## SIEMENS

## Data sheet

## 6AV3688-3AY36-0AX0



SIMATIC HMI KP8 PN Key Panel, 8 short-stroke switches with multicolored 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     KP8 PN       Control elements	General information	
With parameterizable keys     Yes       Keyboard fonts     •       • Membrane keyboard     -	Product type designation	KP8 PN
Keyboard fonts       •         • Membrane keyboard	Control elements	
Membrane keyboard     user-definable label membrane keys     Short-stroke keys     Number of short-stroke keys     P direct LEDs (LEDs as S7 output I/O)     Number of color modes for LED     S; red, green, blue, yellow, white     Direct keys (keys as S7 input I/O)     Number of color modes for LED     S; red, green, blue, yellow, white     Direct keys (keys as S7 input I/O)     Number of color modes for LED     S; red, green, blue, yellow, white     Direct keys (keys as S7 input I/O)     Number of color modes for LED     S; red, green, blue, yellow, white     Direct keys (keys as S7 input I/O)     Number of color modes for LED     S; red, green, blue, yellow, white     Direct keys (keys as S7 input I/O)     Supply for the format possible     Yes: Compatible with Extension Units dimensions     Rail mounting Ves: Compatible with Extension Units dimensions     No     Mounting in portrait format possible     Yes     Mounting in portrait format possible     Yes     Mounting in landscape format possible     Yes     Mounting in landscape format possible     Yes     Mounting of slots for command devices and signaling units     O     Supply voltage     Type of slots for command devices and signaling units     Upper current     Current consumption (rated value)     O: 24 V     permissible range, lower limit (DC)     28.8 V     Imput current     Current consumption (rated value)     O: 3A     Type of output     LED colors     ered     yellow     Yes	With parameterizable keys	Yes
user-definable label membrane keys     Yes       • Short-stroke keys     8       Expansions for operator control of the process     •       • DP direct LEDs (LEDs as S7 output I/O)     8; Adjustable brightness       • DP direct LEDs (LEDs as S7 output I/O)     8; Adjustable brightness       • DP direct keys (keys as S7 input I/O)     8       • Drect keys (keys as S7 input I/O)     8       Installation type/mounting     5; red, green, blue, yellow, white       Mounting type     Mounting clip       Mounting type     Mounting clip       Mounting type     Mounting clip       Mounting ing type     Mounting clip       Mounting ing type     No       Rack mounting     No       Rail mounting/direct mounting     No       Wall mounting/direct mounting     No       Mounting in portrait format possible     Yes       Mounting in landscape format possible     Yes       Mumber of slots for command devices and signaling units     0       Supply voltage     DC       Rated value (DC)     24 V       permissible range, lower limit (DC)     28.8 V       Input current     Ucrent consumption (rated value)       Out Supply voltage     0.3 A       Type of output     Ucrent consumption (rated value)       LED colors     Yes	Keyboard fonts	
• Short-stroke keys       8         Expansions for operator control of the process       9         • 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 clip         Mounting type       Mounting clip         Mounting type       Mounting clip         Mounting in portation       vertical         Rack mounting       Yes; Compatible with Extension Units dimensions         Rail mounting/direct mounting       No         Wall mounting/direct mounting       No         Mounting in portrait format possible       Yes         maximum permissible angle of inclination without external ventilation       30°; To the front/rear         vertilation       0         Supply voltage       DC         Rated value (DC)       24 V         permissible range, lower limit (DC)       28.8 V         Input current       Urrent consumption (rated value)         Current Consumption (rated value)       0.3 A         Type of output       LED colors         • yellow       Yes	Membrane keyboard	
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 clip       Mounting type     Mounting clip       Mounting osition     vertical       Rack mounting     No       Front mounting     Yes; Compatible with Extension Units dimensions       Rail mounting     No       Wall mounting/direct mounting     No       Mounting in landscape format possible     Yes       Mumber of slots for command devices and signaling units     0       Supply voltage     DC       Rated value (DC)     24 V       permissible range, lower limit (DC)     28.8 V       Input current     UC)       Current consumption (rated value)     0.3 A       Type of output     0.3 A       Type of output     Yes       LED colors     Yes       • yellow     Yes	<ul> <li>— user-definable label membrane keys</li> </ul>	Yes
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 clip         Mounting type       Mounting clip         Mounting position       vertical         Rack mounting       No         Front mounting       Yes; Compatible with Extension Units dimensions         Rail mounting direct mounting       No         Wall mounting/direct mounting       No         Mounting in portrait format possible       Yes         maximum permissible angle of inclination without external vertilation       30°; To the front/rear         ventilation       Pres         Mumber of slots for command devices and signaling units       0         Supply voltage       DC         Rated value (DC)       24 V         permissible range, lower limit (DC)       28.8 V         Input current       0.3 A         Type of output       ULED colors         • red       Yes         • yellow       Yes	<ul> <li>Short-stroke keys</li> </ul>	
OP direct LEDs (LEDs as S7 output I/O)     S; Adjustable brightness     Number of color modes for LED     S; red, green, blue, yellow, white     Direct keys (keys as S7 input I/O)     S      Installation type/mounting     Mounting type     Mounting clip     Mounting position     vertical     Rack mounting     No     Front mounting     No     Front mounting     No     Mounting in portrait format possible     Yes     Mounting in landscape format possible     Yes     Mounting of slots for command devices and signaling units     O     Supply voltage     Type of supply voltage     DC     Rated value (DC)     permissible range, upper limit (DC)     28.8 V     Input current     Current consumption (rated value)     O.3 A     Type of output     LED colors     erd     yellow     Yes	<ul> <li>— Number of short-stroke keys</li> </ul>	8
