6AV2185-8DF01-0AA0

**Data sheet** 

Extension Unit 15" KP12F PN compatible with all IP65 fully enclosed 16:9 HMI/IPC devices. Flexible configuration of control elements; 5 mounting positions; 5 control elements can be installed. PROFIsafe connection (control elements ordered separately)



Product type designation  Control elements  Version of actuating element  Operating principle of the actuating element  Tactile feedback Functional lighting  Yes; Freely configurable colors: Red, green, blue, white, yellow With parameterizable keys  Yes  Installation type/mounting  Mounting  Mounting  For mounting on a 16:9 HMI / IPC PRO device (lower part)  Mounting type  Screwed joint  No  No  No  Front mounting  No  No  Front mounting  No  Supply voltage  Type of supply voltage  Supply voltage  DC  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  19.2 V  permissible range, upper limit (DC)  power  Active power input, typ.  3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per RF12  Interfaces  Number of Industrial Ethernet interfaces  PROFISATE  PROFISATE  PROFISATE  Yes  1.1 (2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode  Media redundancy  — MRP  Pegree and class of protection  IP (all-round)  Pes  UL approval  UL approval  Use	General information	
Version of actuating element Operating principle of the actuating element Functional lighting With parameterizable keys Yes Installation type/mounting Mounting Mounting Mounting Mounting Mounting For mounting on a 16:9 HMI / IPC PRO device (lower part) Mounting No	Product type designation	Extension Unit 15" KP12F PN
Operating principle of the actuating element Functional lighting Yes; Freely configurable colors: Red, green, blue, white, yellow With parameterizable keys Installation type/mounting Mounting Mounting Mounting type Rack mounting No Number of slots for command devices and signaling units RFID reader can be installed Supply voltage Type of supply voltage Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) 19.2 V permissible range, upper limit (DC) 19.4 V Input current Current consumption (rated value)  Fower Active power input, typ. 3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces Number of PROFINET interfaces Protocols PROFIsafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy — MRP  Pegree and class of protection IP (all-round) IP65  Standards, approvals, certificates CE mark Yes UL approval	Control elements	
Functional lighting With parameterizable keys With parameterizable keys Nes Installation type/mounting Mounting	Version of actuating element	1x Key Panel 12
With parameterizable keys Installation type/mounting  Mounting Mounting For mounting on a 16:9 HMI / IPC PRO device (lower part)  Mounting type Screwed joint Rack mounting No No Number of slots for command devices and signaling units FRID reader can be installed Yes; SIMATIC RF200 Access Control Reader RF1060R  Supply voltage Type of supply voltage DC Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Power Active power input, typ.  150 mA; without load Power Active power input, typ.  3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces Number of industrial Ethernet interfaces PROFisafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy — MRP Yes  Degree and class of protection IP (all-round) IP (all-round) IP 65  Standards, approvals, certificates CE mark Yes UL approval	Operating principle of the actuating element	Tactile feedback
Installation type/mounting	Functional lighting	Yes; Freely configurable colors: Red, green, blue, white, yellow
Mounting type Screwed joint Rack mounting No No No Number of slots for command devices and signaling units RFID reader can be installed Supply voltage Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Active power input, typ.  3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces Number of industrial Ethernet interfaces Number of PROFINET interfaces Protocols PROFISafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy — MRP Yes Pegse and class of protection IP (all-round) IV (all IND INTERCACES (All INTE	With parameterizable keys	Yes
Mounting type Rack mounting No Number of slots for command devices and signaling units RFID reader can be installed Supply voltage Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) permissible range input, type.  Sale V Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces Number of industrial Ethernet interfaces Number of PROFINET interfaces Protocols PROFIsafe  Yes; Ix SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy — MRP Yes  Degree and class of protection IP (all-round) IP65  Standards, approvals  Yes UL approval	Installation type/mounting	
Rack mounting No Number of slots for command devices and signaling units Front mounting SRFID reader can be installed Yes; SIMATIC RF200 Access Control Reader RF1060R  Supply voltage Type of supply voltage DC Rated value (DC) 24 V permissible range, lower limit (DC) 28.8 V  Input current Current consumption (rated value) 150 mA; without load  Power Active power input, typ. 3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces Number of industrial Ethernet interfaces 2; For the construction of lines and rings without external switch Number of PROFINET interfaces 2; Incl. switch  Protocols PROFIsafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy — MRP Yes  Degree and class of protection IP (all-round) IP65  Standards, approvals, certificates CE mark Yes UL approval	Mounting	For mounting on a 16:9 HMI / IPC PRO device (lower part)
