Life Is On

eliwell by Schneider Electric

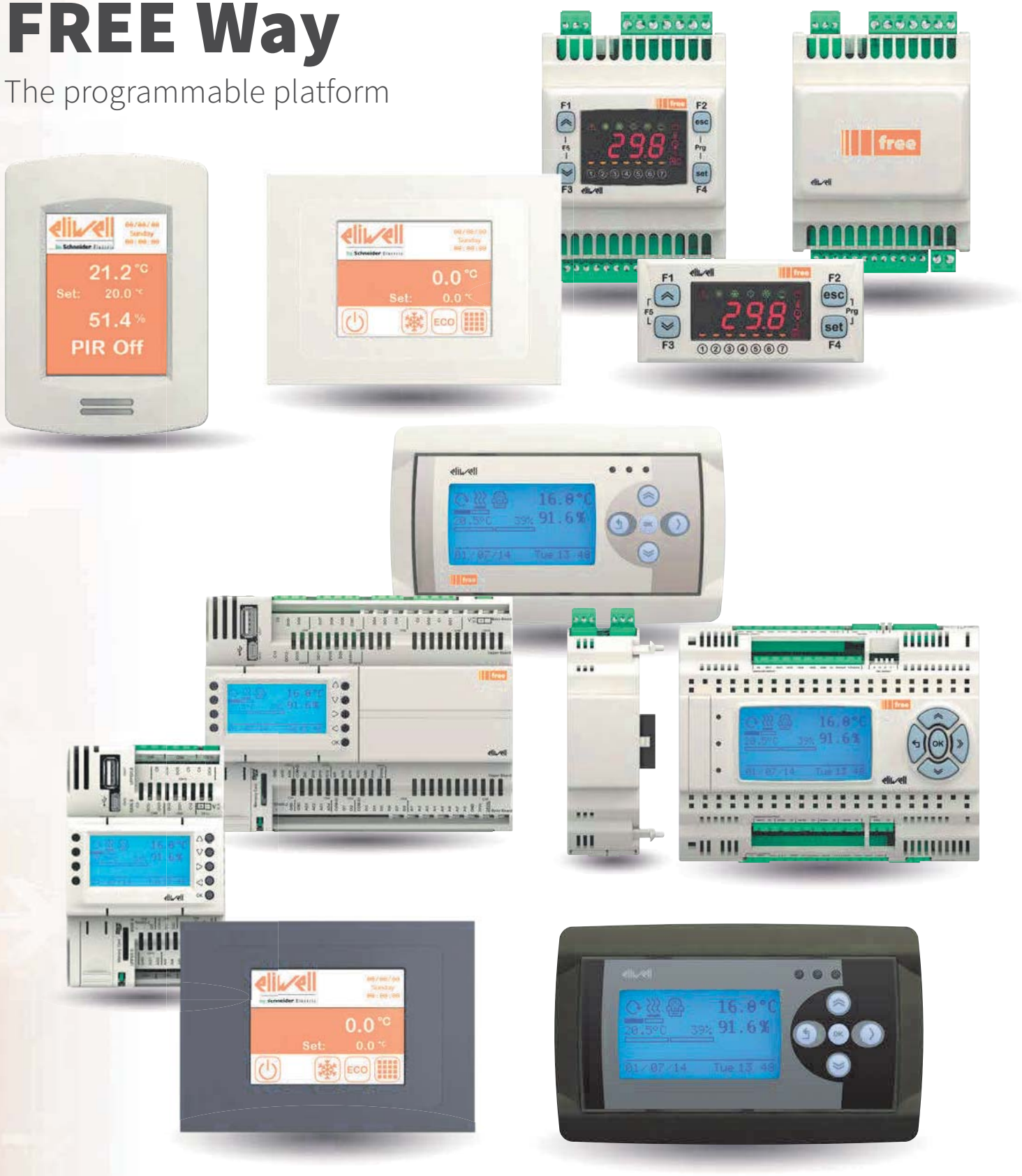
FREE Way

The programmable platform

www.eliwell.com

FREE Way

The programmable platform



General description

The Eliwell programmable platform

FREE Way: the new Eliwell approach to programmability, enabling customers to create their solutions quickly and effectively.

FREE Way is the Eliwell-developed programmable platform that comprises the **FREE Studio** software suite and **FREE Smart**, **FREE Panel, FREE Advance** and **FREE Evolution**, the range of programmable controllers in a choice of sizes.

The simple, flexible FREE Studio software suite is compatible with the 5 standard programming languages (**IEC61131-3**) and is structured to manage a full range of controllers of different complexities and sizes, to meet all the customer's system customization needs.

Features

FREE Studio

- Single software suite for quick, easy programming
- Advanced debug and simulation options and complete, effective in-line Help
- App protection and different user levels
- App revision log
- Customizable interface

FREE Smart

- User interface with configurable keys
- Available in three sizes, in the 100...240V~ and 12...24 Vac/ 24Vdc versions:
  - **FREE Smart SMP**, panel mount (32x74mm) with LED display
  - **FREE Smart SMD** 4 DIN with LED display, **FREE Smart SMC** 4 DIN blind
- Connectible via RS-485, Modbus RTU or Eliwell standard user interfaces and peripherals

FREE Panel

- Available in two sizes:
  - **FREE Panel EVP** system controller, with gateway functions and monochrome backlit LCD display, available for panel mounting (**FREE Panel EVP**) or wall mounting
  - **FREE Panel AVP** zone or system controller with color backlit graphic display, with resistive touchscreen interface, available for panel mounting or wall mounting depending on model
- High connectivity: can be integrated in industrial systems and BMS
- Connectible with Eliwell standard and third-party peripherals

FREE Advance

- Fully customizable graphic user interface
- Available in 4 Din and 8 Din sizes, **FREE Advance AVD** with backlit LCD graphic display, **FREE Advance AVC** blind
- High built-in connectivity as standard for integration in industrial systems and BMS
- Connectible with third-party and Eliwell standard peripherals (including FREE Smart)

FREE Evolution

- Fully customizable graphic user interface
- Available in 8 Din FREE Evolution EVD sizes with backlit LCD graphic display and **FREE Evolution AVC** blind versions
- High connectivity: can be integrated in industrial systems and BMS via dedicated plug-in modules
- Connectible with third-party and Eliwell standard peripherals (including FREE Smart)

Certification c UL us depending on model, specified in UL reference file no. E233482
AVP1100/1200/1300: CTUVus certification indicated in UL reference file no. U8 17 05 54090 001

FREE Panel AVP

FREE Panel EVP

FREE Advance

FREE Evolution

FREE Smart

Plus points

Speed

One of the FREE programmable platform's main aims is to enable customers to create solutions for their customers fast. Many FREE features significantly cut the times between design of a new application and its production release.

Compactness

The FREE programmable platform makes customers cost-competitive. FREE controllers were designed with a strong focus on technology and physical size, with impressive results in terms of simplicity, modularity and compactness. FREE controllers' integrated solutions and small size generate real, immediate financial savings for customers.

Efficiency

Complete and scalable to different complexity levels, the FREE programmable platform gives customers great freedom to choose the solution they consider best for their application. This allows easy identification of solutions that cut costs or item numbers, facilitating solutions more open to future developments or future system demands, especially with regard to connectivity.

Reliability

The FREE Way programmable platform's high quality standards enable customs to save on the costs generated by quality nonconformities both in their production processes and in installations in the field. **FREE Smart**, **FREE Panel, FREE Advance and FREE Evolution** controllers and the **FREE Studio** development environment were all designed with innovative but carefully defined criteria, using state-of-the-art yet stable technology solutions and certified, monitored production processes. Eliwell has always been famed for its reliability.

The FREE Way targets

Constructors of:

- ATUs (Air Treatment Units)
- Chillers
- Heat Pumps
- Rooftop Units
- Precision air-conditioners
- Compressor Rooms

Installers/system integrators of:

- All-air systems
- Hydronic systems
- Air-water systems
- Commercial automation

FREE Studio

The **FREE Studio** software suite is compatible with all 5 standard programming languages (**IEC61131-3**).
Every project may comprise several programs; developers can use more than one language in the same project.

Every new program has a choice of 5 programming languages, 2 textual and 3 visual:

- **ST**, **Structured Text**
- **FBD, Functional Block Diagram**
- **LD, Ladder**
- **IL, Instruction List**
- **SFC, Sequential Function Chart**

IEC61131-3 development software

Main functions

Variable display with application running

Debugging of variables through display of their status in numerical format when the application is running and connected to FREE Smart, FREE Panel and FREE Evolution

Function Library

Management of default and/or developer-created function libraries.
Any additional cards are managed by the developer himself

Variable graphic display

Debugging of variables through display of their status in graphic format when the application is running and connected to FREE Smart, FREE Panel and FREE Evolution

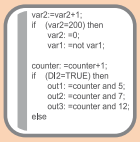
Variable reading / writing

The working environment allows:

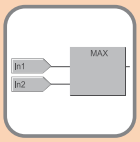
- creation of a dedicated menu to be shown on the device's display
- reading and writing of BIOS parameters (parameters + I/O values)
- reading and writing of the parameters and variables defined by the developer in Applications associated to the menu

In-line Help to assist the programmer in every program development phase, accessed from the context by just pressing the F1 button.
The whole help guide is also available in printable pdf format

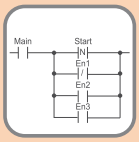
Baselines and Libraries, ready to use and available for download via web



ST

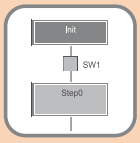


FBD



LD

IL



SFC

Components

With FREE Studio, developers can program in various working environments, since they can access releases constantly updated with new functions and optimizations, available in the specific area of the Eliwell site.

Baselines

Applications supplied ready to use, compliant with architecture rules, easily modified to all requirements.

Libraries of objects to save you even more time, by making FREE Studio easier to use.

Application

Component specifically for developers, for developing and modifying applications in 5 standard languages.

Device

Component for less skilled users for parameter management, application downloads, field tests, etc.

Connection

Component for configuring networks, both field networks and open networks for integration with other systems.

User Interface

Component for developing and customizing the user terminal graphic interface.

Simulation

Component for simulating the application on a PC.

System and installation requirements

Operating Systems

- Windows 10 English
- Windows 8, 8.1 English
- Windows 7 Home / Professional / Ultimate English

The installation setup, software updates, libraries and documentation are available on the eliwell.com website, after registration for access to the private area.

FREE Smart models

Models are available both DIN rail mount version (SMD with display, SMC without display) and in the 32x74 Eliwell standard version (SMP) panel mount version.

The offering is completed by various expansions (SME) and terminals (SKP, SKW) for combination with FREE Smart series models.

All inputs and outputs are independent and configurable to ensure adaptability to any system.