Number of color modes for LED     S; red, green, blue, yellow, white     Direct keys (keys as S7 input I/O)     S      Installation type/mounting     Mounting type     Mounting clip     Mounting position     Rack mounting     No     Front mounting     Yes; Compatible with Extension Units dimensions     Rail mounting direct mounting     No     Wall mounting/direct mounting     No     Mounting in portrait format possible     Yes     Mounting in landscape format possible     Yes     Mounting of slots for command devices and signaling units     Supply voltage     Type of supply voltage     Rated value (DC)     permissible range, lower limit (DC)     permissible range, lower limit (DC)     permissible range, upper limit (DC)     Zes & V     Input current     Current consumption (rated value)         0.3 A     Type of output     LED colors         erd         yellow     Yes	Expansions for operator control of the process	
Direct keys (keys as S7 input I/O)     S      Installation type/mounting     Mounting type     Mounting position     vertical     Rack mounting     No     Front mounting     Yes; Compatible with Extension Units dimensions     Rail mounting/direct mounting     No     Wall mounting/direct mounting     No     Mounting in portrait format possible     Yes     Mounting in landscape format possible     Yes     Mounting of inclination without external     vertitation     Number of slots for command devices and signaling units     Supply voltage     Type of supply voltage     Rated value (DC)     permissible range, lower limit (DC)     20.4 V     permissible range, lower limit (DC)     20.4 V     permissible range, upper limit (DC)     20.5 V     permissible range, upper limit (DC)     20.4 V     permissible range, upper limit (DC)     20.5 V     permissible range, upper limit (DC)     Ves     vellow     Ves	<ul> <li>DP direct LEDs (LEDs as S7 output I/O)</li> </ul>	8; Adjustable brightness
Installation type/mounting           Mounting type         Mounting clip           Mounting position         vertical           Rack mounting         No           Front mounting         Yes; Compatible with Extension Units dimensions           Rail mounting/direct 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           Vertialation         0           Supply voltage         DC           Rated value (DC)         24 V           permissible range, lower limit (DC)         26.4 V           permissible range, upper limit (DC)         28.8 V           Input current         Current consumption (rated value)           Current consumption (rated value)         0.3 A           Type of output         LED colors           • red         Yes           • yellow         Yes	<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         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           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         DC           Rated value (DC)         24 V           permissible range, lower limit (DC)         20.4 V           permissible range, upper limit (DC)         20.3 A	<ul> <li>Direct keys (keys as S7 input I/O)</li> </ul>	8
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         DC           Rated value (DC)         24 V           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         Yes           • red         Yes         Yes	Installation type/mounting	
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         Mounting in landscape format possible       Yes         Mounting on trait format possible       Yes         Mounting in landscape format possible       Yes         Mounting on trait format possible       Yes         Mounting on trait format possible       Yes         Mounting on portrait format possible       Yes         Mounter of slots for command devices and signaling units       0         Supply voltage       DC         Rated value (DC)       24 V         permissible range, lower limit (DC)       20.4 V         permissible range, upper limit (DC)       28.8 V         Input current       0.3 A         Current consumption (rated value)       0.3 A         Type of output       <	Mounting type	Mounting clip
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       DC         Rated value (DC)       24 V         permissible range, lower limit (DC)       20.4 V         permissible range, upper limit (DC)       28.8 V         Input current       0.3 A         Current consumption (rated value)       0.3 A         Type of output       LED colors         • red       Yes         • gellow       Yes	Mounting position	vertical
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       DC         Rated value (DC)       24 V         permissible range, lower limit (DC)       20.4 V         permissible range, upper limit (DC)       28.8 V         Input current       0.3 A         Current consumption (rated value)       0.3 A         Type of output       LED colors         e red       Yes         e low       Yes	Rack 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       DC         Rated value (DC)       24 V         permissible range, lower limit (DC)       20.4 V         permissible range, upper limit (DC)       28.8 V         Input current       0.3 A         Current consumption (rated value)       0.3 A         Type of output       Yes         LED colors       Yes         • red       Yes         • yellow       Yes	Front mounting	Yes; Compatible with Extension Units dimensions
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       0         Type of supply voltage       DC         Rated value (DC)       24 V         permissible range, lower limit (DC)       20.4 V         permissible range, upper limit (DC)       28.8 V         Input current       0.3 A         Type of output       LED colors         • red       Yes         • yellow       Yes	Rail mounting	No