Front mounting Number of slots for command devices and signaling units RFID reader can be installed Yes; SIMATIC RF200 Access Control Reader RF1060R  Supply voltage Type of supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 19.2 V permissible range, upper limit (DC) 28.8 V  Input current Current consumption (rated value)  Power Active power input, typ. 3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces Number of industrial Ethernet interfaces 2; For the construction of lines and rings without external switch Number of PROFINET interfaces 2; Incl. switch Protocols PROFIsafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy — MRP Yes  Degree and class of protection IP (all-round) Standards, approvals, certificates CE mark Ves Ves	Mounting type	Screwed joint
Number of slots for command devices and signaling units RFID reader can be installed Yes; SIMATIC RF200 Access Control Reader RF1060R  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)  Power  Active power input, typ.  3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces  Number of PROFINET interfaces 2; For the construction of lines and rings without external switch Number of PROFINET interfaces  Protocols  PROFIsafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy — MRP Yes  Degree and class of protection  IP (all-round) IP65  Standards, approvals, certificates CE mark Ves UL approval	Rack mounting	No
RFID reader can be installed  Supply voltage  Type of supply voltage  Rated value (DC) 24 V  permissible range, lower limit (DC) 19,2 V  permissible range, upper limit (DC) 28.8 V  Input current  Current consumption (rated value) 150 mA; without load  Power  Active power input, typ. 3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces  Number of industrial Ethernet interfaces 2; For the construction of lines and rings without external switch  Number of PROFINET interfaces 2; Incl. switch  Protocols  PROFIsafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode  Media redundancy  — MRP Yes  Degree and class of protection  IP (all-round) IP65  Standards, approvals, certificates  CE mark Yes  UL approval	Front mounting	No
Type of 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)  Power Active power input, typ.  3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces Number of industrial Ethernet interfaces 2; For the construction of lines and rings without external switch Number of PROFINET interfaces 2; Incl. switch Protocols PROFIsafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy —MRP Yes  Degree and class of protection IP (all-round) IP65  Standards, approvals, certificates CE mark Yes UL approval	Number of slots for command devices and signaling units	5
Type of supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 19.2 V permissible range, upper limit (DC) 28.8 V Input current Current consumption (rated value)  Power Active power input, typ. 3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12 Interfaces Number of industrial Ethernet interfaces 2; For the construction of lines and rings without external switch Number of PROFINET interfaces 2; Incl. switch Protocols PROFIsafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy — MRP Yes  Degree and class of protection IP (all-round) IP65  Standards, approvals, certificates CE mark Yes UL approval	RFID reader can be installed	Yes; SIMATIC RF200 Access Control Reader RF1060R
Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  28.8 V  Input current  Current consumption (rated value)  Power  Active power input, typ.  3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces  Number of industrial Ethernet interfaces  Number of PROFINET interfaces  2; For the construction of lines and rings without external switch  Number of PROFINET interfaces  2; Incl. switch  Protocols  PROFIsafe  Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode  Media redundancy  — MRP  Yes  Degree and class of protection  IP (all-round)  IP65  Standards, approvals, certificates  CE mark  Yes  UL approval	Supply voltage	
permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC)  19.2 V  28.8 V  Input current  Current consumption (rated value)  150 mA; without load  Power  Active power input, typ. 3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces  Number of industrial Ethernet interfaces 2; For the construction of lines and rings without external switch Number of PROFINET interfaces 2; Incl. switch  Protocols  PROFIsafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy — MRP Yes  Degree and class of protection IP (all-round) IP65  Standards, approvals, certificates CE mark Yes UL approval	Type of supply voltage	DC
permissible range, upper limit (DC)  Input current  Current consumption (rated value)  Power  Active power input, typ.  3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces  Number of industrial Ethernet interfaces  Number of PROFINET interfaces  Protocols  PROFIsafe  Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode  Media redundancy  — MRP  Pegree and class of protection  IP (all-round)  IP (all-round)  Standards, approvals, certificates  CE mark  UL approval  150 mA; without load  28.8 V  150 mA; without load  10.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  III (III (III (III (III (III (III (II	Rated value (DC)	24 V
Input current Current consumption (rated value)  Power  Active power input, typ.  3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces  Number of industrial Ethernet interfaces 2; For the construction of lines and rings without external switch Number of PROFINET interfaces 2; Incl. switch  Protocols  PROFIsafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy — MRP Yes  Degree and class of protection IP (all-round) IP65  Standards, approvals, certificates  CE mark UL approval  150 mA; without load  7 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  18 (W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  18 (W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  19 (W per KP12  10 (W per KP12  11 (W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  10 (W per KP12  11 (W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  11 (W per KP12  12 (W per KP12  13 (W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  13 (W per KP12  14 (W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  14 (W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  14 (W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  15 (W per KP12  16 (W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  16 (W per operator control with LED or 0.5 W per KP12  17 (W per operator control with LED or 0.5 W per KP12  18 (W per operator control with LED or 0.5 W per KP12  18 (W per operator control with LED or 0.5 W per KP12  19 (W per operator control with LED or 0.5 W per KP12  19 (W per operator control with LED o	permissible range, lower limit (DC)	19.2 V