FREE Smart 12...24 Vac / 24Vdc /C identifies units with RTC – Real Time Clock

Model	Code	Digital Outputs at hazardous voltage	TRIAC Outputs at hazardous voltage	O.C. outputs: PWM / PPM at safety extra low voltage (SELV)	Analog outputs 0-10 V at safety extra low voltage (SELV)	Digital Inputs voltage free	Analogue Inputs at safety extra low voltage (SELV)	O.C. Outputs	RS 485 built-in
SMP5500/C/S	SMP5500050450	5	-	2	3	6	5	1	yes
SMP5500/C	SMP5500010450	5	-	2	3	6	5	1	-
SMD5500/C/S	SMD5500050450	5	-	2	3	6	5	1	yes
SMD5500/C	SMD5500010450	5	-	2	3	6	5	1	-
SMD3600/C/S	SMD3600050450	3	2	1	3	6	5	1	yes
SMC5500/C/S	SMC5500050450	5	-	2	3	6	5	1	yes
SMC5500/C	SMC5500010450	5	-	2	3	6	5	1	-
Expansions									
SME3200	SME3200000400	3	-	2	-	6	3	1	-
SME5500	SME5500000450	5	-	2	3	6	5	1	-

FREE Smart 100...240 Vac /C identifies units with RTC – Real Time Clock/S identifies units with built-in RS485 serial output

Model	Code	Digital Outputs at hazardous voltage	O.C. outputs: PWM / DI at safety extra low voltage (SELV)	Outputs 0...10 V at safety extra low voltage (SELV)	Outputs 4...20 mA / 0...20 mA	Analog inputs at safety extra low voltage (SELV)
SMD4500/C/S	SMD4500050H00	4	2	2	1	5
SMD4500/C	SMD4500010H00	4	2	2	1	5
SMC4500/C/S	SMC4500050H00	4	2	2	1	5
Expansion						
SME4500	SME4500000H00	4	2	2	1	5

Terminals with power supply from base

Model	Code	Mount	Dimensions	Display	Analog inputs at safety extra low voltage (SELV)
SKP10	SKP100G000000	panel	74x32x30 mm	LED / 4 digits	-
SKW22	SKW220G000000	wall	137x96.5x31.3 mm	LCD	1 built-in NTC 1 NTC input / DI / 4...20 mA
SKW22L	SKW22LG000000	wall	137x96.5x31.3 mm	Backlit LCD	1 built-in NTC 1 NTC input / DI / 4...20 mA
SKP22	SKP220G000000	panel; wall: see Accessories page	160x96x10 mm	LCD	1 NTC input 1 NTC input / DI / 4...20 mA

KEY: SELV = Safety Extra Low Voltage; PPM = Pulse Position Modulation; PWM = Pulse Width Modulation; O.C. = Open Collector

Resources available - FREE Smart (model /C/S, msk 412)
The IEC programmer has the following resources:

CPU	14.7 MHz
memory available for **Application**	190 Kbytes
RAM - automatic mapping	2300 Bytes
RAM - Modbus mapping	1024 Byte
EEPROM variables	1024 Byte

Minimum developer kit - FREE Smart

- FREE Studio installation setup
- 1 FREE Smart SMxxxx*
- 1 DMI 100-3 Manufacturer + yellow TTL cable
- 1 MFK optional + blue TTL cable
- FREE Smart* power supply wiring and transformer

* otherwise, order the Demo Case

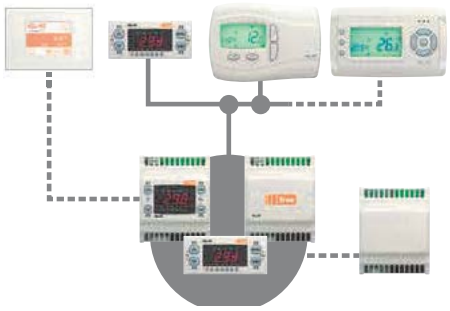
FREE Smart connectivity

FREE Smart controllers are equipped with a serial port for easy integration with the supervision systems of the installation plant.

All controller resources can be accessed via standard Modbus communication protocol, guaranteeing complete control of the plant.

All models have TTL port as standard; /S models have built-in RS485 serial port.

A special Firmware version also provides the Modbus MASTER function.



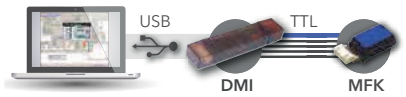
FREE Smart maximum configuration

- max 1 FREE Smart model
- max 1 SME expansion by LAN serial line
- max 1 SKP10 terminal with controller ECHO function
- max 1 SKW22(L) or SKP22 terminal with dedicated menu, allowing ambient temperature and humidity monitoring
- LAN maximum distance: 100 m

FREE Smart update function

Multi Function Key (MFK 100) for uploading and downloading parameter map for quick configuration, and uploading the IEC application and BIOS.

Multi Function Key / DMI
PC → ← FREE



use **blue TTL cable**
for DMI - MFK connection

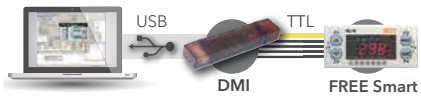
Data download direction	→	←
Parameter map	-	-
IEC application	✓	-
BIOS	✓	-

Multi Function Key
MFK → ← FREE

use **yellow TTL cable**
for MFK - target connection

Data download direction	→	←
Parameter map	✓	✓
IEC application	✓	-
BIOS	✓	-

Network
PC → ← FREE

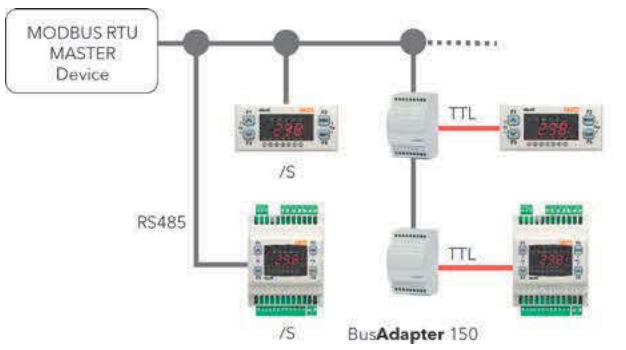


use **yellow TTL cable**
for DMI - target connection

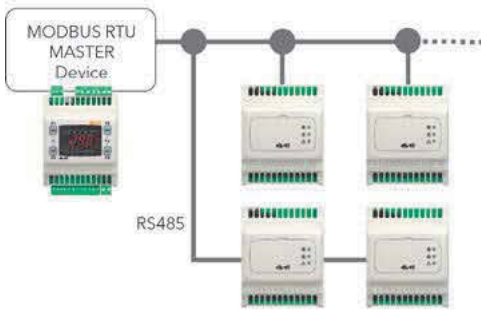
Data download direction	→	←
Parameter map	✓	✓
IEC application	✓	-
BIOS	✓	-

Modbus Slave or Master mode connection examples

Modbus Slave example



Master Modbus example



For models without RS485 use only BusAdapter 150

SMP, SMD, SMC5500

SMP5500

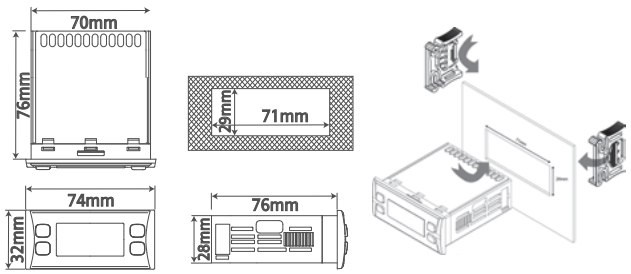
SMD5500

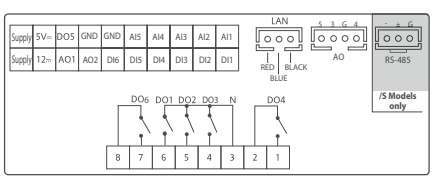
SMC5500

Technical data

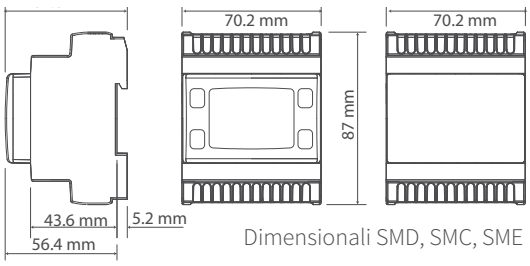
	SMP5500	SMD5500	SMC5500
size	32x74x80 mm (Lxhxd)	4DIN	
display	LED 4 digit - 7 segments		-
power supply	12...24 Vac / 24 Vdc		
relay digital outputs	5 x 2 A 250 Vac		
analog outputs	2 x O.C. PPM/PWM 3 x 0...10 V		
O.C. digital outputs	1 Open Collector		
digital inputs	6 voltage free		
analog inputs	3 x NTC / D.I. 2 x NTC / D.I. / 0...20 mA / 4...20 mA / 0-10 V / 0-5 V / 0-1 V		
connectivity	TTL RS485 isolated (only /S models) LAN for connection to SKP/SKW terminal or SME expansion		
operating temperature	-20...+55 °C		

Electric, mount and dimensional diagrams

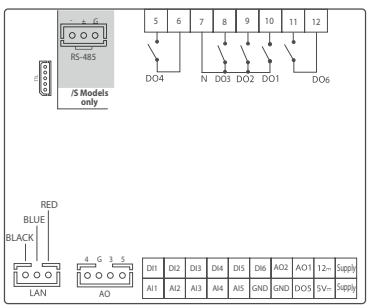




SMP5500/C - SMP5500/C/S



Dimensionali SMD, SMC, SME



SMD5500/C/S - SMC 5500/C - SMC5500/C/S

SMD3600, SME Expansions

SMD3600

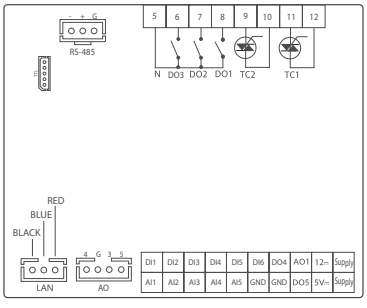
SME3200

SME5500

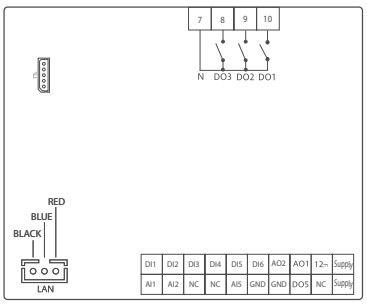
Technical data

	SMD3600	SME3200	SME5500
size	4DIN		
display	LED 4 digit - 7 segments	-	-
power supply	12...24 Vac	12...24 Vac / 24 Vdc	
relay digital outputs	3 x 2A 250 Vac		5 x 2A 250 Vac
analog outputs	2 x TRIAC 3 A 250 Vac 1 x Open Collector PPM/PWM 3 x 0...10 V	- 1 x Open Collector PPM/PWM -	- 1 x Open Collector PPM/PWM 3 x 0...10 V
O.C. digital outputs	2 Open Collector	1 Open Collector	
digital inputs	6 voltage free		
analog inputs	3 x NTC / D.I. 2 x NTC / D.I. / 0...20 mA / 4...20 mA / 0-10 V / 0-5 V / 0-1 V	3 x NTC / D.I. -	3 x NTC / D.I. 2 x NTC / D.I. / 0...20 mA / 4...20 mA / 0-10 V / 0-5 V / 0-1 V
connectivity	TTL RS485 isolated LAN for connection to SKP/SKW terminal or SME expansion	TTL - LAN for connection to FREE Smart	TTL - LAN for connection to FREE Smart
operating temperature	-20...+55 °C		