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       0         Type of supply voltage       DC         Rated value (DC)       24 V         permissible range, lower limit (DC)       20.4 V         permissible range, upper limit (DC)       28.8 V         Input current       0.3 A         Type of output       LED colors         • red       Yes         • yellow       Yes	Wall mounting/direct mounting	No
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       0         Type of supply voltage       DC         Rated value (DC)       24 V         permissible range, lower limit (DC)       20.4 V         permissible range, upper limit (DC)       28.8 V         Input current       Current consumption (rated value)         Current consumption (rated value)       0.3 A         Type of output       LED colors         • red       Yes         • yellow       Yes	Mounting in portrait format possible	Yes
ventilation       Image: Supply voltage         Type of supply voltage       DC         Rated value (DC)       24 V         permissible range, lower limit (DC)       20.4 V         permissible range, upper limit (DC)       28.8 V         Input current       Current consumption (rated value)         Current consumption (rated value)       0.3 A         Type of output       Yes         • yellow       Yes	Mounting in landscape format possible	Yes
Supply voltageType of supply voltageDCRated value (DC)24 Vpermissible range, lower limit (DC)20.4 Vpermissible range, upper limit (DC)28.8 VInput currentCurrent consumption (rated value)Current consumption (rated value)0.3 AType of outputLED colors• redYes• yellowYes		30°; To the front/rear
Type of supply voltage       DC         Rated value (DC)       24 V         permissible range, lower limit (DC)       20.4 V         permissible range, upper limit (DC)       28.8 V         Input current       0.3 A         Type of output       LED colors         • red       Yes         • yellow       Yes	Number of slots for command devices and signaling units	0
Rated value (DC)       24 V         permissible range, lower limit (DC)       20.4 V         permissible range, upper limit (DC)       28.8 V         Input current       0.3 A         Current consumption (rated value)       0.3 A         Type of output       LED colors         • red       Yes         • yellow       Yes	Supply voltage	
permissible range, lower limit (DC)     20.4 V       permissible range, upper limit (DC)     28.8 V       Input current     0.3 A       Current consumption (rated value)     0.3 A       Type of output     LED colors       • red     Yes       • yellow     Yes	Type of supply voltage	DC
permissible range, upper limit (DC)     28.8 V       Input current     0.3 A       Current consumption (rated value)     0.3 A       Type of output     LED colors       • red     Yes       • yellow     Yes	Rated value (DC)	24 V
Input current     0.3 A       Current consumption (rated value)     0.3 A       Type of output        LED colors        • red     Yes       • yellow     Yes	permissible range, lower limit (DC)	20.4 V
Current consumption (rated value)     0.3 A       Type of output       LED colors       • red     Yes       • yellow     Yes	permissible range, upper limit (DC)	28.8 V
Type of output       LED colors       • red       Yes       • yellow       Yes	Input current	
LED colors     Yes       • red     Yes       • yellow     Yes	Current consumption (rated value)	0.3 A
<ul> <li>red Yes</li> <li>yellow Yes</li> </ul>	Type of output	
• yellow Yes	LED colors	
	• red	Yes
• green Yes	• yellow	Yes
	• green	Yes

blue         Yes           Digital inputs         8: Total inputs and outputs max. 8 and 1x SiL 2 or 2x SiL 3           Input voltage         -           - Raded value (DC)         24 V           Origital outputs         8: Max. 8: inputs and outputs (total)           Short-struit protection         Yes           Switching capacity of the outputs         -           - with resistive load, max.         100 mA           Outputs voltage         -           - Raded value (DC)         24 V           Total current of the outputs         -           - With resistive load, max.         100 mA           Outputs or them outputs         -           - Current per group, max.         800 mA           Mundre of Indeatrial Ethernet Interfaces         2: For the construction of lines and rifugs without external switch           Number of ports of the integrated switch         2: For port           Protocols         -           PROFINET         Yes; also 3rd party PLC           Supports protocol for PROFINET to Press         Yes           PROFINET         Yes           PROFINET         Yes           PROFINET         Yes           PROFINET         Yes           PROFINET         Yes	• white	Yes
Number of digital inputs         8: Total inputs and outputs max. 8 and 1x Sit. 2 or 2x Sit. 3           Input voltagin         24 V           Digital outputs         8: Max. 8 inputs and outputs (total)           Shot-circuit protection         Yes           Switchin agregative of the outputs         • Rated value (DC)           • Rated value (DC)         24 V           • Wath resistive bad, max.         100 mA           Output voltage         • Output voltage           • Current per drannel, max.         100 mA           • Current per drannel, max.         2: For the construction of lines and rings without external switch           Number of PROFINET interfaces         2: Ind. switch           Industrial Ethernet         2: Not. switch           PROFINET         Yes           PROFINET         Yes </td <td>• blue</td> <td></td>	• blue	
Number of digital inputs         8: Total inputs and outputs max. 8 and 1x Sit. 2 or 2x Sit. 3           Input valiage         24 V           Digital outputs         24 V           State value (DC)         24 V           State value (DC)         24 V           Short-circuit protection         Yes           Switching capacity of the outputs         •           • With resistive bad, max.         100 mA           Output value         •           • Current per dranner, max.         100 mA           Output value         •           • Current per dranner, max.         100 mA           • Current per dranner, max.         100 mA           • Current per dranner, max.         2: For the construction of lines and rings without external switch           • Number of PROFINET interfaces         2: Ind. switch           • Number of ports of the integrated switch         2: Not. switch           • Number of PROFINET interfaces         2: Ind. switch           • Routputs         No           PROFINET CEA         No           PROFINET CEA         No           PROFINET         Yes           PROFINET         Yes           PROFINET         Yes           PROFINET         Yes           P	Digital inputs	
Input voltage         24 V           Digital outputs         6! Max. 8 inputs and outputs (total)           Stort-Group Interction         Yes           Switching capacity of the outputs         0 on A           Outputs         100 mA           Outputs         0 on A           Outputs         100 mA           Outputs         100 mA           Outputs         100 mA           Current per down, max.         800 mA           Interfaces         2: For the construction of lines and rings without external switch           Number of Industrial Ethernet interfaces         2: incl. switch           Industrial Ethernet         2: loci. switch           Number of Industrial Ethernet         2: loci. switch           Industrial Ethernet         2: loci. switch           Number of Industrial Ethernet         2: loci. switch           Industrial Ethernet         2: loci. switch           Number of PROFINET Interfaces         2: loci. switch           Industrial Ethernet         2: loci. switch           No         PROFINET         Yes           PROFINET TET         Yes           PROFINET TET         Yes           PROFINET TET         Yes           PROFINET CEA         No		8; Total inputs and outputs max. 8 and 1x SIL 2 or 2x SIL 3
• Rated value (DC)         24 V           Digital outputs         6: Max. 8: inputs and outputs (total)           Shot-circuit protection         Yes           Switching capacity of the outputs		
Optical outputs         Fix Max. Birputs and outputs (total)           Switching capacity of the outputs         *           • with resistive load, nax.         100 mA           Output voltage         *           • Rated value (DC)         24 V           Total current of the outputs         *           • Current per channel, max.         800 mA           Interfaces         2; For the construction of lines and rings without external switch           Number of PROFINET Interfaces         2; Ind. switch           Indistrial Ethernet         *           Number of pROFINET         Yes: also 3rd party PLC           Supports protocol for PROFINET IO         Yes           PROFINET         Yes           PROFINET CEA         No           PROFINET         Yes           PROFINET         No           PROFINET         Yes           PROFINET         Yes           PROFINET         No           PROFINET         No           PROFIN		24 V
Number of digital outputs         8: Max. 8 inputs and outputs (total)           Short-circuit protection         Yes           • with resistive load, max.         100 mA           Output voltage         •           • Rated value (CC)         24 V           Total current of the outputs         •           • Current per channel, max.         800 mA           Interfaces         2: For the construction of lines and rings without external switch           Number of Industrial Ethernet interfaces         2; For the construction of lines and rings without external switch           Number of PORFINET interfaces         2; Incl. switch           Industrial Ethernet         2; Incl. switch           Number of ports of the integrated switch         2; Per port           PROFINET         Yes; also 3drd party PLC           Supports protocol for PROFINET IO         Yes           PROFISate         No           IRT         Yes           PROFISate         No           PROFISate         No <td< td=""><td></td><td></td></td<>		
Short-circuit protection         Yes           Switching capacity of the outputs         • with resistive load, max.         100 mA           Output voltage         • Rated value (CC)         24 V           • Caurent per channel, max.         100 mA         • Current per droup, max.           • Current per droup, max.         800 mA           Interfaces         2: For the construction of lines and rings without external switch           Number of industrial Ethernet         • Current per droup, max.           Industrial Ethernet         • Number of ports of the integrated switch         2; Por the construction of lines and rings without external switch           Number of ports of the integrated switch         Yes: also 3rd party PLC         Supports protocol for PROFINET IO           PROFINET CBA         Yes         Yes         PROFINET CBA           IRT         Yes         No         PROFINET CBA         No           PROFINET CBA         No         No         PROFINET CBA         No           PROFIEUS         No         No         PROFIEUS         No           MPI         No         No         PROFIEUS         No           Redia redundancy         -         No         PROFIEUS         No           Redia redundancy         -         No         PROFIEUS		8; Max. 8 inputs and outputs (total)
• with resistive load, max.     100 mA       Output voltage     .       • Rated value (DC)     24 V       Total current of the outputs     .       • Current per channel, max.     800 mA       Interfaces     2; For the construction of lines and rings without external switch       Number of Industrial Ethernet interfaces     2; For the construction of lines and rings without external switch       Number of PROFINET interfaces     2; Per port       PROFINET     Yes; also 3rd party PLC       Supports protocol for PROFINET IO     Yes       PROFINET     Yes; also 3rd party PLC       Supports protocol for PROFINET IO     Yes       PROFINET     Yes; also 3rd party PLC       Supports protocol for PROFINET IO     Yes       PROFINET     Yes       PROFINET     Yes       PROFINET     No       Protocols (Ethernet)     No       • TCPIP     No       Reduranexing made model     No		
Output voitage         24 V           Total current per channel, max.         100 mA           • Current per colonnel, max.         800 mA           Interfaces         2; For the construction of lines and rings without external switch           Number of Industrial Elhement interfaces         2; For the construction of lines and rings without external switch           Number of PROFINET interfaces         2; Incl. switch           Industrial Elhement         2; Per port           PROFINET         Yes; also 3rd party PLC           Supports protocol for PROFINET I/O         Yes           PROFIBUS         No           PROFIBUS         No           PROFIBUS         No           PROFIBUS         No           MPI         No           AS-Interface         No           PROFIBUS         No           PROFIBUS         No           MPI         No           AS-Interface         No           PROFIBUS         No           PROFIBUS <td>Switching capacity of the outputs</td> <td></td>	Switching capacity of the outputs	
• Rated value (DC)         24 V           Total current of values         100 mA           • Current per channel, max.         800 mA           Interfaces         2. For the construction of lines and rings without external switch           Number of Industrial Ethernet interfaces         2. For the construction of lines and rings without external switch           Industrial Ethernet         2. For the construction of lines and rings without external switch           Industrial Ethernet         2. For the construction of lines and rings without external switch           PROFINET         2. Per port           PROFINET         Yes; also 3rd party PLC           Supports protocol for PROFINET IO         Yes           PROFINET CBA         No           IRT         Yes           PROFIBUS         No           MPI         No           EtBR/NX         No           Protocols (Ethernet)         No           • TCP/IP         No           Redundancy mode         No           AS-Interface Safety at Work         No           • AS-Interface Safety at Work         No           • CAN         No           • Data-Highway         No           • DeviceNet Safety         No           • DeviceNet Safety         No </td <td></td> <td>100 mA</td>		100 mA
Total current of the outputs         100 mA           • Current per group, max.         800 mA           Interfaces         2; For the construction of lines and rings without external switch           Number of PROFINET interfaces         2; For the construction of lines and rings without external switch           Number of PROFINET interfaces         2; Incl. switch           Industrial Ethemet         •           • Number of ports of the integrated switch         2; Per port           PROFINET         Yes; also 3rd party PLC           Supports protocol for PROFINET IO         Yes           PROFILE         Yes           PROFILE         Yes           PROFILE         Yes           PROFILE         Yes           PROFILE         No           IRT         Yes           PROFILE         No           As-Interface         No           ETR/NX         No           Protocols         •           • TCP/IP         No           Redundancy mode         •           Media redundancy         -           - MRP         Yes           Euther protocols         •           • As-Interface Safety at Work         No           • DeviceNet         No <td>Output voltage</td> <td></td>	Output voltage	
• Current per channel, max.     100 mA       • Current per group, max.     800 mA       Mentacos     2: Fort be construction of lines and rings without external switch       Number of PROFINET interfaces     2: Fort be construction of lines and rings without external switch       10 mber of PROFINET interfaces     2: Fort be construction of lines and rings without external switch       • Number of ports of the integrated switch     2: Per port       PROFINET     Yes; also 3rd party PLC       Supports protocol for PROFINET IO     Yes       PROFINET CBA     No       IRT     Yes       PROFIBUS     No       MPI     No       AS-Interface     No       EIB/KNX     No       Protocols     Eib/KNX       Protocols     Vers       Protocols     Eib/KNX       Protocols     No       Media redundarcy     No	Rated value (DC)	24 V
• Current per group, max.         800 mA           Interfaces         Xumber 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           Supports protocol for PROFINET IO         Yes           PROFINET CBA         No           IRT         Yes           PROFISIS         No           Protocols (Ethernet)         -           • Torkinsfrace Safety at Work         No           • AS-Interface Safety at Work <td>Total current of the outputs</td> <td></td>	Total current of the outputs	
Interfaces         2: For the construction of lines and rings without external switch           Number of PROFINET Interfaces         2: Incl. switch           Industrial Ethernet         2: Per port           Protocols         PROFINET           PROFINET         Yes; also 3rd party PLC           Supports protocol for PROFINET IO         Yes           PROFINET CBA         No           PROFISIS         No           Protocols (Ethernet)         No           • TCP/IP         No           Redundancy mode         Interface Safety at Work           • AS-Interface Safety at Work         No           • Data-Highway         No           • DeviceNet	<ul> <li>Current per channel, max.</li> </ul>	100 mA
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         2; Per port           PROFINET         Yes; also 3rd party PLC           Supports protocol for PROFINET IO         Yes           PROFINET CBA         No           IRT         Yes           PROFINET CBA         No           PROFISUS         No           PROFISUS (Ethernet)         -           • TCP/IP         No           Redundancy mode         -           Media redundancy         -          MRP         Yes           Further protocols         No           • AS-Interface Safety at Work	<ul> <li>Current per group, max.</li> </ul>	800 mA
Number of PROFINET interfaces       2; Incl. switch         Industrial Ethernet       • Number of ports of the integrated switch       2; Per port         Protocols       Yes; also 3rd party PLC         Supports protocol for PROFINET IO       Yes; also 3rd party PLC         Supports protocol for PROFINET IO       Yes         PROFINET CBA       No         IRT       Yes         PROFINET CBA       No         PROFISafe       No         PROFISafe       No         PROFISATE       No         Protocols       -         • TCP/IP       No         Redundancy mode       -         Media redundancy       -         - MRP       Yes         Further protocols       -         • AS-Interface Safety at Work       No         • DeviceNet       No	Interfaces	
industrial Ethemet     Dimensional       • Number of ports of the integrated switch     2; Per port       PROFINET     Yes; also 3rd party PLC       Supports protocol for PROFINET IO     Yes       PROFINET CBA     No       IRT     Yes       PROFIsafe     No       PROFISIT     No       AS-Interface     No       EIB/KNX     No       Protocols (Ethernet)     No       • TCP/IP     No       Redundancy mode     Ves       Protocols (Ethernet)     -       • CP/IP     No       Redundancy     -       - MRP     Yes       Further protocols     -       • AS-Interface Safety at Work     No       • CAN     No       • AS-Interface Safety at Work     No       • CAN     No       • CAN     No       • CAN     No       • Data-Highway     No       • DeviceNet Safety     No       • DeviceNet Safety     No       • INTERBUS     No       • INTERBUS-Safety     No       • INTERBUS-Safety     No       • INTERBUS-Safety     No       • SafetyBUS p     No       • SafetyBUS p     No       • SERCOS     No <td>Number of industrial Ethernet interfaces</td> <td>2; For the construction of lines and rings without external switch</td>	Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch
• Number of ports of the integrated switch       2; Per port         PROFINET       Yes; also 3rd party PLC         Supports protocol for PROFINET IO       Yes         PROFINET CBA       No         IRT       Yes         PROFISIZ       No         IRT       Yes         PROFISIZ       No         Protocols (Ethernet)       No         • TCP/P       No         Patint redundancy       No         - MRP       Yes         Puther protocols       No         • CAN       No         • Data-Highway       No         • DeviceNet1       No         • DeviceNet2       No         • EtherNet/IP       No	Number of PROFINET interfaces	2; Incl. switch
Protocols     Yes; also 3rd party PLC       Supports protocol for PROFINET IO     Yes; also 3rd party PLC       Supports protocol for PROFINET IO     Yes       PROFINET CBA     No       IRT     Yes       PROFISITE CBA     No       PROFISITE     No       Protocols     No       EllsKNX     No       Protocols (Ethernet)     No       • TCP/IP     No       Redundancy mode     Yes       • MRP     Yes       Further protocols     No       • AS-Interface Safety at Work     No       • CAN     No       • DeviceNet     No       • INTERBUS     No <td< td=""><td>Industrial Ethernet</td><td></td></td<>	Industrial Ethernet	
PROFINET     Yes; also 3rd party PLC       Supports protocol for PROFINET IO     Yes       PROFINET CBA     No       IRT     Yes       PROFINET CBA     No       IRT     Yes       PROFINET CBA     No       PROFINET CBA     No       PROFINET CBA     No       PROFISUS     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       • Data-Highway     No       • Data-Highway     No       • DeviceNet Safety     No       • DeviceNet Safety     No       • No     •       • INTERBUS     No       • INTERBUS     No       • INTERBUS Safety     No       • SafetyBUs p     No       • SERCOS     No       • SERCOS     No       • SERCOS     No       • SUCOnet     No       • Other bus systems     No       • Other bus systems     No       • Other bus systems     No	<ul> <li>Number of ports of the integrated switch</li> </ul>	2; Per port
Supports protocol for PROFINET IO         Yes           PROFINET CBA         No           IRT         Yes           PROFISafe         No           PROFISUS         No           MPI         No           AS-Interface         No           EIB/KNX         No           Protocols (Ethernet)         No           TOP/IP         No           Redundancy mode         Mo           Media redundancy         -           - MRP         Yes           Furthers protocols         -           • AS-Interface Safety at Work         No           • CAN         No           • DeviceNet         No           • DeviceNet Safety         No           • DeviceNet Safety         No           • DeviceNet Safety         No           • EherNetI/P         No           • Foundation Fieldbus         No           • INTERBUS         No           • INTERBUS p         No           • Local Operating Network         No           • SafetyBUS p         No           • SafetyBUS p         No           • SterCOS         No           • Ster commissioning functions         <	Protocols	
PROFINET CBA     No       IRT     Yes       PROFISATE     No       PROFISUS     No       MPI     No       AS-Interface     No       EIB/KNX     No       Protocols (Ethernet)     •       • TCP/IP     No       Redundancy mode     •       Media redundancy     •       - MRP     Yes       Further protocols     •       • CAN     No       • CAN     No       • Data-Highway     No       • DeviceNet     No       • DeviceNet     No       • EherNet/IP     No       • Enernet/IP     No       • CaN     No       • DeviceNet     No       • DeviceNet     No       • DeviceNet     No       • EherNet/IP     No       • Call Operating Network     No       • INTERBUS     No       • INTERBUS Safety     No       • Local Operating Network     No       • SafetyBUS p     No       • SelecOs     No       • SelecOs     No       • SterCOS     No       • Other bus systems     No       • Other bus systems     No       • Other bus systems     No <td>PROFINET</td> <td>Yes; also 3rd party PLC</td>	PROFINET	Yes; also 3rd party PLC
IRT     Yes       PROFIsafe     No       PROFIBUS     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       • Data-Highway     No       • DeviceNet     No       • DeviceNet Safety     No       • EtherNet/IP     No       • EtherNet/IP     No       • EtherNet/IP     No       • SafetyBUS     No       • SafetyBUS     No       • INTERBUS     No       • INTERBUS p     No       • SafetyBUS p     No       • SafetyBUS p     No       • SERCOS     No       • SUCOnet     No       • Other bus systems     No <td>Supports protocol for PROFINET IO</td> <td>Yes</td>	Supports protocol for PROFINET IO	Yes
PROFisafe         No           PROFIBUS         No           MPI         No           AS-Interface         No           EIB/KNX         No           Protocols (Ethernet)         No           • TCP/IP         No           Redundancy mode         Media redundancy          MRP         Yes           Further protocols         Volume           • CAN         No           • CAN         No           • Data-Highway         No           • DeviceNet         No           • DeviceNet         No           • EtherNet/IP         No           • EtherNet/IP         No           • EtherNet/IP         No           • INTERBUS         No           • INTERBUS         No           • INTERBUS         No           • INTERBUS         No           • SafetyBUS p         No           • SECOS         No           • SERCOS         No           • SUCOnet         No           • Oberio us systems         No           • Ether bus systems         No           • SECOS         No           • SECOS         No <td>PROFINET CBA</td> <td>No</td>	PROFINET CBA	No
PROFIBUS       No         MPI       No         AS-Interface       No         EIB/KNX       No         Protocols (Ethernet)	IRT	Yes
MPI     No       AS-Interface     No       EIB/KNX     No       Protocols (Ethernet)	PROFIsafe	No
AS-Interface       No         EIB/KNX       No         Protocols (Ethernet)	PROFIBUS	No
EIB/KNX       No         Protocols (Ethernet)       No         Redundancy mode       Media redundancy        MRP       Yes         Further protocols       No         • AS-Interface Safety at Work       No         • CAN       No         • Data-Highway       No         • DeviceNet       No         • EtherNet/IP       No         • EtherNet/IP       No         • INTERBUS       No         • INTERBUS       No         • INTERBUS       No         • Local Operating Network       No         • SafetyBUS p       No         • SUCOnet       No         • SUCOnet       No         • Other bus systems       No         • Other bus systems       No         • Other bus systems       Yes; During switch on         Key and signal lamp test       Yes; automatically when switching on	MPI	No
Protocols (Ethernet)       No         • TCP/IP       No         Redundancy mode       Media redundancy        MRP       Yes         Further protocols       ************************************	AS-Interface	No
• TCP/IP       No         Redundancy mode       Media redundancy        MRP       Yes         Further protocols       No         • AS-Interface Safety at Work       No         • CAN       No         • Data-Highway       No         • DeviceNet       No         • DeviceNet       No         • EtherNet/IP       No         • Foundation Fieldbus       No         • INTERBUS       No         • INTERBUS       No         • Local Operating Network       No         • SafetyBUS p       No         • SERCOS       No         • SUCOnet       No         • other bus systems       No         Test commissioning functions       Yes; During switch on         Key and signal lamp test       Yes; During switch ing on	EIB/KNX	No
Redundancy mode         Media redundancy        MRP       Yes         Further protocols       Ves         Further protocols       No         • AS-Interface Safety at Work       No         • CAN       No         • Data-Highway       No         • DeviceNet       No         • DeviceNet Safety       No         • DeviceNet Safety       No         • EtherNet/IP       No         • Foundation Fieldbus       No         • INTERBUS       No         • INTERBUS       No         • INTERBUS       No         • Local Operating Network       No         • Local Operating Network       No         • MODBUS       No         • SERCOS       No         • SUCOnet       No         • other bus systems       No         Test commissioning functions       Yes; During switch on         Illuminant test       Yes; During switch on         Key and signal lamp test       Yes; automatically when switching on	Protocols (Ethernet)	
Media redundancy       Yes        MRP       Yes         Further protocols       -         • AS-Interface Safety at Work       No         • CAN       No         • CAN       No         • Data-Highway       No         • DeviceNet       No         • DeviceNet Safety       No         • DeviceNet Safety       No         • EtherNet/IP       No         • Foundation Fieldbus       No         • INTERBUS       No         • INTERBUS       No         • Local Operating Network       No         • MODBUS       No         • SafetyBUS p       No         • SERCOS       No         • SUCOnet       No         • other bus systems       No         Test commissioning functions       Yes; During switch on         Key and signal lamp test       Yes; automatically when switching on	• TCP/IP	No
MRP     Yes       Further protocols       • AS-Interface Safety at Work     No       • CAN     No       • CAN     No       • Data-Highway     No       • DeviceNet     No       • DeviceNet Safety     No       • DeviceNet Safety     No       • EtherNet/IP     No       • Foundation Fieldbus     No       • INTERBUS     No       • INTERBUS     No       • INTERBUS     No       • INTERBUS     No       • Local Operating Network     No       • MODBUS     No       • SERCOS     No       • SUCOnet     No       • other bus systems     No       Test commissioning functions     Yes; During switch on       Key and signal lamp test     Yes; automatically when switching on	Redundancy mode	
Further protocols <ul> <li>AS-Interface Safety at Work</li> <li>CAN</li> <li>CAN</li> <li>Data-Highway</li> <li>DeviceNet</li> <li>DeviceNet</li> <li>DeviceNet Safety</li> <li>No</li> <li>DeviceNet Safety</li> <li>No</li> <li>EtherNet/IP</li> <li>Foundation Fieldbus</li> <li>INTERBUS</li> <li>INTERBUS-Safety</li> <li>Local Operating Network</li> <li>MODBUS</li> <li>SafetyBUS p</li> <li>SuCOnet</li> <li>other bus systems</li> </ul> <li>Test commissioning functions</li> <li>Test commissioning functions</li> <li>Ether bus dignal lamp test</li> <ul> <li>Yes; During switch on</li> <li>Yes; automatically when switching on</li> </ul>	Media redundancy	
• AS-Interface Safety at WorkNo• CANNo• Data-HighwayNo• DeviceNetNo• DeviceNet SafetyNo• DeviceNet SafetyNo• EtherNet/IPNo• Foundation FieldbusNo• INTERBUSNo• INTERBUS-SafetyNo• Local Operating NetworkNo• MODBUSNo• SafetyBUS pNo• SERCOSNo• SUCOnetNo• other bus systemsNoTest commissioning functionsIlluminant testYes; During switch on Yes; automatically when switching onEMC	— MRP	Yes
• CANNo• Data-HighwayNo• DeviceNetNo• DeviceNet SafetyNo• DeviceNet SafetyNo• EtherNet/IPNo• Foundation FieldbusNo• INTERBUSNo• INTERBUS-SafetyNo• Local Operating NetworkNo• MODBUSNo• SafetyBUS pNo• SERCOSNo• SUCOnetNo• other bus systemsNo• ther bus systemsNo• Ether bus systemsYes; During switch onKey and signal lamp testYes; automatically when switching onEMCEMC		
Data-HighwayNoDeviceNetNoDeviceNet SafetyNoEtherNet/IPNoFoundation FieldbusNoINTERBUSNoINTERBUS-SafetyNoLocal Operating NetworkNoMOBUSNoSafetyBUS pNoSERCOSNoSUCOnetNoother bus systemsNoIlluminant testYes; During switch onKey and signal lamp testYes; automatically when switching on	<ul> <li>AS-Interface Safety at Work</li> </ul>	No
• DeviceNetNo• DeviceNet SafetyNo• EtherNet/IPNo• Foundation FieldbusNo• INTERBUSNo• INTERBUS-SafetyNo• Local Operating NetworkNo• MODBUSNo• SafetyBUS pNo• SERCOSNo• SUCOnetNo• other bus systemsNoTest commissioning functionsYes; During switch onEMCYes; automatically when switching on	• CAN	No
• DeviceNet SafetyNo• EtherNet/IPNo• Foundation FieldbusNo• INTERBUSNo• INTERBUSNo• INTERBUS-SafetyNo• Local Operating NetworkNo• MODBUSNo• SafetyBUS pNo• SERCOSNo• SUCOnetNo• other bus systemsNoTest commissioning functionsIlluminant testYes; During switch onKey and signal lamp testYes; automatically when switching onEMC		No
EtherNet/IPNo• EtherNet/IPNo• Foundation FieldbusNo• INTERBUSNo• INTERBUS-SafetyNo• Local Operating NetworkNo• MODBUSNo• SafetyBUS pNo• SERCOSNo• SUCOnetNo• other bus systemsNoTest commissioning functionsIlluminant testYes; During switch onKey and signal lamp testYes; automatically when switching onEMC		
Foundation FieldbusNoINTERBUSNoINTERBUS-SafetyNoLocal Operating NetworkNoMODBUSNoSafetyBUS pNoSERCOSNoSUCOnetNoother bus systemsNoIlluminant testYes; During switch onKey and signal lamp testYes; automatically when switching on	-	
• INTERBUSNo• INTERBUS-SafetyNo• Local Operating NetworkNo• MODBUSNo• SafetyBUS pNo• SERCOSNo• SUCOnetNo• other bus systemsNo• other bus systemsNoIlluminant testYes; During switch onKey and signal lamp testYes; automatically when switching on		
• INTERBUS-SafetyNo• Local Operating NetworkNo• MODBUSNo• SafetyBUS pNo• SERCOSNo• SUCOnetNo• other bus systemsNo• other bus systemsNoIlluminant testYes; During switch onKey and signal lamp testYes; automatically when switching on		
Local Operating NetworkNo• MODBUSNo• SafetyBUS pNo• SERCOSNo• SUCOnetNo• other bus systemsNo• other bus systemsNoTest commissioning functionsIlluminant testYes; During switch onKey and signal lamp testYes; automatically when switching onEMC		
• MODBUSNo• SafetyBUS pNo• SERCOSNo• SUCOnetNo• other bus systemsNo• other bus systemsNoTest commissioning functionsIlluminant testYes; During switch onKey and signal lamp testYes; automatically when switching onEMC	-	
• SafetyBUS pNo• SERCOSNo• SUCOnetNo• other bus systemsNo• other bus systemsNoTest commissioning functionsIlluminant testYes; During switch onKey and signal lamp testYes; automatically when switching onEMC	·	
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		
• SUCOnet     No       • other bus systems     No       Test commissioning functions     Illuminant test       Illuminant test     Yes; During switch on       Key and signal lamp test     Yes; automatically when switching on       EMC     Yes; Automatically when switching on		
• other bus systems     No       Test commissioning functions     Illuminant test       Illuminant test     Yes; During switch on       Key and signal lamp test     Yes; automatically when switching on       EMC     Yes		
Test commissioning functions         Illuminant test       Yes; During switch on         Key and signal lamp test       Yes; automatically when switching on         EMC       Yes; Automatically when switching on		
Illuminant test     Yes; During switch on       Key and signal lamp test     Yes; automatically when switching on       EMC		No
Key and signal lamp test     Yes; automatically when switching on       EMC		
EMC		
		Yes; automatically when switching on
Emission of radio interference acc. to EN 55.011	EMC	
	Emission of radio interference acc. to EN 55 011	

Limit class A for use is industrial cross	Very Group 1, measured at a distance of 10 m
<ul> <li>Limit class A, for use in industrial areas</li> <li>Limit class B, for use in residential areas</li> </ul>	Yes; Group 1, measured at a distance of 10 m
• Limit class b, for use in residential areas	No
NEMA (front)	
Enclosure Type 4 at the front	No
Enclosure Type 4 at the front	Yes; Incl. NEMA12
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
KC approval	Yes
Suitable for safety functions	Yes
Use in hazardous areas	100
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
<ul> <li>Det Norske Veritas (DNV)</li> </ul>	No
<ul> <li>Lloyds Register of Shipping (LRS)</li> </ul>	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
<ul> <li>Operation (vertical installation)</li> </ul>	
— For vertical installation, min.	0°C
<ul> <li>For vertical installation, max.</li> </ul>	55 °C
<ul> <li>Operation (max. tilt angle)</li> </ul>	
— At maximum tilt angle, min.	0°C
— At maximum tilt angle, min.	45 °C
<ul> <li>Operation (vertical installation, portrait format)</li> </ul>	
— For vertical installation, min.	0°C
— For vertical installation, max.	55 °C
<ul> <li>Operation (max. tilt angle, portrait format)</li> </ul>	
— At maximum tilt angle, min.	0° 0
— At maximum tilt angle, min.	45 °C
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	0° C
Relative humidity	OF V/ : no condenantian
Operation, max.	95 %; no condensation
Configuration	
Configuration software	Vec
STEP 7 Basic (TIA Portal)	Yes
STEP 7 Professional (TIA Portal)  Europhics (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
<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
Modicon (Modbus)	No
Mechanics/material	
Service life	
<ul> <li>Short-stroke keys (in switching cycles)</li> </ul>	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:

8/10/2020 🖸