## **SIEMENS**

## **Data sheet**

6AV3688-3EH47-0AX0

SIMATIC HMI KP32F PN, Key Panel, 32 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, 16 DI+16 DI/DO, 4 safety DI 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  32  Expansions for operator control of the process  • PD direct LEDs (LED 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)  8; Adjustable brightness  • PD direct LEDs (LED as S7 output I/O)  • Number of color modes for LED  • Direct keys (keys as S7 input I/O)  10; Installation type/mounting  Mounting type  Mounting position  Rack mounting  No  Front mounting  Wall mounting/direct mounting  Mounting in portrait 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	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 — Number of color modes for LED • Direct Lebs (LEDs as S7 output I/O) • Number of color modes for LED • Direct keys (keys as S7 input I/O) 32  Installation type/mounting Mounting type Mounting type Mounting type Mounting position Rack mounting Front mounting Wall mounting/direct mounting Mounting in jandrate format possible Mounting in inardscape 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, lower limit (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) perm	Product type designation	KP32F PN
Membrane keyboard	Control elements	
Membrane keyboard — user-definable label membrane keys Function keys — Number of function keys — Number of short-stroke keys — Number of 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) • Number of color modes for LED • Direct keys (keys as S7 input I/O) 32  Installation type/mounting  Mounting type Mounting position Front mounting No Front mounting Wall mounting/direct mounting  Mounting in portrait format possible Mounting in Inandscape 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 Current Current Current Current consumption (rated value) 1 A  Type of output  LED colors • red • yellow  Yes  32   Yes  32  Expansions (Park Adjustable brightness 32  Expansions for operator ontrol of the process 4 Park Adjustable brightness 32  Expansions for operator developes 4 Park Adjustable brightness 32  Expansions for operator developes 4 Park Adjustable brightness 32  Expansions (Park Adjustable brightness 4 Park Adjustable b	With parameterizable keys	Yes
- user-definable label membrane keys  • Function keys  - Number of function keys  • Short-stroke keys  - Number of short-stroke keys  - Number of short-stroke keys  - Number of color modes for 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)  • 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 keys (keys as S7 input I/O)  Rack mounting type  Mounting type  Mounting position  Rack mounting  Pront mounting  Yes  Rail mounting  Wall mounting/direct mounting  No  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, lower limit (DC)  permissible range, upper limit (DC)  permissib	Keyboard fonts	
• Function keys     — Number of function keys     • Short-stroke keys     — Number of 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)     • Number of color modes for LED     • Direct keys (keys as S7 input I/O)     32  Installation type/mounting  Mounting type     Mounting type     Mounting position     Rack mounting     No     Front mounting     No     Front mounting     No 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     • red     • yellow     • yes     • yellow     Yes     • yellow     Yes     • yellow     Yes     *     * yellow     Yes     *     * yellow     Yes     *     * yellow     Yes     * yes     * yes     * yes     * yellow     Yes     * yes     * yes     * yellow     * Yes     * yes     * yellow     * Yes     * yes     * yellow	<ul> <li>Membrane keyboard</li> </ul>	
- Number of function keys  Short-stroke keys  - Number of short-stroke keys  52  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) • Direct keys (keys as S7 input I/O)  Installation type/mounting  Mounting type  Mounting type  Mounting clip  Mounting position  Rack mounting  No  Rail mounting  Wall mounting/direct mounting  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, lower limit (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range,	<ul> <li>user-definable label membrane keys</li> </ul>	Yes
Short-stroke keys  Number of short-stroke keys  Direct LEDs (LEDs as S7 output I/O) Si; Adjustable brightness Direct keys (keys as S7 input I/O) Si; red, green, blue, yellow, white Direct keys (keys as S7 input I/O) Si; red, green, blue, yellow, white Direct keys (keys as S7 input I/O) Si; red, green, blue, yellow, white Direct keys (keys as S7 input I/O) Si; red, green, blue, yellow, white Si; red, green, blue, yellow, w	<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) 32  Installation type/mounting  Mounting type Mounting position Rack mounting Front mounting  Wall mounting/direct mounting  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  DC  Rated value (DC) permissible range, lower limit (DC) permissible range, upper	<ul> <li>Number of function keys</li> </ul>	32
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)  1	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)     S; red, green, blue, yellow, white     Si red, green,	Number of short-stroke keys	32
Number of color modes for LED Direct keys (keys as S7 input I/O) Direct keys (keys as S7 input I/O)  Nounting type Mounting type Mounting position Rack mounting No Front mounting No Wall mounting/direct 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) 28.8 V  Input current Current consumption (rated value)  Pres Possible range Possibl	·	