Current consumption (rated value)  Power  Active power input, typ.  3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces  Number of industrial Ethernet interfaces 2; For the construction of lines and rings without external switch Number of PROFINET interfaces 2; Incl. switch  Protocols  PROFIsafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode  Media redundancy — MRP Yes  Degree and class of protection  IP (all-round) IP65  Standards, approvals, certificates  CE mark UL approval  Yes	permissible range, upper limit (DC)	28.8 V
Power  Active power input, typ.  3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces  Number of industrial Ethernet interfaces  Protocols  PROFINET interfaces  2; For the construction of lines and rings without external switch  Number of PROFINET interfaces  2; Incl. switch  Protocols  PROFIsafe  Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode  Media redundancy  — MRP  Yes  Degree and class of protection  IP (all-round)  IP65  Standards, approvals, certificates  CE mark  UL approval  Yes	Input current	
Active power input, typ.  3.6 W; Additional 0.1 W per operator control with LED or 0.5 W per RGB illuminated pushbutton or 2.6 W per KP12  Interfaces  Number of industrial Ethernet interfaces 2; For the construction of lines and rings without external switch Number of PROFINET interfaces 2; Incl. switch  Protocols  PROFIsafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy — MRP Yes  Degree and class of protection IP (all-round) IP (all-round) IP65  Standards, approvals, certificates CE mark UL approval Yes	Current consumption (rated value)	150 mA; without load
Interfaces  Number of industrial Ethernet interfaces  Number of PROFINET interfaces  Protocols  PROFIsafe  Redundancy mode  Media redundancy  — MRP  Degree and class of protection  IP (all-round)  Standards, approvals, certificates  CE mark  UL approval  IP (all-pound)  III (all-pound)  IVES  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye	Power	
Number of industrial Ethernet interfaces  2; For the construction of lines and rings without external switch  2; Incl. switch  Protocols  PROFISATE  Protocols  Protocols  Protocols  Protocols  Protocols  Protocols  Protocols  Protocols  Protocols  Pres  Pres  Protocols  Protocols  Pres  Pres  Protocols  Pres  Protocols  Pres  Pres  Pres  Protocols  Pres  Pres  Pres  Pres  Protocols  Pres	Active power input, typ.	
Number of PROFINET interfaces  Protocols  PROFIsafe  Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode  Media redundancy — MRP  Yes  Degree and class of protection  IP (all-round)  Standards, approvals, certificates  CE mark  UL approval  Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  IP (sll-sylva)  Yes  Yes	Interfaces	
Protocols PROFIsafe Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode Media redundancy — MRP Yes  Degree and class of protection IP (all-round) IP65  Standards, approvals, certificates CE mark UL approval Yes	Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch
PROFIsafe  Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor  Redundancy mode  Media redundancy — MRP  Yes  Degree and class of protection  IP (all-round)  Standards, approvals, certificates  CE mark  Yes  UL approval  Yes	Number of PROFINET interfaces	2; Incl. switch
Redundancy mode  Media redundancy — MRP  Pegree and class of protection  IP (all-round)  Standards, approvals, certificates  CE mark  UL approval  Stop sensor  Yes  Yes  Yes  Yes	Protocols	
Media redundancy — MRP Yes  Degree and class of protection  IP (all-round) IP65  Standards, approvals, certificates  CE mark Yes  UL approval Yes	PROFIsafe	
— MRP Yes  Degree and class of protection  IP (all-round) IP65  Standards, approvals, certificates  CE mark Yes  UL approval Yes	Redundancy mode	
Degree and class of protection  IP (all-round)  Standards, approvals, certificates  CE mark  Ves  UL approval  Yes	Media redundancy	
IP (all-round)  Standards, approvals, certificates  CE mark  UL approval  Yes	— MRP	Yes
Standards, approvals, certificates  CE mark  UL approval  Yes  Yes	Degree and class of protection	
CE mark Yes UL approval Yes	IP (all-round)	IP65
UL approval Yes	Standards, approvals, certificates	
	CE mark	Yes
clilius Ves	UL approval	Yes
COLUS	cULus	Yes

RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes; EAC
Suitable for safety functions	Yes; e.g. installation of emergency stop
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	50 °C
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	60 °C
Altitude during operation relating to sea level	
Installation altitude above sea level, max.	2 000 m
Relative humidity	
<ul><li>Operation, max.</li></ul>	90 %; no condensation
Mechanics/material	
Material	
Aluminum	Yes
Enclosure material (front)	
Aluminum	Yes; Knockout covered with black film
Dimensions	
Width	396 mm
Height	99 mm
Depth	100.65 mm
Weights	
Weight (without packaging)	2.5 kg
Scope of supply	
Delivery quantity in pieces	1
Components included	Power supply connector

4/21/2021

last modified: