product type designation	KP8 PN
Membrane keyboard — user-definable label membrane keys Function keys Function keys — Number of function keys — Number of function keys — Number of short-stroke keys  Expansions for operator control of the process  Expansions for operator control of the process  • Potent LEDs (LEDs as \$7 output I/O) • Number of color modes for LED • Direct keys (keys as \$7 input I/O) • Number of color modes for LED • Direct keys (keys as \$7 input I/O)  * Mounting type  Mounting type  Mounting type  Mounting type  Mounting type  Mounting type  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  Mounting in landscape format possible  Mounting in portrait format possible  Mounting in portrait format possible  Mounting in portrait format possible  Yes  Mounting of slots for command devices and signaling units  DC  Rated value (DC)  24 V; 24 V can be looped through connector, interrupted when pulled permissible range, lower limit (DC)  28.8 V  Input current  Current consumption (rated value)  Type of output  LED colors  • red  • yellow  • green  Yes    **Batter of function weys  8  **Adjustable brightness  8  Expansions for operator control of the process  8  Expansions for operator control of the process  **Operator Level Seven	Control elements	
Membrane keyboard — user-definable label membrane keys Function keys — Number of function keys  Short-stroke keys — Number of short-stroke keys  Expansions for operator control of the process  Permissible range, ower primit (DC)  Permissible range, ower limit (DC)  Permissible range, ower publications of the process or permissible range, ower limit (DC)  Permissible range, ower publications of the process or permissible range, ower limit (DC)  Permissible r	With parameterizable keys	Yes
- user-definable label membrane keys  • Function keys  - Number of function keys  • Short-stroke keys  - Number of short-stroke keys  • Por direct LEDs (LEDs as \$7 output I/O)  • Number of color modes for LED  • Direct keys (keys as \$7 input I/O)  • Number of color modes for LED  • Direct keys (keys as \$7 input I/O)  • Number of color modes for LED  • Direct keys (keys as \$7 input I/O)  • Number of color modes for LED  • Direct keys (keys as \$7 input I/O)  • No  Mounting type  Mounting type  Mounting dilp  Mounting position  Rack mounting  No  Wall mounting/direct mounting  Wall mounting/direct mounting  No  Mounting in landscape format possible  maximum permissible angle of inclination without external  verification of slots for command devices and signaling units  Supply voltage  Type of supply voltage  Type of supply voltage  DC  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)	Keyboard fonts	
Function keys  - Number of function keys  Short-stroke keys  - Number of short-stroke keys  Bexpansions for operator control of the process  • DP direct LEDs (LEDs as S7 output I/O)  Number of color modes for LED  Direct keys (keys as S7 input I/O)  Nounting type  Mounting position  Rack mounting  Mounting position  Rack mounting  Front mounting  Wall mounting/direct mounting  No  Mounting in portrait format possible  maximum permissible angle of Inclination without external ventilation  Number of slots for command devices and signaling units  Supply voltage  Type of supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  Person upper l	Membrane keyboard	
- Number of function keys  • Short-stroke keys  - Number of short-stroke keys  • DP direct LEDs (LEDs as S7 output I/O)  • Number of color modes for LED  • Direct keys (keys as S7 input I/O)  • Number of color modes for LED  • Direct keys (keys as S7 input I/O)  * No  * Mounting type  Mounting clip  wertical  * Mounting position  * Pack mounting  * Pes; Compatible with Extension Units dimensions  * Rait mounting  * Wall mounting/direct mounting  * Mounting in landscape format possible  * Mounting in landscape format possible  * Mounting of slots for command devices and signaling units  * Supply voltage  Type of supply voltage  Type of supply voltage  * Rated value (DC)  * permissible range, lower limit (DC)  * permissible range, upper limit (DC)  *	<ul> <li>user-definable label membrane keys</li> </ul>	Yes
Short-stroke keys  Number of short-stroke keys  Papansions for operator control of the process  Def direct LEDs (LEDs as S7 output I/O) Number of color modes for LED Direct keys (keys as S7 input I/O) Number of color modes for LED Direct keys (keys as S7 input I/O) Number of color modes for LED Direct keys (keys as S7 input I/O) Number of color modes for LED Number of slots for command devices and signaling units  Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range, lower limit (DC) Permi	<ul> <li>Function keys</li> </ul>	
Expansions for operator control of the process  • DP direct LEDs (LEDs as S7 output I/O) • Number of color modes for LED • Direct keys (keys as S7 input I/O) • Number of color modes for LED • Direct keys (keys as S7 input I/O)  **Mounting type  **Mounting position  **Rack mounting  **Pes: Compatible with Extension Units dimensions  **Rail mounting  **Mounting in portrait format possible  **Rail mounting in portrait format possible  **Mounting in portrait format possible  **Mounting in landscape format possible  **maximum permissible angle of inclination without external ventilation  Number of slots for command devices and signaling units  **Supply voltage**  Type of supply voltage  Rated value (DC)  **permissible range, lower limit (DC)  **permissible range, upper limit (DC)  **permissib	<ul> <li>Number of function keys</li> </ul>	8
Expansions for operator control of the process  • DP direct LEDs (LEDs as S7 output I/O) • Number of color modes for LED • Direct keys (keys as S7 input I/O) 8  Installation type/mounting  Mounting type  Mounting type  Mounting position Rack mounting  Front mounting  Wall mounting/direct mounting  Mounting in portrait format possible  Mounting in Inadscape format possible  Mounting in fandscape for command devices and signaling units  Supply voltage  Type of supply voltage  Type of supply voltage  Rated value (DC) permissible range, lower limit (DC) 24 V; 24 V can be looped through connector, interrupted when pulled permissible range, lower limit (DC) 28 8 V  Input current  Current consumption (rated value)  • red • yellow • green  Yes  • green	Short-stroke keys	
Description of the property o	<ul> <li>Number of short-stroke keys</li> </ul>	8
Number of color modes for LED Direct keys (keys as S7 input I/O)  Installation type/mounting  Mounting type Mounting position Rack mounting No Front mounting Wall mountingdirect mounting No Mounting in portrait format possible Mounting in landscape format possible Number of slots for command devices and signaling units  Supply voltage Type of supply voltage  Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Permissible	Expansions for operator control of the process	
Direct keys (keys as S7 input I/O)  Installation type/mounting  Mounting type     Mounting position     Rack mounting     Rack mounting     Pront mounting     Rail mounting     No     Wall mounting/direct mounting     No     Mounting in portrait format possible     Mounting in landscape format possible     Mounting in landscape format possible     Mounting in contrait format possible     Mounting in landscape format possible     Mounting of in landscape format possible     Mounting in landscape format possible     Mounting of slots for command devices and signaling units  Supply voltage  Type of supply voltage  Type of supply voltage  Rated value (DC)     permissible range, lower limit (DC)     24 ∀; 24 ∀ can be looped through connector, interrupted when pulled  permissible range, upper limit (DC)     28.8 ∀  Input current  Current consumption (rated value)  Type of output  LED colors  ■ red     Yes  ■ yellow     Yes  ■ yellow     Yes  ■ green     Yes	<ul> <li>DP direct LEDs (LEDs as S7 output I/O)</li> </ul>	8; Adjustable brightness
Mounting type	<ul> <li>Number of color modes for LED</li> </ul>	5; red, green, blue, yellow, white
Mounting type Mounting clip  Mounting position vertical  Rack mounting  Front mounting Yes; Compatible with Extension Units dimensions  Rail mounting  No  Wall mounting/direct mounting  No  Mounting in portrait format possible  Mounting in landscape format possible  Yes  maximum permissible angle of inclination without external ventilation  Number of slots for command devices and signaling units  Supply voltage  Type of supply voltage  Rated value (DC)  Permissible range, lower limit (DC)  Permissible range, upper limit (DC)  28.8 V  Input current  Current consumption (rated value)  O.3 A  Type of output  LED colors  • red  • yes  • yellow  • green  Yes	Direct keys (keys as S7 input I/O)	8
Mounting position vertical Rack mounting Rack mounting Rail mounting Rail mounting Wall mounting/direct mounting Mounting in portrait format possible Mounting in landscape format possible Mounting in landscape format possible Mounting in landscape format possible Mounting in solds for command devices and signaling units  Supply voltage Type of supply voltage Rated value (DC) Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC)  10.3 A  Type of output  LED colors  Fed Pes	Installation type/mounting	
Rack mounting Pront 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 Mounting in landscape format possible Yes maximum permissible angle of inclination without external ventilation Number of slots for command devices and signaling units  Supply voltage Type of supply voltage Rated value (DC) 24 V; 24 V can be looped through connector, interrupted when pulled permissible range, lower limit (DC) 22.4 V permissible range, upper limit (DC) 28.8 V Input current Current consumption (rated value)  Type of output  LED colors • red • yes • yellow • green Yes	Mounting type	Mounting clip
Front mounting Rail mounting No Wall mounting/direct mounting No Mounting in portrait format possible Mounting in landscape format possible Maximum permissible angle of inclination without external ventilation Number of slots for command devices and signaling units  Supply voltage Type of supply voltage  Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range upper limit (DC) Permi	Mounting position	vertical
Rail mounting  Wall mounting/direct mounting  Mounting in portrait format possible  Mounting in landscape format possible  maximum permissible angle of inclination without external ventilation  Number of slots for command devices and signaling units  Supply voltage  Type of supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  LED colors  ored  yes  yes  green  Yes	Rack mounting	No
Wall mounting/direct mounting  Mounting in portrait format possible  Mounting in landscape format possible  Mounting in landscape format possible  Maximum permissible angle of inclination without external ventilation  Number of slots for command devices and signaling units  Supply voltage  Type of supply voltage  Type of supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  10.3 A  Type of output  LED colors  red  yes  yellow  green  Yes  Yes  Yes	Front mounting	Yes; Compatible with Extension Units dimensions
Mounting in portrait format possible  Mounting in landscape format possible  Maximum permissible angle of inclination without external ventilation  Number of slots for command devices and signaling units  Supply voltage  Type of supply voltage  Rated value (DC)  Permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  Input current  Current consumption (rated value)  LED colors  • red  • yellow  • green  Yes  Yes  Yes  Yes  Yes	Rail mounting	No
Mounting in landscape format possible  maximum permissible angle of inclination without external ventilation  Number of slots for command devices and signaling units  Supply voltage  Type of supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Input current  Current consumption (rated value)  Type of output  LED colors  • red  • yellow  • green  Yes  Yes	Wall mounting/direct mounting	No
maximum permissible angle of inclination without external ventilation  Number of slots for command devices and signaling units  5	Mounting in portrait format possible	Yes
ventilation  Number of slots for command devices and signaling units  Supply voltage  Type of supply voltage  Rated value (DC)  Permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  28.8 V  Input current  Current consumption (rated value)  Type of output  LED colors  ored  yellow  yellow  green  Yes  Yes	Mounting in landscape format possible	Yes
Type of supply voltage  Rated value (DC)  Permissible range, lower limit (DC)  Permissible range, upper limit (DC)  Permis		30°; To the front/rear
Type of supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  28.8 V  Input current  Current consumption (rated value)  Type of output  LED colors  • red • yellow • yellow • green  DC  24 V; 24 V can be looped through connector, interrupted when pulled  20.4 V  28.8 V  Input current  O.3 A  Yes  Yes  Yes  Yes	Number of slots for command devices and signaling units	0
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)  7 Type of output  LED colors  • red • yes • yellow • green  Yes  • green  Yes	Supply voltage	
permissible range, lower limit (DC)  permissible range, upper limit (DC)  28.8 V  Input current  Current consumption (rated value)  Type of output  LED colors  • red • yellow • yellow • green  Yes	Type of supply voltage	DC
permissible range, upper limit (DC)  Input current  Current consumption (rated value)  Type of output  LED colors  • red • yellow • yellow • green  Yes	Rated value (DC)	24 V; 24 V can be looped through connector, interrupted when pulled
Input current  Current consumption (rated value)  Type of output  LED colors  • red • yellow • yellow • green  Yes  • yes	permissible range, lower limit (DC)	20.4 V
Current consumption (rated value)  Type of output  LED colors  • red • yes • yellow • green  Yes  • green  Yes	permissible range, upper limit (DC)	28.8 V
Type of output  LED colors  • red Yes  • yellow Yes  • green Yes	Input current	
LED colors  • red  • yellow  • green  Yes  Yes  Yes	Current consumption (rated value)	0.3 A
<ul> <li>red</li> <li>yes</li> <li>yellow</li> <li>green</li> <li>Yes</li> <li>Yes</li> </ul>	Type of output	
<ul><li>yellow</li><li>green</li><li>Yes</li><li>Yes</li></ul>	LED colors	
• green Yes	• red	Yes
	• yellow	Yes
• white 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	o, Total impate and outpute max. o and TX of 2 of 2X of 2
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
<ul> <li>Number of ports of the integrated switch</li> </ul>	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	
— MRP	Yes
Further protocols	
<ul> <li>AS-Interface Safety at Work</li> </ul>	No
• CAN	No
Data-Highway	No
DeviceNet	No
<ul> <li>DeviceNet Safety</li> </ul>	No
<ul> <li>Foundation Fieldbus</li> </ul>	No
• INTERBUS	No
INTERBUS-Safety	No
<ul> <li>Local Operating Network</li> </ul>	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> <li>Limit class A, for use in industrial areas</li> </ul>	Yes; Group 1, measured at a distance of 10 m
Limit class B, for use in residential areas	No
Degree and class of protection	

10/11/15	IDOS
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	Mi
Enclosure Type 4 at the front     Findours Type 4v at the front	No
Enclosure Type 4x at the front  Standards, approvals, contificators	Yes; Incl. NEMA12
Standards, approvals, certificates	Voc
CE mark	Yes
CULus  PCM (formerly C TICK)	Yes Yes
RCM (formerly C-TICK)  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
<ul> <li>Nippon Kaiji Kyokai (Class NK)</li> </ul>	No
<ul> <li>Polski Rejestr Statkow (PRS)</li> </ul>	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)	0.00
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, max.	45 °C
Ambient temperature during storage/transportation	20 °C
• min.	-20 °C 60 °C
max.  Relative humidity	00 C
Operation, max.	95 %; no condensation
Operation, max.	55 70, 110 COTINGTISATION
Configuration > Treader  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
3 07 000/100	SIMATIC STEP 7 Basic V11 (or higher)
• LOGO!	No
• WinAC	Yes
SINUMERIK	No

• SIMOTION	No
<ul> <li>Allen Bradley (EtherNet/IP)</li> </ul>	No
<ul> <li>Allen Bradley (DF1)</li> </ul>	No
Mitsubishi (MC TCP/IP)	No
<ul><li>Mitsubishi (FX)</li></ul>	No
OMRON (FINS TCP)	No
<ul> <li>OMRON (LINK/Multilink)</li> </ul>	No
<ul> <li>Modicon (Modbus TCP/IP)</li> </ul>	No
<ul><li>Modicon (Modbus)</li></ul>	No
Mechanics/material	
Enclosure material (front)	
Plastic	Yes
• Aluminum	No
Stainless steel	No
Service life	
<ul> <li>Short-stroke keys (in switching cycles)</li> </ul>	1 500 000
<ul> <li>LEDs (ON period)</li> </ul>	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: 8/7/2023 🖸