◆ Direct keys (keys as S7 input I/O)  Installation type/mounting  Mounting type  Mounting position  Rack mounting  Front mounting  Rail mounting  Wall mounting/direct mounting  Mounting in portrait format possible  Mounting in portrait format possible  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  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  p		8; Adjustable brightness
Installation type/mounting  Mounting type  Mounting position  Rack mounting  Rack mounting  Yes  Rail mounting  No  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 signalling 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)  1 A  Type of output  LED colors  • red • yes  Mounting clip  Mounting clip  Mounting clip  Mounting clip  Westrical  No  No  No  No  No  Yes  Yes  Yes  Mounting clip  Wertical  No  No  Pers  No  Pers  Supply voltage  DC  24 V; 24 V looped through at connector, no interruption on pulling permissible range, upper limit (DC)  28.8 V  Input current  Current consumption (rated value)  1 A  Type of output  LED colors  • red • yes • yellow  Yes		
Mounting type Mounting position Vertical  Rack mounting No Front mounting Front mounting No Wall mounting/direct mounting Mounting in portrait format possible Mounting in landscape format possible Yes Mounting in landscape format possible Yes Mounting in landscape format possible Yes  Mounting to landscape format possible Yes  Type of slots for command devices and signaling units  DC Rated value (DC) 24 V; 24 V looped through at connector, no interruption on pulling permissible range, lower limit (DC) 28.8 V Input current Current consumption (rated value)  1 A  Type of output  LED colors • red • yes • yellow Yes		32
Mounting position vertical Rack mounting Rait mounting Rait 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	Installation type/mounting	
Rack mounting Front mounting Yes Rail mounting No Wall mounting/direct mounting No Mounting in portrait format possible Mounting in landscape format possible Tyes To the front/rear Vertilation 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) Type of output  LED colors Fred Supply voltage Tyes Fred Yes Yes Yes Yes	Mounting type	Mounting clip
Front mounting  Rail mounting  Rail mounting  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)  Input current  Current consumption (rated value)  Type of output  LED colors  • red  • yellow  Yes	Mounting position	vertical
Rail mounting 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 signalling 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) 1A  Type of output  LED colors or red yellow Yes  No	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  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  Input current  Current consumption (rated value)  Type of output  LED colors  or red oyellow  Yes  Yes  Yes  Yes	Front mounting	Yes
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  Type of supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Input current  Current consumption (rated value)  LED colors  or red oyellow  Yes  Yes  Yes  Yes  Yes		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  Yes  30°; To the front/rear  0  20°; To the front/rear  20°; To the front/rear  0  20°; To the front/rear  20°; To the front/rear		No
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  30°; To the front/rear		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)  1 A  Type of output  LED colors  • red • yellow  Yes		
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  • yes  • yellow	ventilation	30°; To the front/rear
Type of supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Input current  Current consumption (rated value)  LED colors  • red  • yellow  Type of supply voltage  DC  24 V; 24 V looped through at connector, no interruption on pulling  20.4 V  28.8 V  Input current  1 A  Yes  Yes	Number of slots for command devices and signaling units	0
Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Input current  Current consumption (rated value)  LED colors  • red  • yellow  Yes	Supply voltage	
permissible range, lower limit (DC)  permissible range, upper limit (DC)  28.8 V  Input current  Current consumption (rated value)  1 A  Type of output  LED colors  • red • yellow  • yellow  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  Yes	Rated value (DC)	24 V; 24 V looped through at connector, no interruption on pulling
Input current  Current consumption (rated value)  Type of output  LED colors  • red • yellow  Yes	permissible range, lower limit (DC)	20.4 V
Current consumption (rated value)  Type of output  LED colors  • red  • yellow  Yes	permissible range, upper limit (DC)	28.8 V
Type of output  LED colors  • red • yellow  Yes	Input current	
LED colors  • red Yes  • yellow Yes	Current consumption (rated value)	1 A
<ul><li>red</li><li>yellow</li><li>Yes</li></ul>	Type of output	
• yellow Yes	LED colors	
,	• red	Yes
• green Yes	• yellow	Yes
	• green	Yes

• white	Yes
• blue	Yes
Digital inputs	
Number of digital inputs	32; Total inputs and outputs max. 32 and 2x SIL 2 or 4x SIL 3
Input voltage	5-, . Star impacts and suspense man. SE and EA SIE 2 of TA SIE 0
Rated value (DC)	24 V
Digital outputs	27 V
	4C: May 20 inputs and autoute (tatal)
Number of digital outputs	16; Max. 32 inputs and outputs (total) Yes
Short-circuit protection	Tes
Switching capacity of the outputs	100 mA
with resistive load, max.  Output voltage	100 mA
Output voltage	24 V: Non incloted
Rated value (DC)  Total current of the cutoute	24 V; Non-isolated
Total current of the outputs	100 mA
Current per channel, max.	