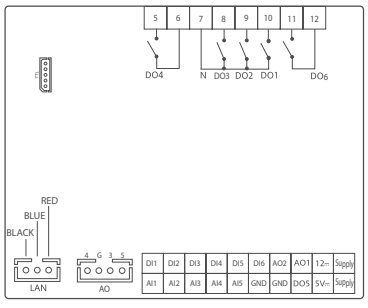
Electric diagrams



SMD3600/C/S



SME3200



SME5500

SMD, SMC4500, SME4500 Expansion

SMD4500

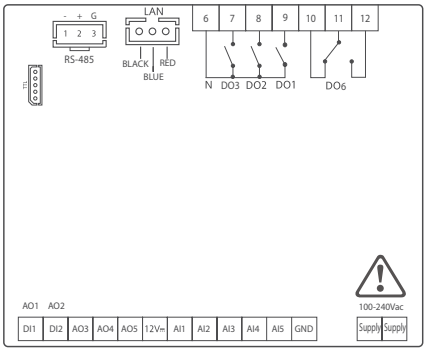
SMC4500

SME4500

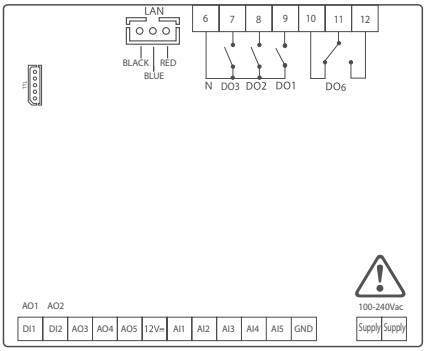
Technical data

	SMD4500	SMC4500	SME4500
size	4DIN		
display	LED 4 digit - 7 segments	-	-
power supply	100...240 Vac		
relay digital outputs	4 x 2 A 250 Vac		
analog outputs	2 x Open Collector PWM/D.I. 2 x 0...10 V 1 x 4..20 mA / 0…20 mA		
analog inputs	3 x NTC / Pt1000 / D.I. 2 x NTC / D.I. / 0...20 mA / 4...20 mA / 0-10 V / 0-5 V / 0-1 V		3 x NTC / D.I. 2 x NTC / D.I. / 0...20 mA / 4...20 mA / 0-10 V / 0-5 V / 0-1 V
connectivity	TTL RS485 LAN for connection to SKP/SKW terminal or SME expansion		TTL - LAN for connection to FREE Smart
operating temperature	-20...+55 °C		

Electric diagrams



SMD4500/C/S - SMC4500/C/S



SME4500 Expansion

Interfaces, FREE Smart Terminals

SKP10

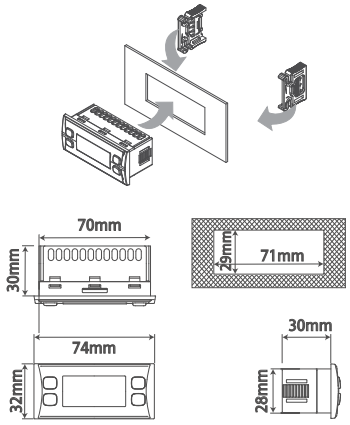
SKW22/22L

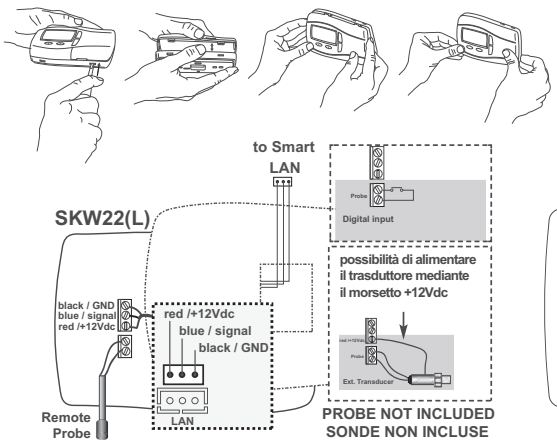
SKP22

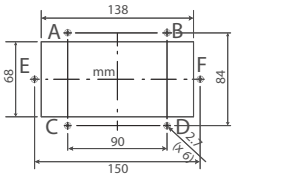
Technical data

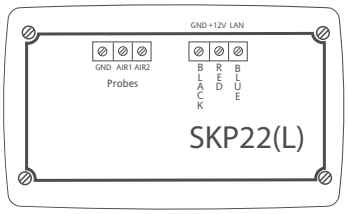
	SKP10	SKW22 - SKW22L	SKP22
size (LxDxH)	74x32x30 mm	4DIN	
mount	panel	wall	panel
display	LED 4 digit - 7 segments	LCD (model 22L: Backlit LCD)	LCD
power supply	from base		
analog inputs	- -	1 x built-in NTC 1 x NTC / D.I. / 0...20 mA / 4...20 mA remote	1 x remote NTC 1 x NTC / D.I. / 0...20 mA / 4...20 mA remote
connectivity	LAN for connection to FREE Smart		
wiring	COLV000033200 cable included in pack		
operating temperature	-20...+55 °C	-5...+60 °C	
humidity module	-	KP100000 - not included (see Accessories page)	-

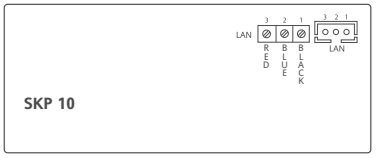
Electric and mount diagrams



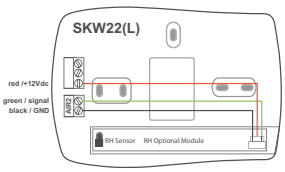








SKP10



SKW22 - SWK22L

SKP22

FREE Panel models

FREE Panel AVP is the completely customizable solution for creating an easily maintained and serviced zone controller with backlit color graphic touchscreen display, mounting on vertical surfaces, Modbus Slave connectivity, and integral temperature, humidity and presence probes.
The panel version adds Modbus Master connectivity with option of installation inside a machine, also on DIN rail.

FREE Panel AVP

FREE Panel EVP is the version with LCD graphic display suitable for use as system controller, with gateway functions, used in association with the other FREE Advance, FREE Evolution and FREE Smart controllers or third party devices.
FREE Panel EVP delivers excellent performance in terms of memory, user interface, Master/Slave connectivity and expandability (up to 12 expansions via field CANbus), and is easy to program, maintain and service.
A special base plate is available as wall mount accessory.

FREE Panel EVP

FREE Panel AVP /C identifies units with RTC – Real Time Clock **/P** identifies panel mount

Model	Code	Mount	Display	Built-in probe	Serial
AVP1000 /P WHITE	AVP100W0P0500	panel*	color touchscreen display 3.5" 320x240	-	RS485** - Modbus SL USB Micro-B
AVP1000 /P GREY	AVP100G0P0500	panel*	color touchscreen display 3.5" 320x240	-	RS485** - Modbus SL USB Micro-B
AVP1100 /C	AVP11000W0500	wall	color touchscreen display 3.5" 320x240	temperature	RS485** - Modbus SL USB Micro-B
AVP1200 /C	AVP12000W0500	wall	color touchscreen display 3.5" 320x240	temperature & relative humidity	RS485** - Modbus SL USB Micro-B
AVP1300 /C	AVP13000W0500	wall	color touchscreen display 3.5" 320x240	temperature, relative humidity and presence probes	RS485** - Modbus SL USB Micro-B

*both horizontal and vertical (for vertical surface mount see Accessories page)
**485 Master or Slave

Vertical mount. Horizontal mount if built-in probes are not used.

FREE Panel EVP /C identifies units with RTC – Real Time Clock **/RH**: humidity probe

Model	Code	Mount	Display	Inputs at safety extra low voltage (SELV)	Serial
EVP3300/C	EVP3300010B00	panel*	Backlit LCD	1 x built-in NTC; 1 x remote NTC; 1 x remote 4...20 mA / 0-5 V / 0-10 V	CANbus; RS485; Ethernet
EVP3500/C/RH	EVP3500010B00	panel*	Backlit LCD	1 x built-in NTC; 1 x remote NTC 1 x built-in %RH	CANbus; RS485; Ethernet

*(for wall mount see Accessories page)
KEY: SELV = Safety Extra Low Voltage

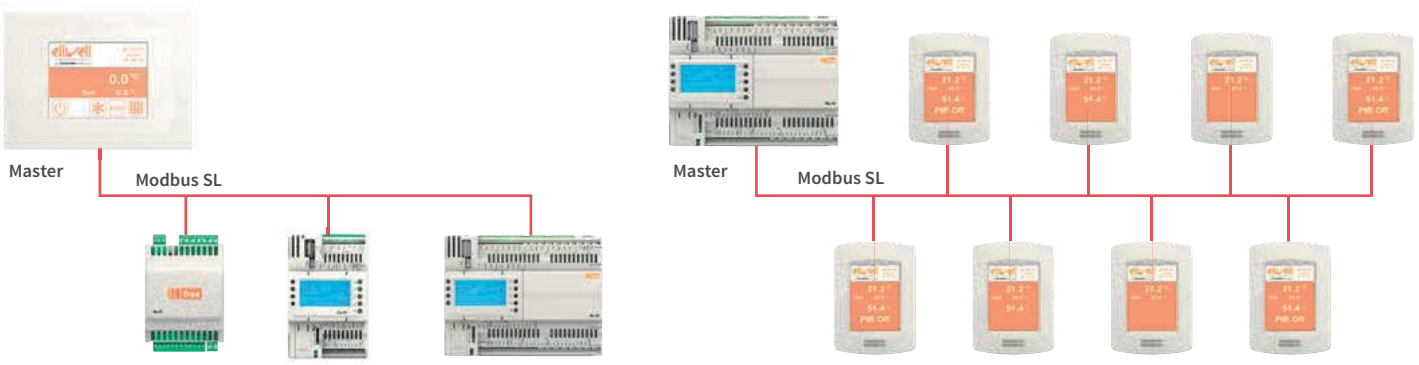
Resources available - FREE Panel

The IEC programmer has the following resources:

