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Data sheet 6AV3688-3AY36-0AX0

SIMATIC HMI KP8 PN KEY PANEL, 8 SHORT-STROKE KEYS WITH MULTI-COLOR LED'S, PROFINET INTERFACE 8 CONFIGURABLE DI/DO PINS, 24V DC LOOP THROUGH CONFIGURABLE WITH STEP7 V5.5 AND LATER



General information	
Product type designation	SIMATIC HMI KP8 PN
Control elements	
With parameterizable keys	Yes
Keyboard fonts	
• Membrane keyboard	
— user-definable label 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; 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	
Rack mounting possible	No
Front installation possible	Yes; Compatible with extension unit dimensions
Rail mounting possible	No
Wall mounting/direct mounting possible	No

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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 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)	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; Max. 8 inputs and outputs (total)
Input voltage	
• Rated value (DC)	24 V
Digital outputs	
Number of digital outputs	8; Max. 8 inputs and outputs (total)
Short-circuit protection	Yes
Load "resistive"	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

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• 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
MRP	Yes
PROFIsafe	No
PROFIBUS	No
MPI	No
AS-Interface	No
EIB/KNX	No
Protocols (Ethernet)	
• TCP/IP	No
Further protocols	
• AS-Interface Safety at Work	No
• SafetyBUS p	No
• CAN	No
• INTERBUS	No
• INTERBUS-Safety	No
• MODBUS	No
• Data-Highway	No
• DeviceNet	No
• DeviceNet Safety	No
• 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
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
Enclosure Type 4 at the front	No
Enclosure Type 4x at the front	Yes; Incl. NEMA12

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IP (rear)	IP20

Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
Suitable for safety functions	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
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

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, 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
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	60 °C
Relative humidity	

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• Operation, max.	95 %; no condensation

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; 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	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
Overall depth	49 mm; Incl. angled SIMATIC Ethernet connector

Weights	
Weight without packaging	270 g

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