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
DeviceNet	No
DeviceNet Safety	No
Foundation Fieldbus	No
INTERBUS	No
INTERBUS     INTERBUS-Safety	No
Local Operating Network	No
MODBUS	No
SafetyBUS p	No
• SERCOS	No
• SUCOnet	No
other bus systems	No
· .	INO
Test commissioning functions	Voc. During quitch on
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	

Initial class A, for use in incidental areas  Initial class A, for use in incidental areas  Degree and class of protection  IP (ear)  IP (at the front)  IP (at the	<ul> <li>Limit class A, for use in industrial areas</li> </ul>	Yes; Group 1, measured at a distance of 10 m
Degree and class of protection  IP (at the front)  IP (at the front)  Fi (rear)  NEAK (front)  - Enclosure Type 4 at the front - Yes  CE mark  ULIII  CHULIS  CEMPA - READ (formerly Cost-R)  CEMPA - READ (formerly Cost-R)  CEMPA - ATEX Zone 2 - No - ATEX Zone 2		
Procession		110
Pirear    NEMA (tont)   Enclosure Type 4 at the front   Yes, Incl. NEMA12   Enclosure Type 4 at the front   Yes, Incl. NEMA12   Standards, approxiles, certificates   Yes		ID65
NEMA (front)		
		IF 20
■ Enclosure Type 4.4 at the front Standards, approvals, certificates  CE mark  CULUS  Yes  CRM (gromerly C-TICIK)  KR approval  EAC (formerly C-TICIK)  Yes  CCC  No: not necessary  Sutable for safety functions  Yes  LEAC (formerly Gast-R)  CCC  No: not necessary  Ves  CCC  Sutable for safety functions  Yes  Use in hazardous areas  ■ ATEX Zone 2  ■ ATEX Zone 2  ■ AULUS Class I Zone 1  ■ CULUS Class I Zone 2, Division 2  ■ CULUS Class I Zone 2, Division 2  ■ Mo  ■ Cultus Class I Zone 2, Division 2  ■ Mo  ■ Carmanischer Loyd (GL)  ■ American Bureau of Shipping (ABS)  ■ Dere and Vertras (BV)  ■ Det Norske Vertras (DNV)  ■ Det Norske Vertras (DNV)  ■ Det Norske Vertras (DNV)  ■ Dopation (Raji Kyloka) (Class NK)  ■ Plosik Rejest Folkhow (PRS)  Ambient conditions  Ambient temperature during operation  ■ min.  ■ For vertical installation, min.  ■ For vertical installation in.  ■ For vertical install		No
Standards, approvals, certificates CE mark CULus CULus RCM (formerly C-TICK) Yes RCM (formerly Gost-R) CCC No; not necessary Yes CCC Sutable for safety functions Yes  - ATEX Zone 2 - ATEX Zone 2 - ATEX Zone 2 - ATEX Zone 2 - CULus Class I Zone 2, Division 2 - CH Culus Class I Zone 2, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Culus Class I Zone 4, Division 2 - CH Class I Division 2 - CH Cla		
CE mark		103, III. NEWATZ
Ves   RCM (formerly C-TICK)		Vac
RCM (formerly C-TICK)		
KC approval		
EAC (formerly Gost-R) CCC CCC No; not not necessary Ves  Use in hazardous areas  ATEX Zone 2  OCLUS Class I Zone 1  OCLUS Class I Zone 2, Division 2  FM Class I Division 2  Marine approval  Germanischer Lloyd (GL)  American Bureau of Shipping (ABS)  Bureau Vertas (BV)  Det Norske Veritas (DNV)  Lloyds Register of Shipping (LRS)  No No Polsk Rejest Statkow (PRS)  Ambient temperature during operation  min.  max.  Operation (wertical installation, max.  Operation (max. titl angle, min.  — For vertical installation, min.  — For proventical install		
CCC Surlable for safety functions Ves Use in hazardous areas  • ATEX Zone 2 • ATEX Zone 2 • CULus Class I Zone 1 • CULus Class I Zone 2   No • American Bureau of Shipping (ABS)   No • American Bureau of Shipping (ABS)   No • American Bureau of Shipping (ABS)   No • Det Norsek Veritas (BV)   No • Det Norsek Veritas (CNY)   No • Lloyds Register of Shipping (LRS)   No • Nippon Kagli Kyoka (Class NK)   No • Polski Rejestr Statkow (PRS)   No • Ambient conditions  Ambient temperature during operation • min. • max. • 66 °C  Operation (werical installation, min. • For vertical installation, max. • 55 °C  Operation (max. tilt angle, max. • At maximum tilt angle, min. • At maximum tilt angle, max. • Af °C  Operation (verical installation, max. • For vertical installation, max. • Operation (verical installation, max. • Operation (verical installation, max. • For vertical installation, max. • Operation (verical installation, max. • Operation (verical installation, max. • For vertical installation, max. • Operation (verical installation, max. • For vertical installation, max. • Operation (verical installation, max. • Operation (verical installation, max. • For vertical installation, max. • Operation (verical installation, max. • For vertical installation, max. • Operation (verical installation, max. • Operation (verical installation, max. • Operation (verical installation, max. • For vertical installation, max. • Operation (verical installation, max. • Operation (ver		
Suitable for safety functions  Use in hazardous areas  ATEX Zone 2  ATEX Zone 2  CULus Class I Zone 1  CULus Class I Zone 1  CULus Class I Zone 2, Division 2  No  FM Class I Division 2  No  ARMAN American Bureau of Shipping (ABS)  Delivacian Vertica (BV)  Del Norske Vertica (BV)  Del Norske Vertica (BV)  No  No  No  No  No  No  No  No  Del Lipdys Register of Shipping (LRS)  No  No  No  No  No  Del Lipdys Register of Shipping (LRS)  No  No  No  No  Polski Rejest Statkow (PRS)  Ambient temperature during operation  min.  o"C  max.  S5 "C  Operation (vertical installation, min.  For vertical installation, max.  Operation (max. till angle. min.  At maximum tilt angle. min.  For vertical installation, min.  For vertical installation, min.  O"C  Operation (vertical installation, min.  At maximum tilt angle. min.  At maximum tilt angle. min.  For vertical installation, min.  For vertical installation, min.  S5 "C  Operation (max. till angle, portrait format)  For vertical installation, max.  S5 "C  Operation (max. till angle, portrait format)  At maximum tilt angle, min.  At "C  Ambient temperature during storage/transportation  min.  max.  Ab "C  Ambient temperature during storage/transportation  min.  To "C  T		
Use in hazardous areas		
		100
		No
• cULus Class I Zone 2, Division 2 No  • FM Class I Division 2 No  Marine approval  • Germanischer Lloyd (GL)  • American Bureau of Shipping (ABS)  • Bureau vertas (BV)  • Det Norske Veritas (DNV)  • Lloyds Register of Shipping (LRS)  • Nipon Kajil Kyokai (Class NK)  • Polski Rejestr Statkow (PRS)  Ambient conditions  Ambient temperature during operation  • min.  • max.  • o °C  Operation (vertical installation, min.  — For vertical installation, max.  Operation (wertical installation, max.  Operation (vertical installation, max.  — For vertical installation, max.  Operation (max. tilt angle, max.  At °C  Operation (max. tilt angle, max.  45 °C  Operation (max. tilt angle, max.  At a maximum tilt angle, max.  45 °C  Ambient temperature during storage/transportation  • min.  • At maximum tilt angle, max.  Ambient temperature during storage/transportation  • min.  • max.  Relative humidity  • Operation, max.  95 %; no condensation  configuration of header  Operation (TIA Portal)  Yes  Functionality under WinCC (TIA Portal)  Process coupling  • \$7-1200  Yes; with ET 200pro CPU and ET 200S CPU		
### FM Class I Division 2    Marine approval		
Germanischer Lloyd (GL)  American Bureau of Shipping (ABS)  Dureau Veritas (BV)  Det Norske Veritas (DNV)  Lloyds Register of Shipping (LRS)  No  Nippon Kajii Kyokai (Class NK)  Potski Rejestr Statkow (PRS)  No  Ambient conditions  Ambient temperature during operation  inin.  min.  orc  max.  Operation (vertical installation)  — For vertical installation, min.  — For vertical installation, max.  Operation (wax. tilt angle)  — At maximum tilt angle, max.  At maximum tilt angle, max.  Operation (vertical installation, min.  — For vertical installation, portrait format)  — For vertical installation, min.  Orc  Operation (vertical installation, min.  — For vertical installation, portrait format)  — At maximum tilt angle, max.  At "C  Operation (wax. tilt angle, max.  For vertical installation, min.  Orc  Operation (wax. tilt angle, min.  — For vertical installation, min.  — For vertical installation, min.  Orc  Operation (wax. tilt angle, min.  — For vertical installation, min.  Orc  Operation (max. tilt angle, min.  — At maximum tilt angle, min.  — At maximum tilt angle, min.  — At maximum tilt angle, min.  Orc  Ambient temperature during storage/transportation  in min.  orc  orc  max.  Relative humidity  Operation, max.  Operation, max.  Operation, max.  So "C  Operation floader  Configuration / header  Configuration / header  Configuration software  STEP 7 Basic (TIA Portal)  Yes  Functionality under WinCc (TIA Portal)  Process coupling  ST-1200  Yes; with ET 200pro CPU and ET 200S CPU		
Germanischer Lloyd (GL)  American Bureau of Shipping (ABS)  Dureau Veritas (BV)  Det Norske Veritas (DNV)  Lloyds Register of Shipping (LRS)  No  Nippon Kajii Kyokai (Class NK)  Potski Rejestr Statkow (PRS)  No  Ambient conditions  Ambient temperature during operation  inin.  min.  orc  max.  Operation (vertical installation)  — For vertical installation, min.  — For vertical installation, max.  Operation (wax. tilt angle)  — At maximum tilt angle, max.  At maximum tilt angle, max.  Operation (vertical installation, min.  — For vertical installation, portrait format)  — For vertical installation, min.  Orc  Operation (vertical installation, min.  — For vertical installation, portrait format)  — At maximum tilt angle, max.  At "C  Operation (wax. tilt angle, max.  For vertical installation, min.  Orc  Operation (wax. tilt angle, min.  — For vertical installation, min.  — For vertical installation, min.  Orc  Operation (wax. tilt angle, min.  — For vertical installation, min.  Orc  Operation (max. tilt angle, min.  — At maximum tilt angle, min.  — At maximum tilt angle, min.  — At maximum tilt angle, min.  Orc  Ambient temperature during storage/transportation  in min.  orc  orc  max.  Relative humidity  Operation, max.  Operation, max.  Operation, max.  So "C  Operation floader  Configuration / header  Configuration / header  Configuration software  STEP 7 Basic (TIA Portal)  Yes  Functionality under WinCc (TIA Portal)  Process coupling  ST-1200  Yes; with ET 200pro CPU and ET 200S CPU		
American Bureau of Shipping (ABS) Bureau Vertals (BV) De It Norske Veritas (DNV) Lloyds Register of Shipping (LRS) No Nippon Kaiji Kyokai (Class NK) Polski Rejesti Statkow (PRS)  Ambient conditions  Ambient temperature during operation  max. S55 °C  Operation (vertical installation) For vertical installation, min. For vertical installation, max. S55 °C  Operation (max. tilt angle) At maximum tilt angle, min. At maximum tilt angle, max. S55 °C  Operation (vertical installation, min. For vertical installation, max. S55 °C  Operation (max. tilt angle) At maximum tilt angle, max. S55 °C  Operation (max. tilt angle) At maximum tilt angle, max. S55 °C  Operation (max. tilt angle, min. For vertical installation, max. S55 °C  Operation (max. tilt angle, min. S55 °C  Opera	• •	No
Bureau Veritas (BV)  Det Norske Veritas (DNV)  Lloyds Register of Shipping (LRS)  No  Nippon Kaiji Kyokai (Class NK)  Polski Rejestr Statkow (PRS)  Ambient conditions  Ambient temperature during operation  min.  min		No
Lloyds Register of Shipping (LRS) No Nippon Kaiji Kyokai (Class NK) Polski Rejestr Statkow (PRS)  Ambient conditions  Ambient conditions  Ambient temperature during operation  ini. max. S56 °C Operation (vertical installation) — For vertical installation, min. — For vertical installation, max. S56 °C Operation (max. tit angle) — At maximum tit angle, min. — At maximum tit angle, max. Operation (vertical installation, max. S56 °C Operation (max. tit angle)  — At maximum tit angle, min. — At maximum tit angle, max. Operation (vertical installation, portrait format)  — For vertical installation, min. — For vertical installation, max. Operation (max. tit angle, portrait format) — At maximum tit angle, min. — At maximum tit angle, min. — At maximum tit angle, max. 45 °C  Ambient temperature during storage/transportation  inin. — 20 °C  reax.  Relative humidity  Operation, max. Operation, max.  S56 %; no condensation  configuration / header  Configuration software  STEP 7 Basic (TIA Portal) Yes  STEP 7 Professional (TIA Portal) Process coupling  S7-1200 Yes; with ET 200pro CPU and ET 200S CPU		No
Nippon Kaiji Kyokai (Class NK)     Polski Rejestr Statkow (PRS)     No  Ambient conditions  Ambient temperature during operation     • min.     • max.     55 °C  Operation (vertical installation, min.     — For vertical installation, max.     55 °C  Operation (max. tilt angle)     — At maximum tilt angle, min.     — At maximum tilt angle, max.  Operation (vertical installation, max.  Operation (vertical installation, max.  Operation (vertical installation, min.     — For vertical installation, min.     — At maximum tilt angle, max.     — At maximum tilt angle, portrait format)  — At maximum tilt angle, min.     — At maximum tilt angle, max.     45 °C  Ambient temperature during storage/transportation  • min.     • min.     • max.  Relative humidity  • Operation, max.  Configuration / header  Configuration / header  Configuration software  • STEP 7 Basic (TIA Portal)  Process coupling  • \$7-1200  Yes; with ET 200pro CPU and ET 200S CPU		No
Polski Rejestr Statkow (PRS)  Ambient conditions  Ambient temperature during operation  • min. • max. • max. • 55 °C  Operation (vertical installation)  — For vertical installation, min. — For vertical installation, max. • 55 °C  Operation (max. tilt angle)  — At maximum tilt angle, min. — At maximum tilt angle, min. — For vertical installation, portrait format)  — For vertical installation, portrait format)  — For vertical installation, min. — For vertical installation, max.  Operation (vertical installation, max.  55 °C  Operation (war. tilt angle, portrait format)  — For vertical installation, max.  55 °C  Operation (max. tilt angle, portrait format)  — At maximum tilt angle, portrait format)  — At maximum tilt angle, min. — At maximum tilt angle, min. — At maximum tilt angle, max.  45 °C  Ambient temperature during storage/transportation  • min. • on °C  Relative humidity • Operation, max.  60 °C  Relative humidity • Operation, max.  • STEP 7 Basic (TIA Portal) • Yes • STEP 7 Professional (TIA Portal)  Process coupling • \$7-1200  Yes: with ET 200pro CPU and ET 200S CPU	<ul> <li>Lloyds Register of Shipping (LRS)</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, 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, min. 45 °C  Ambient temperature during storage/transportation  • min20 °C  • max. 60 °C  Relative humidity  • Operation, max. 95 %; no condensation  configuration / header  Configuration of header  Configuration software  • STEP 7 Professional (TIA Portal) Yes  Functionality under WinCC (TIA Portal)  Process coupling  • S7-1200 Yes; with ET 200pro CPU and ET 200S CPU	<ul> <li>Nippon Kaiji Kyokai (Class NK)</li> </ul>	No
Ambient temperature during operation  • min. • 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. — At maximum tilt angle, max. 45 °C  Operation (vertical installation, portrait format) — For vertical installation, min. 0 °C — For vertical installation, min. 0 °C Operation (wax. tilt angle, portrait format) — For vertical installation, max. 55 °C  Operation (max. tilt angle, portrait format) — At maximum tilt angle, min. 0 °C — 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) • STEP 7 Professional (TIA Portal) Process coupling • S7-1200 Yes; with ET 200pro CPU and ET 200S CPU	<ul> <li>Polski Rejestr Statkow (PRS)</li> </ul>	No
<ul> <li>min.</li> <li>max.</li> <li>55 °C</li> <li>Operation (vertical installation)</li> <li>— For vertical installation, min.</li> <li>— For vertical installation, max.</li> <li>55 °C</li> <li>Operation (max. tilt angle)</li> <li>— At maximum tilt angle, min.</li> <li>— At maximum tilt angle, max.</li> <li>— At maximum tilt angle, max.</li> <li>— For vertical installation, portrait format)</li> <li>— For vertical installation, min.</li> <li>— 0 °C</li> <li>— For vertical installation, max.</li> <li>55 °C</li> <li>Operation (max. tilt angle, portrait format)</li> <li>— At maximum tilt angle, min.</li> <li>— 0 °C</li> <li>— At maximum tilt angle, max.</li> <li>45 °C</li> <li>Ambient temperature during storage/transportation</li> <li>• min.</li> <li>• 20 °C</li> <li>• max.</li> <li>60 °C</li> <li>Relative humidity</li> <li>• Operation, max.</li> <li>95 %; no condensation</li> <li>configuration / header</li> <li>Configuration software</li> <li>• STEP 7 Basic (TIA Portal)</li> <li>Yes</li> <li>• STEP 7 Professional (TIA Portal)</li> <li>Yes</li> <li>• STEP 7 Professional (TIA Portal)</li> <li>Process coupling</li> <li>• S7-1200</li> <li>Yes; with ET 200pro CPU and ET 200S CPU</li> </ul>	Ambient conditions	
max. 55 °C  Operation (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, 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, min. 0 °C — At maximum tilt angle, max. 45 °C  Ambient temperature during storage/transportation  • min20 °C • max. 60 °C  Relative humidity  • Operation, max. 95 %; no condensation  configuration / header  Configuration / header  Configuration software  • STEP 7 Professional (TIA Portal) Yes  Functionality under WinCC (TIA Portal)  Process coupling  • S7-1200 Yes; with ET 200pro CPU and ET 200S CPU	Ambient temperature during operation	
Operation (vertical installation)	• min.	0°C
For vertical installation, min For vertical installation, max For vertical installation, max For vertical installation, max.  Operation (max. tilt angle) At maximum tilt angle, min At maximum tilt angle, max For vertical installation, portrait format) For vertical installation, min For vertical installation, max For vertical installation, max For vertical installation, max For vertical installation, max At maximum tilt angle, min At maximum tilt angle, min At maximum tilt angle, max At maximum tilt angle, max At be c At maximum tilt angle, max For vertical installation, max For vertical installation, portrait format) At maximum tilt angle, min At c At maximum tilt angle, min C At c At maximum tilt angle, min C At c At maximum tilt angle, min At c At maximum tilt angle, min At maximum tilt angle, min C At maximum tilt angle, min At maximum tilt angle, min C C C At maximum tilt angle, min At maximum tilt angle, min C C C C C C C	• max.	55 °C
For vertical installation, max.  Operation (max. tilt angle)  At maximum tilt angle, min At maximum tilt angle, max.  At maximum tilt angle, max.  O °C  Operation (vertical installation, portrait format)  For vertical installation, min For vertical installation, max.  For vertical installation, max.  For vertical installation, max.  At maximum tilt angle, min At maximum tilt angle, min At maximum tilt angle, max.  Operation (max. tilt angle, max.  At maximum tilt angle, max.  Operation temperature during storage/transportation  min 20 °C  max.  Relative humidity  Operation, max.  Operation / header  Configuration / header  Configuration software  STEP 7 Basic (TIA Portal) Yes  STEP 7 Professional (TIA Portal) Yes; with ET 200pro CPU and ET 200S CPU	Operation (vertical installation)	
Operation (max. tilt angle)  — At maximum tilt angle, min. — At maximum tilt angle, max.  O °C — At maximum tilt angle, max.  Operation (vertical installation, portrait format) — For vertical installation, min. — For vertical installation, max.  55 °C  Operation (max. tilt angle, portrait format) — At maximum tilt angle, portrait format) — At maximum tilt angle, min. — At maximum tilt angle, max.  45 °C  Ambient temperature during storage/transportation  • min. • max. • max. • 60 °C  Relative humidity • Operation, max.  configuration / header  Configuration software • STEP 7 Basic (TIA Portal) • STEP 7 Professional (TIA Portal)  Process coupling • S7-1200  Yes; with ET 200pro CPU and ET 200S CPU	<ul> <li>For vertical installation, min.</li> </ul>	0°C
— At maximum tilt angle, min.  — At maximum tilt angle, max.  45 °C  Operation (vertical installation, portrait format)  — For vertical installation, min.  — For vertical installation, max.  55 °C  Operation (max. tilt angle, portrait format)  — At maximum tilt angle, min.  — At maximum tilt angle, min.  — At maximum tilt angle, max.  45 °C  Ambient temperature during storage/transportation  • min.  • max.  60 °C  Relative humidity  • Operation, max.  95 %; no condensation  configuration / header  Configuration software  • STEP 7 Basic (TIA Portal)  • STEP 7 Professional (TIA Portal)  Process coupling  • S7-1200  Yes; with ET 200pro CPU and ET 200S CPU	<ul> <li>For vertical installation, max.</li> </ul>	55 °C
- At maximum tilt angle, max.  Operation (vertical installation, portrait format)  - For vertical installation, min.  - For vertical installation, max.  55 °C  Operation (max. tilt angle, portrait format)  - At maximum tilt angle, min.  - At maximum tilt angle, min.  - At maximum tilt angle, max.  45 °C  Ambient temperature during storage/transportation  • min.  • max.  60 °C  Relative humidity  • Operation, max.  configuration / header  Configuration software  • STEP 7 Basic (TIA Portal)  • STEP 7 Professional (TIA Portal)  Process coupling  • S7-1200  Yes; with ET 200pro CPU and ET 200S CPU		
Operation (vertical installation, portrait format)  — For vertical installation, min.  — For vertical installation, max.  55°C  Operation (max. tilt angle, portrait format)  — At maximum tilt angle, min.  — At maximum tilt angle, max.  45°C  Ambient temperature during storage/transportation  • min.  • max.  60°C  Relative humidity  • Operation, max.  95 %; no condensation  configuration / header  Configuration software  • STEP 7 Basic (TIA Portal)  • STEP 7 Professional (TIA Portal)  Process coupling  • S7-1200  Yes; with ET 200pro CPU and ET 200S CPU		
- For vertical installation, min For vertical installation, max For vertical installation, max For vertical installation, max For vertical installation, max S5 °C  Operation (max. tilt angle, portrait format) - At maximum tilt angle, min At maximum tilt angle, max C0 °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) - STEP 7 Professional (TIA Portal) - Yes  Functionality under WinCC (TIA Portal)  Process coupling - S7-1200 - Yes; with ET 200pro CPU and ET 200S CPU	-	45 °C
— For vertical installation, max.  Operation (max. tilt angle, portrait format)  — At maximum tilt angle, min. — At maximum tilt angle, max.  45 °C  Ambient temperature during storage/transportation  • min. • max. • max.  60 °C  Relative humidity • Operation, max.  configuration / header  Configuration software • STEP 7 Basic (TIA Portal) • STEP 7 Professional (TIA Portal)  Process coupling • S7-1200  Yes; with ET 200pro CPU and ET 200S CPU		
Operation (max. tilt angle, portrait format)  — At maximum tilt angle, min. — At maximum tilt angle, max.  45 °C  Ambient temperature during storage/transportation  • min. • max. 60 °C  Relative humidity • Operation, max.  Configuration / header  Configuration software • STEP 7 Basic (TIA Portal) • STEP 7 Professional (TIA Portal)  Process coupling • S7-1200  Yes; with ET 200pro CPU and ET 200S CPU	•	
- At maximum tilt angle, min At maximum tilt angle, max. 45 °C  Ambient temperature during storage/transportation	·	55 °C
— At maximum tilt angle, max.  Ambient temperature during storage/transportation  • min.  • max.  • max.  60 °C  Relative humidity  • Operation, max.  95 %; no condensation  configuration / header  Configuration software  • STEP 7 Basic (TIA Portal)  • STEP 7 Professional (TIA Portal)  • STEP 7 Professional (TIA Portal)  Process coupling  • S7-1200  Yes; with ET 200pro CPU and ET 200S CPU		
Ambient temperature during storage/transportation  • min.  • max.  60 °C  Relative humidity  • Operation, max.  95 %; no condensation  configuration / header  Configuration software  • STEP 7 Basic (TIA Portal)  • STEP 7 Professional (TIA Portal)  • STEP 7 Professional (TIA Portal)  Functionality under WinCC (TIA Portal)  Process coupling  • S7-1200  Yes; with ET 200pro CPU and ET 200S CPU		
<ul> <li>min.</li> <li>max.</li> <li>60 °C</li> <li>Relative humidity</li> <li>Operation, max.</li> <li>95 %; no condensation</li> <li>configuration / header</li> <li>Configuration software</li> <li>STEP 7 Basic (TIA Portal)</li> <li>STEP 7 Professional (TIA Portal)</li> <li>Yes</li> <li>STEP 7 Professional (TIA Portal)</li> <li>Functionality under WinCC (TIA Portal)</li> <li>Process coupling</li> <li>S7-1200</li> <li>Yes; with ET 200pro CPU and ET 200S CPU</li> </ul>	_	45 °C
<ul> <li>● max.</li> <li>Relative humidity</li> <li>● Operation, max.</li> <li>95 %; no condensation</li> <li>configuration / header</li> <li>Configuration software</li> <li>● STEP 7 Basic (TIA Portal)</li> <li>● STEP 7 Professional (TIA Portal)</li> <li>Yes</li> <li>Functionality under WinCC (TIA Portal)</li> <li>Process coupling</li> <li>● S7-1200</li> <li>Yes; with ET 200pro CPU and ET 200S CPU</li> </ul>		
Relative humidity  Operation, max.  Solution / header  Configuration software  STEP 7 Basic (TIA Portal)  STEP 7 Professional (TIA Portal)  STEP 7 Professional (TIA Portal)  Functionality under WinCC (TIA Portal)  Process coupling  S7-1200  Yes; with ET 200pro CPU and ET 200S CPU		
Operation, max.  95 %; no condensation  configuration / header  Configuration software  STEP 7 Basic (TIA Portal)  STEP 7 Professional (TIA Portal)  Yes  Functionality under WinCC (TIA Portal)  Process coupling  S7-1200  Yes; with ET 200pro CPU and ET 200S CPU		60 °C
configuration / header  Configuration software  STEP 7 Basic (TIA Portal)  STEP 7 Professional (TIA Portal)  Yes  Functionality under WinCC (TIA Portal)  Process coupling  S7-1200  Yes; with ET 200pro CPU and ET 200S CPU	•	0.500
Configuration software  • STEP 7 Basic (TIA Portal)  • STEP 7 Professional (TIA Portal)  Functionality under WinCC (TIA Portal)  Process coupling  • S7-1200  Yes; with ET 200pro CPU and ET 200S CPU		95 %; no condensation
STEP 7 Basic (TIA Portal)     STEP 7 Professional (TIA Portal)  Functionality under WinCC (TIA Portal)  Process coupling     S7-1200  Yes; with ET 200pro CPU and ET 200S CPU		
STEP 7 Professional (TIA Portal)  Functionality under WinCC (TIA Portal)  Process coupling      S7-1200  Yes; with ET 200pro CPU and ET 200S CPU		
Functionality under WinCC (TIA Portal)  Process coupling  • S7-1200  Yes; with ET 200pro CPU and ET 200S CPU		
Process coupling  ◆ S7-1200 Yes; with ET 200pro CPU and ET 200S CPU	<u> </u>	Yes
S7-1200  Yes; with ET 200pro CPU and ET 200S CPU	Functionality under WinCC (TIA Portal)	
	· -	
• S7-1500 Yes		
	• 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
<ul> <li>Allen Bradley (EtherNet/IP)</li> </ul>	No
Allen Bradley (DF1)	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	No
Aluminum	Yes
Stainless steel	No
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	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	69 mm; Incl. angled SIMATIC Ethernet connector
Weights	
Weight (without packaging)	1 220 g

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