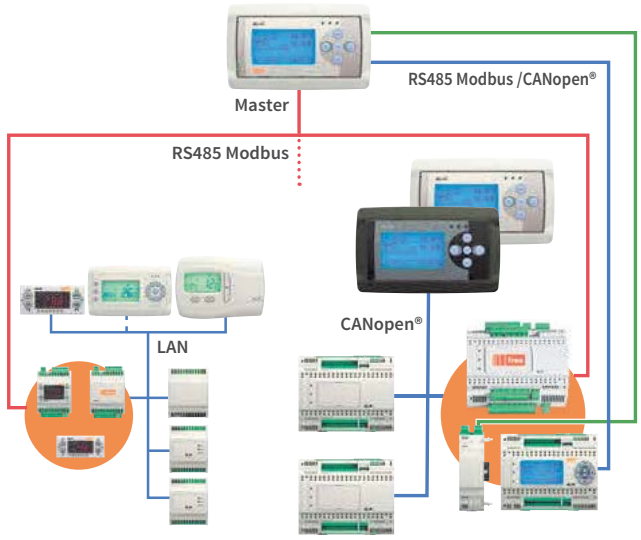
	FREE PANEL AVP	FREE PANEL EVP
CPU	120 MHz, 132 kB RAM	72 MHz, 32 Mbyte RAM
memory available for **Application + User Interface**	736 Kbytes	1 Mbyte + 1.5 Mbye = 2.5 Mbyte
FLASH data memory	4 Mbyte (images + font)	128 Mbyte
RAM - automatic mapping for **Application + User Interface**	78 Kbyte	512 Kbyte + 512 Kbyte
RAM - Modbus mapping	5000 words	5000 words
EEPROM variables	4000 words (application)	4000 words (application) + 10000 words (BACnet objects)

FREE Panel connectivity

AVP



EVP

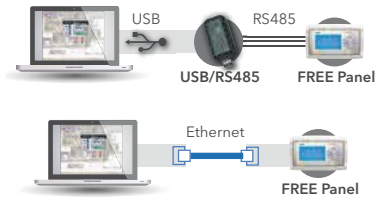


Connectivity and functions

FREE Panel AVP delivers excellent performance in terms of memory, color user interface with resistive touchscreen display and Modbus Master/Slave connectivity, and is easy to program, maintain and service.

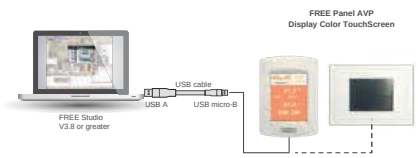
FREE Panel EVP delivers excellent performance in terms of memory, user interface, Master/Slave connectivity and expandability (up to 12 expansions via field CANbus), and is easy to program, maintain and service.

USB-RS485; Ethernet
PC → ← FREE



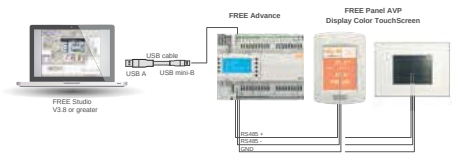
Data download direction	→	←
Parameter map	✓	✓
IEC application	✓	-
HMI application	✓	-
Data files	✓	✓
BIOS	✓	-
Commissioning	✓	✓

USB Host
PC → ← FREE



Data download direction	→	←
Parameter map	✓	✓
IEC application	✓	-
HMI application	✓	-
Data files	-	-
BIOS	✓	-

Ethernet
PC → ← FREE



Configuration permissible with FREE Advanced in Bridge mode and AVP in Slave mode

Data download direction	→	←
Parameter map	✓	✓
IEC application	✓	-
HMI application	✓	-
Data files	-	-
BIOS	✓	-

AVP1000

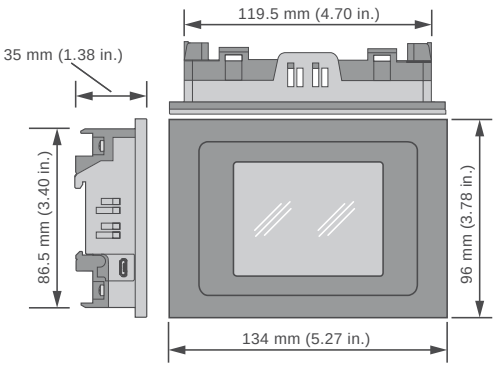
AVP1000/P WHITE

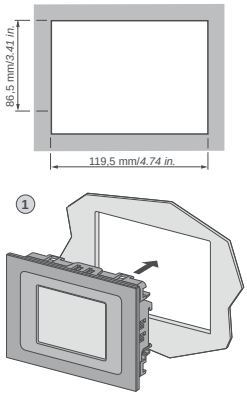
AVP1000/P GREY

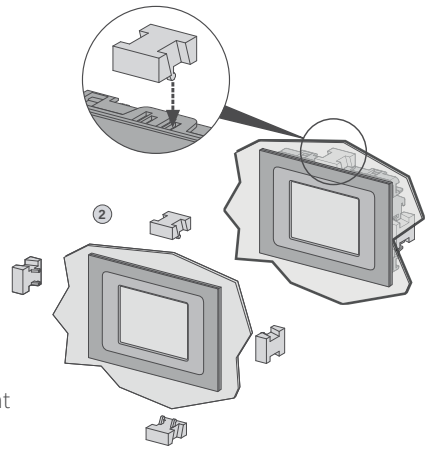
Technical data

	AVP1000/P WHITE	AVP1000/P GREY
size	134x96x35 mm	
enclosure rating	IP 65 on front panel	
display	color touchscreen display 3.5” 320x240	
power supply	24 Vac/dc (Type T 500 mA UL recognized fuse)	
analog inputs	none	
connectivity	RS 485 – Modbus SL USB Micro-B (programming and debug)	
operating temperature	-20…60 °C	

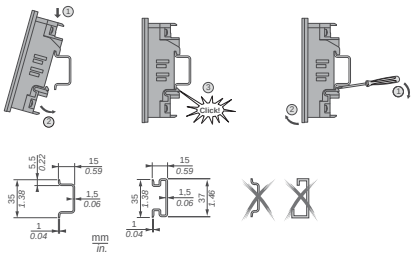
Dimensional and mount diagrams



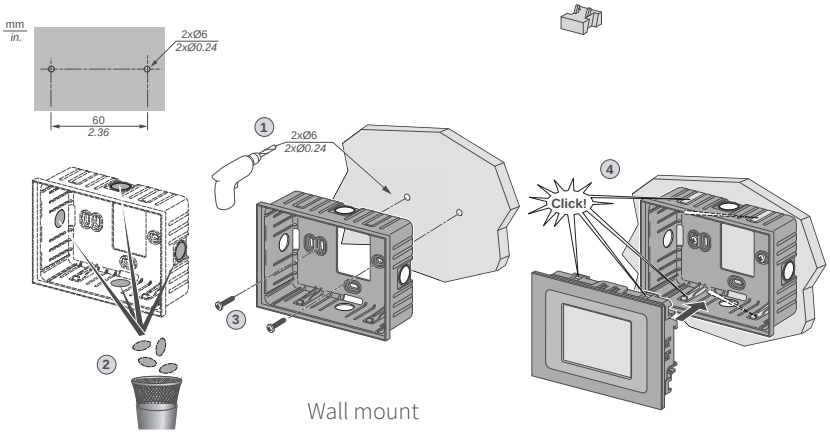




Panel mount



DIN rail mount



Wall mount

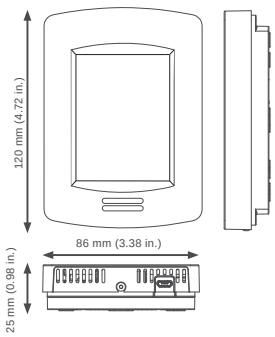
AVP1100, AVP1200, AVP1300

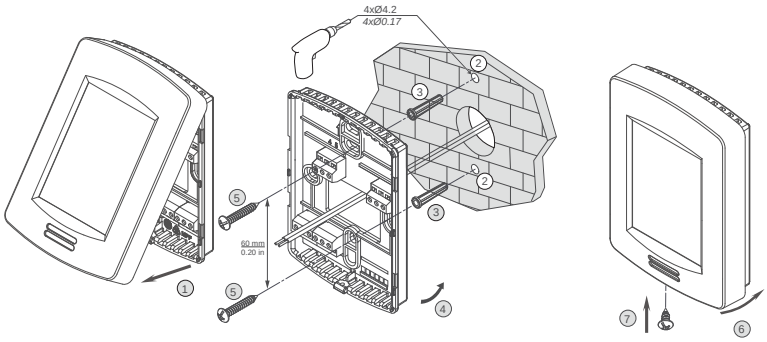
AVP1100/C AVP1200/C AVP1300/C

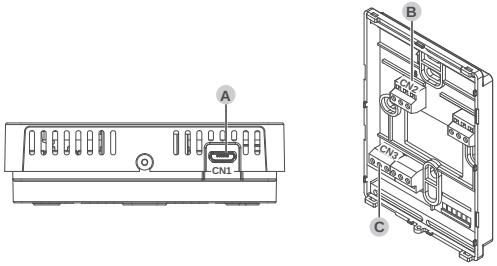
Technical data

	AVP1100/C	AVP1200/C	AVP1300/C
size	120x86x25 mm		
display	color touchscreen display 3.5” 320x240		
power supply	24 Vac - 24 Vac/dc		
analog inputs	1 x built-in NTC	1 x built-in NTC 1 x built-in %RH	1 x built-in NTC 1 x built-in %RH 1 x built-in PIR (presence probe)
connectivity	RS485 - Modbus SL - USB Micro-B (programming and debug)		
operating temperature	0...+50 °C		

Electric and mount diagrams







EVP3300/C, EVP3500/C/RH

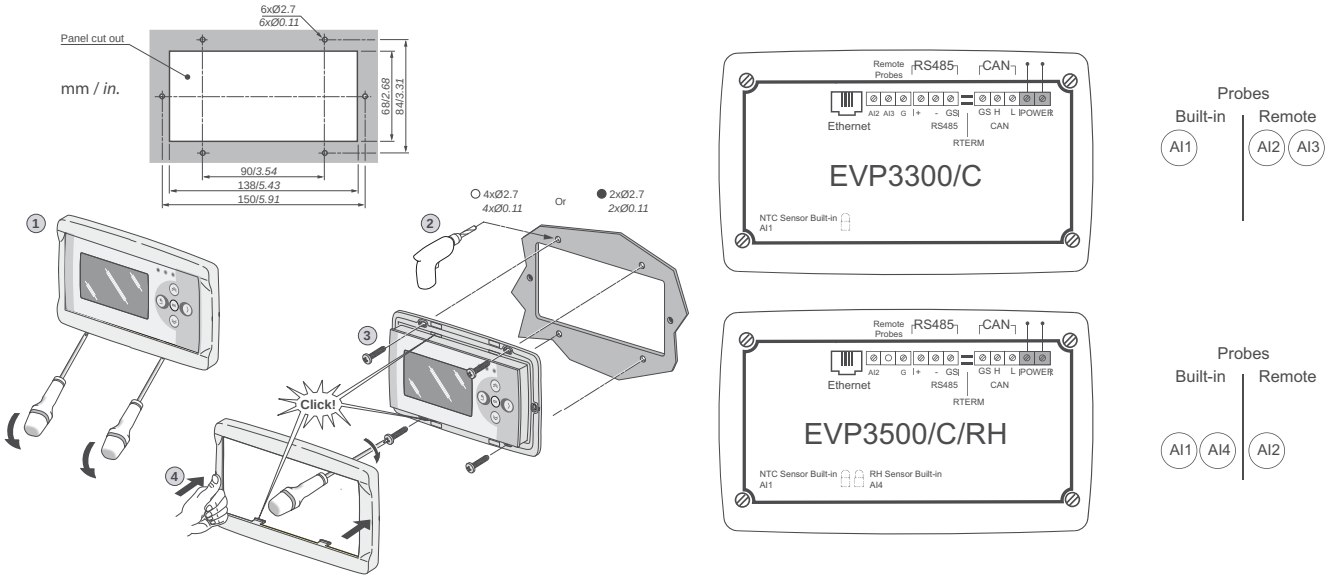
EVP3300/C

EVP3300/C/RH

Technical data

	EVP3300/C	EVP3500/C/RH
size	160x96x10 mm	
display	backlit LCD 128x64 px graphic display	
power supply	24 Vac/dc - 48 Vdc isolated	
analog inputs	AI1 1 x built-in NTC AI2 1 x remote NTC / D.I. AI3 1 x remote 4...20 mA / 0-5 V / 0-10 V	AI1 1 x built-in NTC AI2 1 x remote NTC / D.I. AI4 1 x built-in %RH
connectivity	CANBus isolated: CANopen RS485 isolated: Modbus RTU, BACnet MSTP Ethernet: Modbus TCP - BACnet IP - WebServer -	
operating temperature	-5...+55 °C	

Electric and mount diagrams



EVP3300/C - EVP3300/C/RH

FREE Advance models

FREE Advance

FREE Advance models (**AVD** with display, **AVC** without display) are available in versions for assembly on 8 DIN rail, with disconnectable screw terminal blocks for quick, easy installation.

Every AVD or AVC is expandable via CANbus (field) up to 12 expansions and 2 terminals (EVK). Up to 10 controllers can also be connected together via CANbus (network).

Up to 127 devices can be controlled with Modbus Master, via RS485.

FREE Advance with or without display /C indicates units with RTC – Real Time Clock; built-in RS485 and CANbus as standard

Model	Code	Relay outputs at hazardous voltage	SSR outputs	Analog outputs at safety extra low voltage (SELV)	Digital inputs (SELV) 2 fast pulse/ frequency counters up to 2 Khz included	Analog inputs at safety extra low voltage (SELV)
AVD3000/C/L/U	AVD3000060500	3	-	-	2	2
AVC3000/C/L/U	AVC3000060500	3	-	-	2	2
AVD6200/C	AVD6200050500	6	-	2	2	8
AVC6200/C	AVC6200050500	6	-	2	2	8
AVD6200/C/L/U	AVD6200060500	6	-	2	2	8
AVD6200/C/L/U/SSR	AVD62SS060500	4	2	2	2	8
AVC6200/C/L/U	AVC6200060500	6	-	2	2	8
AVC8400/C/L/U	AVC8400060500	8	-	4	8	8
AVD8400/C/L/U	AVD8400060500	8	-	4	8	8
AVD8400/C/L/U/SSR	AVD84SS060500	6	2	4	8	8
AVC12600/C/L/U	AVC1260060500	12	-	6	12	12
AVD12600/C/L/U	AVD1260060500	12	-	6	12	12
AVD12600/C/L/U/SSR	AVD126S060500	10	2	6	12	12

Expansions RS485 (EVE7500 only) and built-in CANbus as standard

Model	Code	Relay outputs at hazardous voltage	SSR outputs	Analog outputs (SELV) **AO4/AO5** configurable as Open Collector 12 Vdc 100 mA max each	Digital inputs at safety extra low voltage (SELV)	Digital inputs voltage free	Analog inputs at safety extra low voltage (SELV)
EVE7500	EVE7500000B00	7	-	5	8	1*	6
EVE6000	EVE6000000500	6	-	-	2**	-	4
EVE10200	EVE1020000500	10	-	2 (AO1/AO2 30 mA)	4+2**	-	10
EVE4200	EVE4200000500	4	-	2 (AO1/AO2 30 mA)	4	-	4

*fast pulse/frequency counter 1 Khz

**fast pulse/frequency counter 2 Khz

Resources available - FREE Advance

The IEC programmer has the following resources:

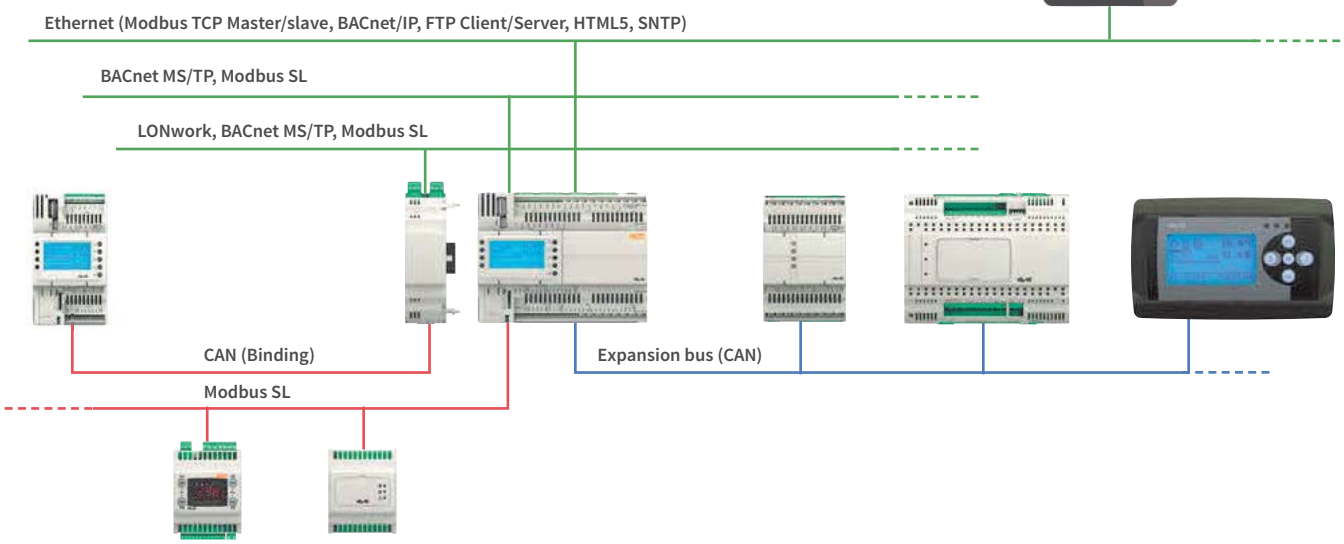
CPU	120 MHz, 16 Mbyte RAM
memory available for **Application**	1 Mbyte
memory available for **User Interface**	1.5 Mbyte
FLASH data memory	6 Mbyte
RAM - automatic mapping for **Application** and **User Interface**	512 Kbyte + 512 Kbyte
RAM - Modbus mapping	5000 words
EEPROM variables	4000 words (application) + 10000 words (BACnet objects)

Minimum developer kit - FREE Advance

- FREE Studio installation setup
- 1 FREE Advance AVD8400/C/L/U
- Mini USB cable for connection to PC
- Ethernet cable for network connection
- FREE Advance power supply transformer

FREE Advance connectivity

FREE Advance models are equipped with ETHERNET and RS-485 serial ports and built-in CANBUS as standard. They can also be integrated in industrial systems and BMS via the range of plug-in units, 2DIN modules quickly and easily connected to the AVD/AVC module.



Connectivity and functions

FREE Advance controllers feature integrated advanced functions, since they incorporate the Ethernet, BACnet, FTP and SNTP protocols as standard, as well as the LON protocol via an optional plug-in.

The Internet connection and integral WebServer offer machine constructors and system integrators complete remote access, drastically reducing service and maintenance times.

This also benefits end users, who can control their plants from multiple devices.

- Integral WebServer
- Local and remote plant control, including email alarm and alert management
- Remote reading and assistance
- Preventive and predictive maintenance
- State-of-the-art plant interface on PC, Tablet and Smartphone

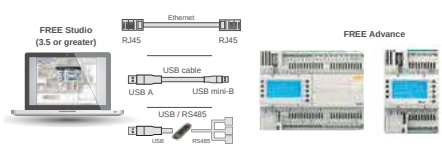
SD card Datalogging
SD card → ← FREE

Data download direction	→	←
Parameter map	-	-
IEC application	✓	
HMI application		
Data files		
BIOS	-	-

USB Host
PC → ← FREE

Data download direction	→	←
Parameter map	✓	✓
IEC application	✓	✓
HMI application	✓	✓
Data files	✓	✓
BIOS	✓	-

Ethernet / USB Device / RS485
PC → ← FREE



Data download direction	→	←
Parameter map	✓	✓
IEC application	✓	-
HMI application	✓	-
Data files	✓	✓
BIOS	✓	-

AVD3000, AVC3000

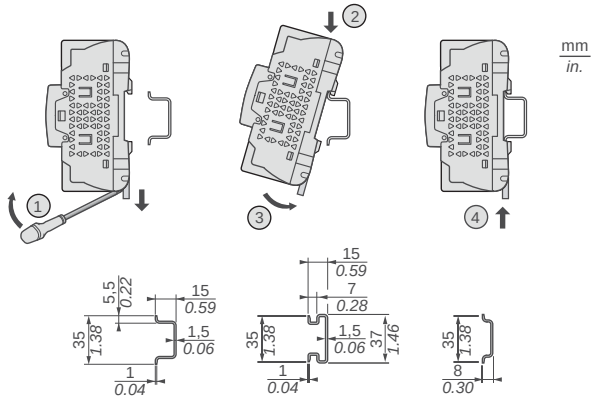
AVD3000

AVC3000

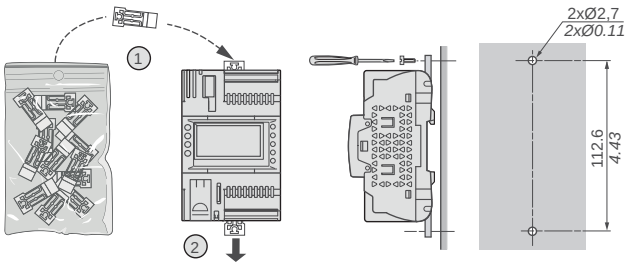
Technical data

	AVD3000	AVC3000
size	4 DIN	
display	backlit LCD 128x64 pixel graphic display	-
power supply	+24 Vac isolated +20...+38 Vdc isolated	
digital outputs	**3**: 3 x 3 A 250 Vac -	**3**: 3 x 3 A 250 Vac -
digital inputs	**2** x SELV can operate as pulse/frequency counters up to 2 kHz	
analog inputs	**2** x NTC 103AT / NTC NK103 / D.I. / PTC KTY81 / Pt1000 / 0...20 mA / 4...20 mA / 0-10 V / 0-5 V	
connectivity	CANBus: CANopen 2 x RS485: Modbus RTU (of which 1 x RS485: also BACnet MS/TP) USB (type A); USB (type mini-B)	
operating temperature	-20...+60°C	

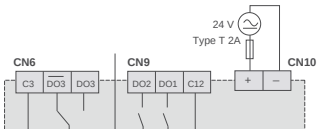
Electric and mount diagrams

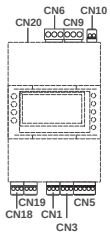


DIN rail mount

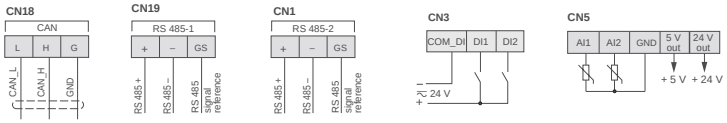


Panel mount





AVD3000
AVC3000*
*without display



AVD6200/C, AVC6200/C

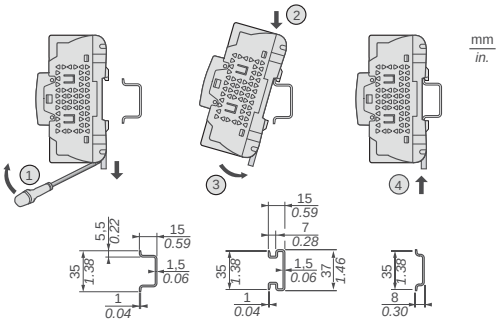
AVD6200/C

AVC6200/C

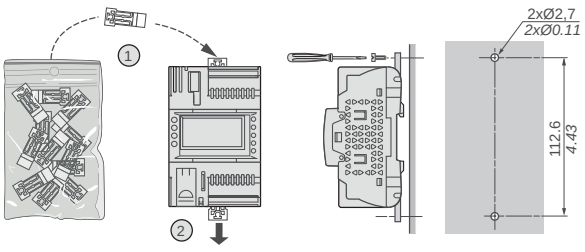
Technical data

	AVD6200/C	AVC6200/C
size	4 DIN	
display	backlit LCD 128x64 pixel graphic display	-
power supply	+24 Vac isolated +20...+38 V⎓ isolated	
digital outputs	**6**: 6 x 3 A 250 Vac -	**6**: 6 x 3 A 250 Vac -
analog outputs	**2**: 2 x 0-10 V, 2 x 0-10 V /4...20 mA / ON-OFF / PWM / O.C. 24 Vdc 50 mA max	
digital inputs	**2** x SELV can operate as pulse/frequency counters up to 2 kHz	
analog inputs	**8** x NTC C 103 AT / NTC NK103 / D.I. / PTC KTY81 / Pt1000 / 0...20 mA / 4...20 mA / 0-10 V / 0-5 V	
connectivity	Ethernet: BACnet IP, Modbus TCP Master/Slave, Webserver, Ftp Client/Server, SNTP via specific EVS ETH EVS ETH / RS485 plug-in module CANBus: CANopen 2 x RS485: Modbus RTU (of which 1 x RS485: also BACnet MS/TP) USB (type mini-B)	
operating temperature	-20...+60 °C	

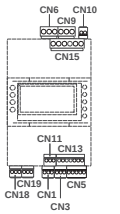
Electric and mount diagrams



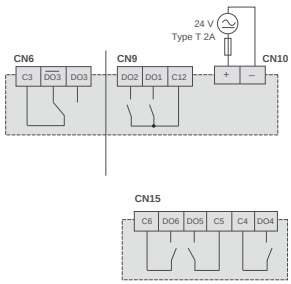
DIN rail mount

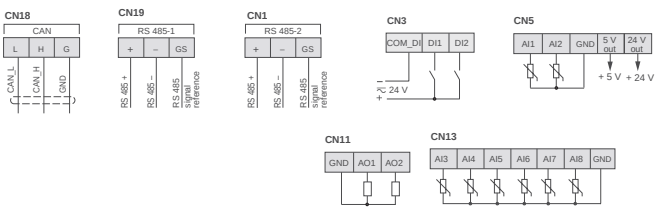


Panel mount



AVD6200/C
AVC6200/C*
*without display





AVD6200/C/L/U, AVD6200/C/L/U SSR, AVC6200/C/L/U

AVD6200/C/L/U

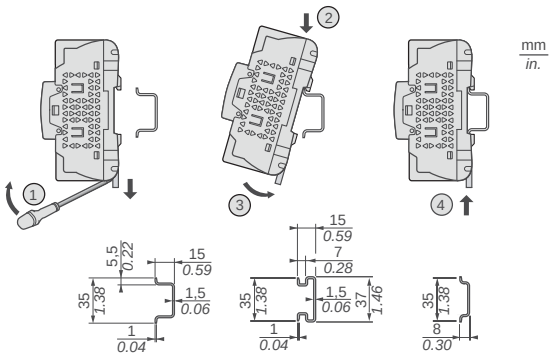
AVD6200/C/L/U SSR

AVC6200/C/L/U

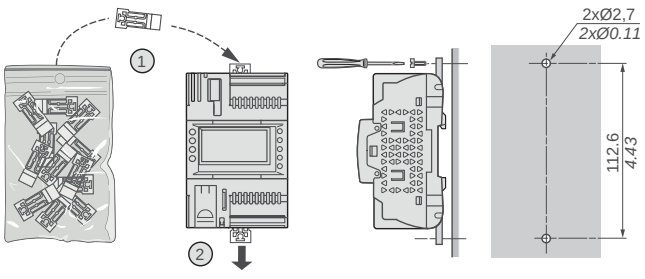
Technical data

	AVD6200/C/L/U	AVD6200/C/L/U SSR	AVC6200/C/L/U
size	4 DIN		
display	backlit LCD 128x64 pixel graphic display		-
power supply	+24 Vac isolated +20...+38 Vdc isolated		
digital outputs	**6**: 6 x 3 A 250 Vac -	**4**: 4 x 3 A 250 Vac **SSR**: 2 x 0.2A 240 Vac	**6**: 6 x 3 A 250 Vac -
analog outputs	**2**: 2 x 0-10 V, 2 x 0-10 V /4...20 mA / ON-OFF / PWM / O.C. 24 Vdc 50 mA max		
digital inputs	**2** x SELV can operate as pulse/frequency counters up to 2 kHz		
analog inputs	**12** x NTC 103 AT / NTC NK103 / D.I. / PTC KTY81 / Pt1000 / 0...20 mA / 4...20 mA / 0-10 V / 0-5 V		
connectivity	CANBus: CANopen 2 x RS485: Modbus RTU (of which 1 x RS485: also BACnet MS/TP) USB (type A); USB (type mini-B)		
operating temperature	-20...+60 °C	-20...+55 °C	-20...+60 °C

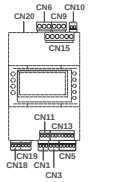
Electric and mount diagrams



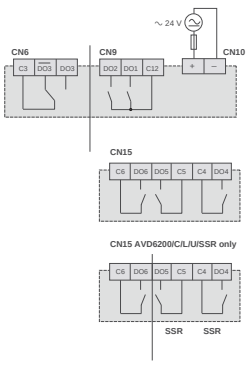
DIN rail mount

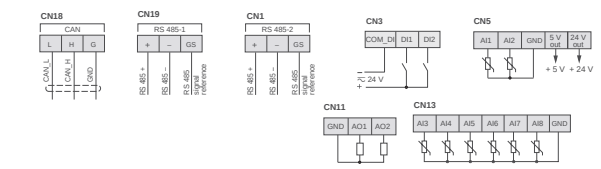


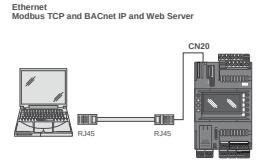
Panel mount



AVD6200/C/L/U
AVD6200/C/L/U/SSR
AVC6200/C/L/U*
*without display







AVD8400, AVD8400 SSR, AVC8400

AVD8400

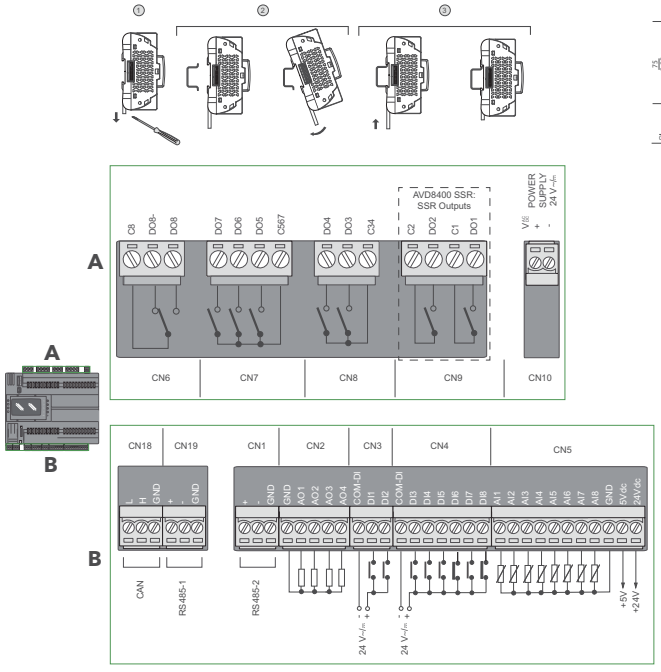
AVD8400 SSR

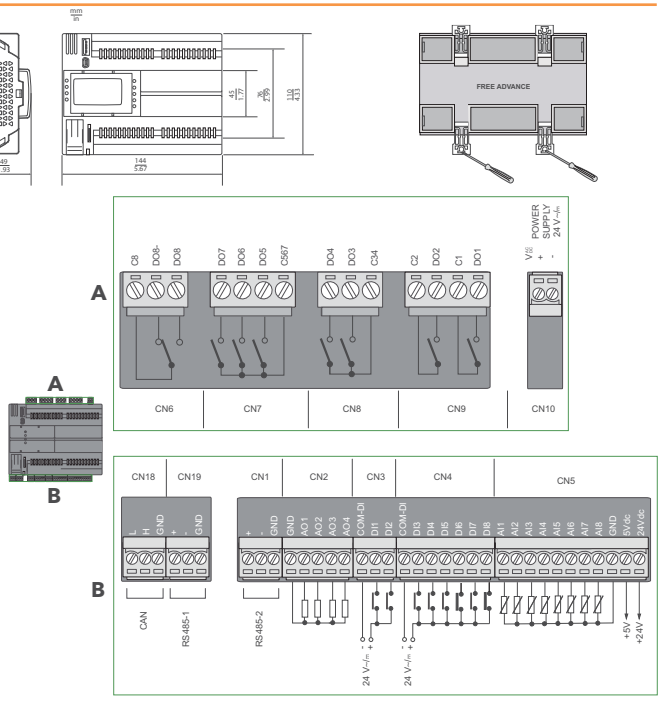
AVC8400

Technical data

	AVD8400	AVD8400 SSR	AVC8400
size	8 DIN		
display	backlit LCD 128x64 pixel graphic display		
power supply	+24 Vac not isolated +20...+38 Vdc not isolated		
digital outputs	**8**: 7 x 3 A, 1 x 1A 250 Vac -	**6**: 5 x 3 A, 1 x 1 A 250 Vac **SSR**: 2 x 0.5 A 240 Vac	**8**: 7 x 3 A, 1 x 1 A 250 Vac -
analog outputs	**4**: 2 x 0-10 V, 2 x 0-10 V /4...20 mA / ON-OFF / PWM / O.C. 24 Vdc 30 mA max		
digital inputs	**6** x SELV **2** x pulse/frequency counters up to 2 kHz		
analog inputs	**8** x NTC 103AT / NTC NK103 / D.I. / PTC KTY81 / Pt1000 / 0...20 mA / 4...20 mA / 0-10 V / 0-5 V		
connectivity	Ethernet: BACnet IP, Modbus TCP Master/Slave, Webserver, Ftp Client/Server, SNTP CANBus: CANopen 2 x RS485: Modbus RTU (of which 1 x RS485: also BACnet MS/TP) USB; 1 x plug-in EVS		
operating temperature	-20...+60 °C		

Electric and mount diagrams





AVD8400 - AVD8400 SSR

AVC8400

AVD12600, AVD12600 SSR, AVC12600

AVD12600

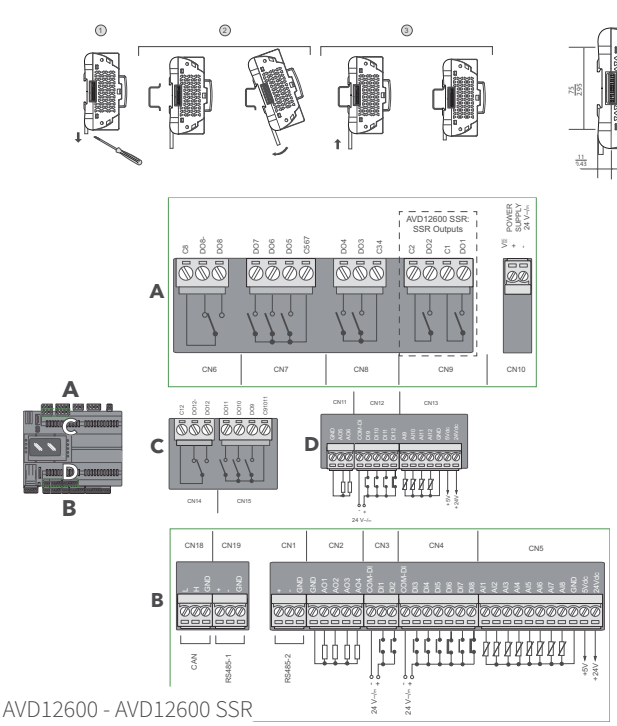
AVD12600 SSR

AVC12600

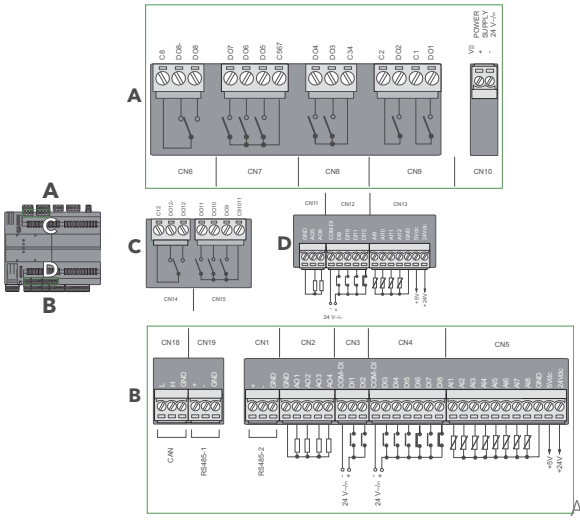
Technical data

	AVD12600	AVD12600 SSR	AVC12600
size	8 DIN		
display	backlit LCD 128x64 pixel graphic display		
power supply	+24 Vac not isolated +20...+38 Vdc not isolated		
digital outputs	**12**: 10 x 3 A, 2 x 1 A 250 Vac -	**10**: 8 x 3 A, 2 x 1 A 250 Vac **SSR**: 2 x 0.5A 240 Vac	**12**: 10 x 3 A, 2 x 1 A 250 Vac -
analog outputs	**6**: 4 x 0-10 V, 2 x 0-10 V /4...20 mA / ON-OFF / PWM / O.C. 24 Vdc 30 mA max		
digital inputs	**10** x SELV **2** x pulse/frequency counters up to 2 kHz		
analog inputs	**12** x NTC 103 AT / NTC NK103 / D.I. / PTC KTY81 / Pt1000 / 0...20 mA / 4...20 mA / 0-10 V / 0-5 V		
connectivity	Ethernet: Bacnet IP, Modbus TCP Master/Slave, Webserver, Ftp Client/Server, SNTP CANBus: CANopen 2 x RS485: Modbus RTU (of which 1 x RS485: also BACnet MS/TP) USB; 1 x plug-in EVS		
operating temperature	-20...+60 °C		

Electric and mount diagrams



AVD12600 - AVD12600 SSR



AVC12600 SSR

FREE Evolution models

FREE Evolution

FREE Evolution models (**EVD** with display, **EVC** without display) are available in versions for assembly on 8 DIN rail, with disconnectable screw terminal blocks for quick, easy installation.

Every EVD or EVC is expandable via CANbus (field) up to 12 expansions and 2 terminals (EVK). Up to 10 controllers can also be connected together via CANbus (network).

Up to 127 devices can be controlled with Modbus Master, via RS485.

FREE Evolution with or without display /C indicates units with RTC – Real Time Clock; built-in RS485 and CANbus as standard

Model	Code	Relay outputs at hazardous voltage	SSR outputs	Analog outputs (SELV) **AO4/AO5** configurable as Open Collector 12 Vdc 100 mA max each	Digital inputs at safety extra low voltage (SELV)	Digital inputs voltage free	Analog inputs at safety extra low voltage (SELV)
EVD7500/C/U	EVD7500060B00	7	-	5	8	1*	6
EVD75SS/C/U	EVD75SS060B00	5	2	5	8	1*	6
EVC7500/C/U	EVC7500060B00	7	-	5	8	1*	6

*Fast counter 1 kHz

Expansions RS485 (EVE7500 only) and built-in CANbus as standard

Model	Code	Relay outputs at hazardous voltage	SSR outputs	Analog outputs (SELV) **AO4/AO5** configurable as Open Collector 12 Vdc 100 mA max each	Digital inputs at safety extra low voltage (SELV)	Digital inputs voltage free	Analog inputs at safety extra low voltage (SELV)
EVE7500	EVE7500000B00	7	-	5	8	1*	6
EVE4200	EVE4200000500	4	-	2	4	-	4

*Fast counter 1 kHz

Resources available - FREE Panel, FREE Evolution

The IEC programmer has the following resources:

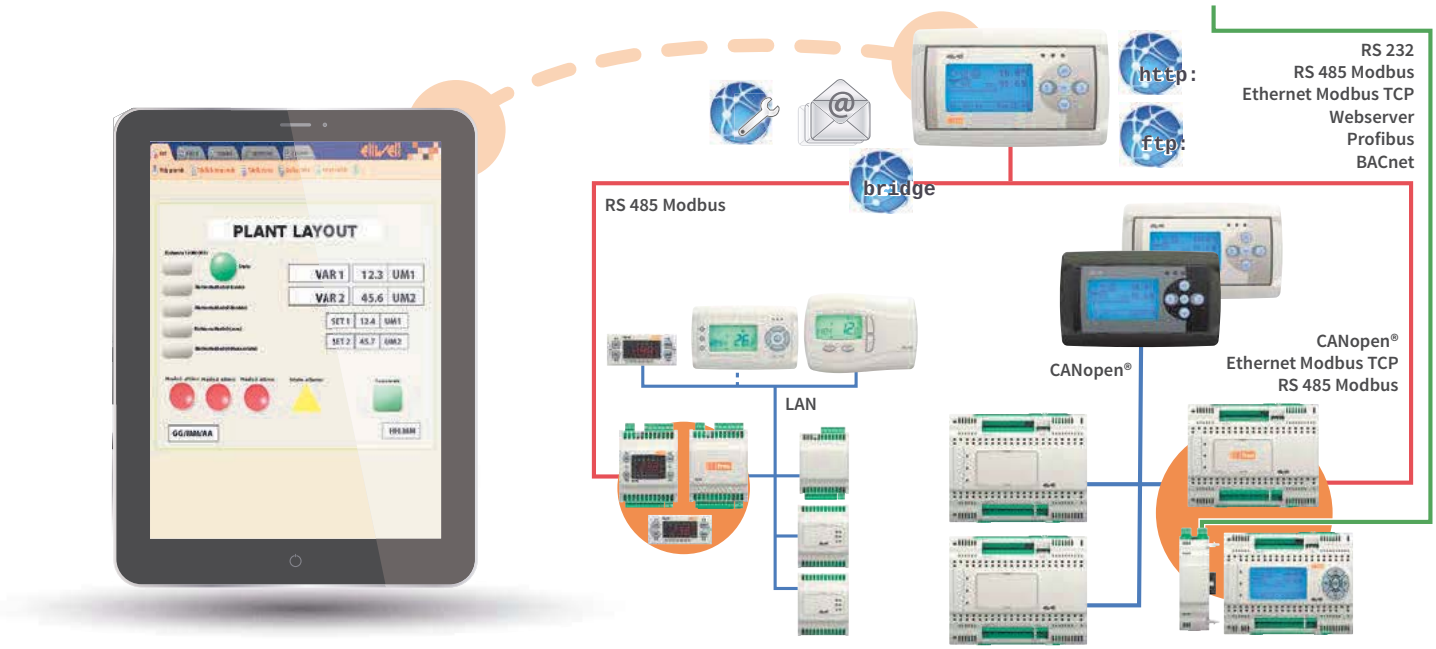
CPU	72 MHz, 32Mbyte RAM
memory available for **Application**	1 Mbyte
memory available for **User Interface**	1.5 Mbyte
FLASH data memory	128 Mbyte
RAM - automatic mapping for **Application** and **User Interface**	512 Kbyte + 512 Kbyte
RAM - Modbus mapping	5000 words
EEPROM variables	4000 words (application) + 10000 words (BACnet objects)

Minimum developer kit - FREE Evolution

- FREE Studio installation setup
- 1 FREE Evolution EVD7500/C/U
- USB/RS485 converter or Ethernet plug-in for PC connection
- FREE Evolution power supply transformer

FREE Evolution connectivity

FREE Evolution models are equipped with RS-485 serial ports and built-in CANBUS as standard. They can also be integrated in industrial systems, BMS and Ethernet networks via the range of plug-in units, 2DIN modules quickly and easily connected to the EVD/EVC module.



WEB functions

FREE Evolution and FREE Panel feature WEB functions that offer machine constructors and system integrators a complete remote access system.
Connecting their machines to the Internet drastically reduces service and maintenance times.
This also benefits end users, who can control their plants from multiple devices.

- Remote access via Internet
- Remote reading and assistance
- Local and remote plant control, including alarm management
- Preventive and predictive maintenance
- Email alarm notification
- State-of-the-art plant interface on PC, Tablet and Smartphone

USB Host
USB → ← FREE

Data download direction	→	←
Parameter map	✓	✓
IEC application	✓	✓
HMI application	✓	✓
Data files	✓	✓
BIOS	✓	-

USB Device
PC → ← FREE

Data download direction	→	←
Parameter map	-	-
IEC application	✓	✓
HMI application	✓	✓
Data files	✓	✓
BIOS	✓	-

USB-RS485 / Ethernet + Plugin
PC → ← FREE

Data download direction	→	←
Parameter map	✓	✓
IEC application	✓	-
HMI application	✓	-
Data files	✓	✓
BIOS	✓	-

EVD7500, EVD75SS, EVC7500

EVD7500

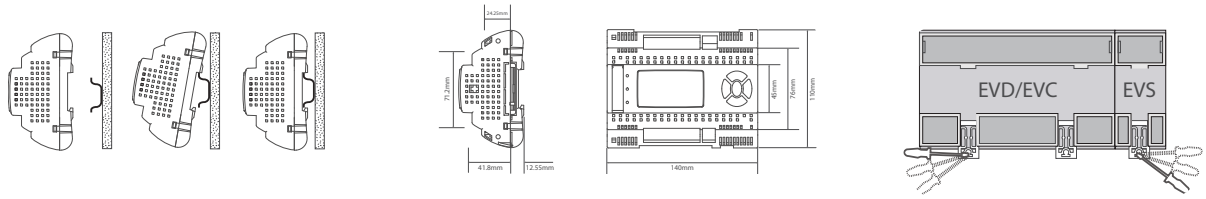
EVD75SS

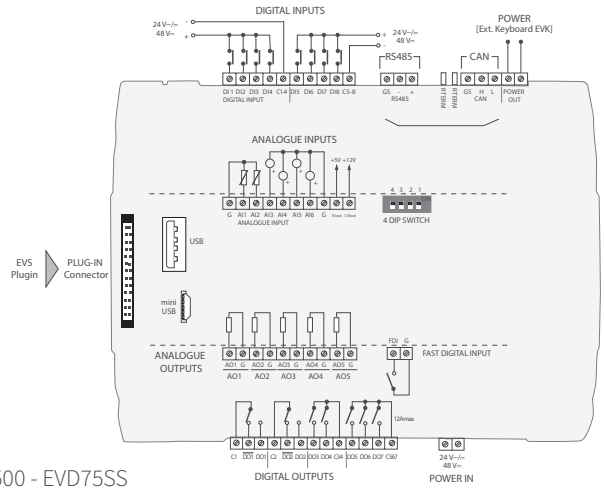
EVC7500

Technical data

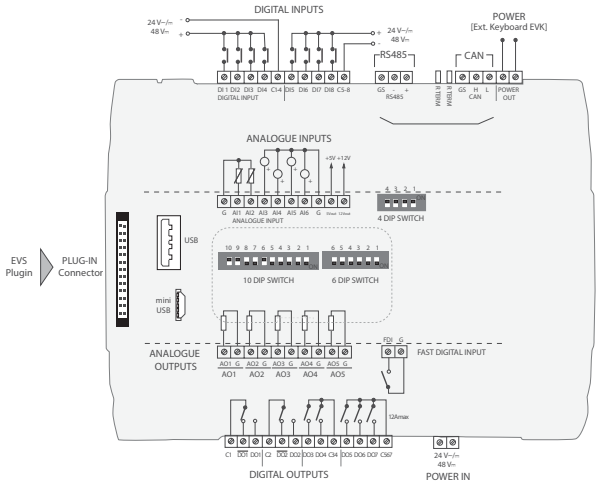
	EVD7500	EVD75SS	EVC7500
size	8 DIN		
display	backlit LCD 128x64 pixel graphic display		
power supply	24 Vac/dc - 48 Vdc isolated		
digital outputs	7: 2 x 8 A, 5 x 5 A 250 Vac -	5: 2 x 8 A, 3 x 5 A 250 Vac SSR: 2 x 1 A 250 Vac	7: 2 x 8 A, 5 x 5 A 250 Vac -
analog outputs	5 x 0-10 V / 4...20 mA / (switch 0..20 mA) AO4/AO5 configurable as O.C. 12 Vdc 100 mA max each		
digital inputs	8 x SELV 1 x voltage free fast counter 1 kHz		
analog inputs	2 x NTC 103 AT / NTC NK103 / D.I. 4 x NTC 103 AT / NTC NK103 / D.I. / Pt1000 / 4...20 mA / 0-10 V / 0-5 V		
connectivity	USB; 1 x Plug-in EVS CANBus isolated: CANopen RS485 isolated: Modbus RTU		
operating temperature	-10...+55 °C		

Electric and mount diagrams





EVD7500 - EVD75SS



EVC7500

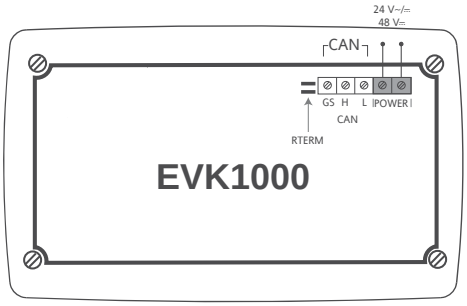
EVK1000 terminal

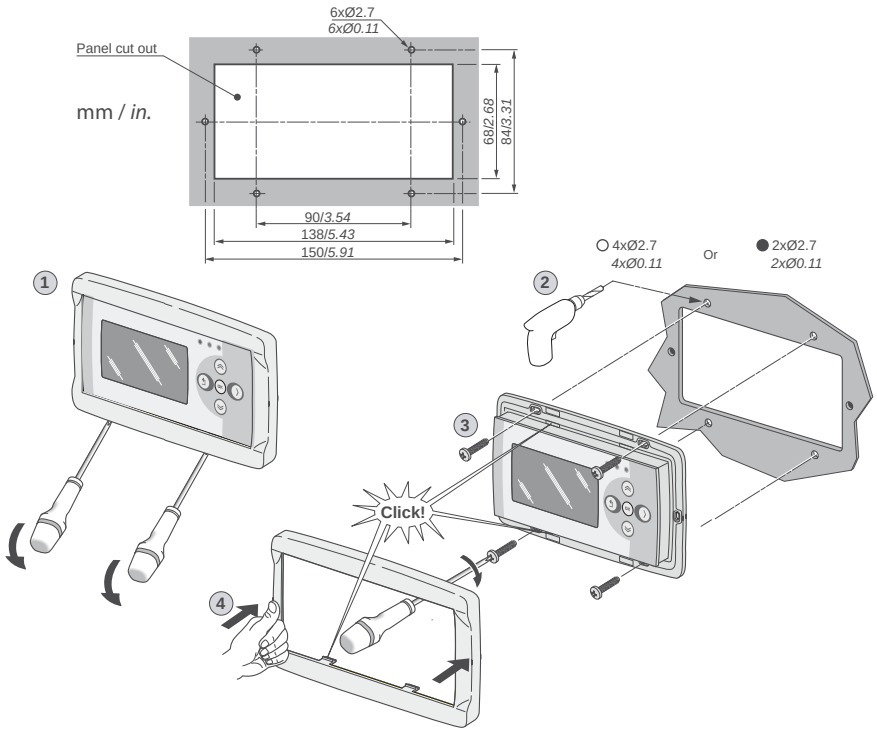
EVK1000

Technical data

	EVK1000
size	160x96x10 mm
mount	panel (for wall mount see Accessories page)
display	Backlit LCD
power supply	12...24 Vac / 24 Vdc isolated
connectivity	CANBus isolated: CANopen
operating temperature	-5...+55 °C
code	EVK1000000B00

Electric, mount and dimensional diagrams





Expansions EVE7500, EVE4200

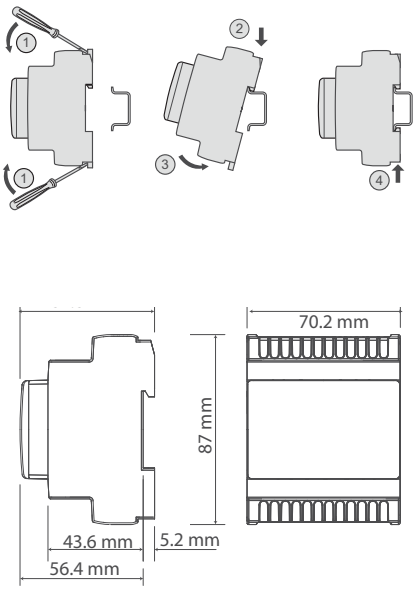
EVE7500

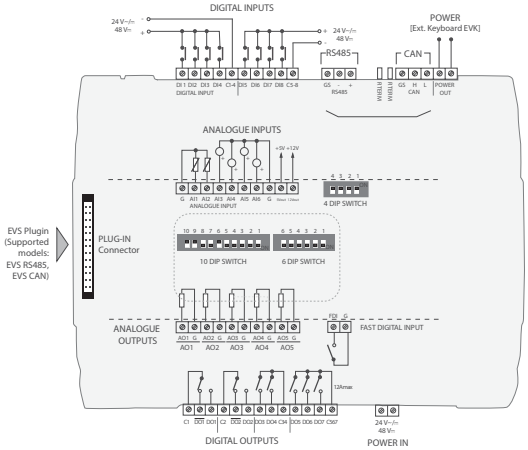
EVE4200

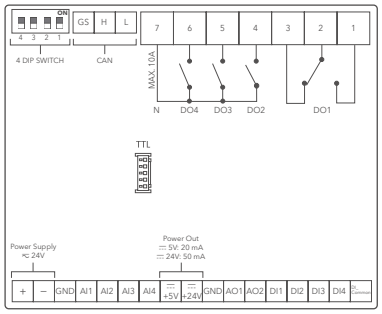
Technical data

	EVE7500	EVE4200
size	8 DIN	
mount	on DIN rail	
display	-	
power supply	24 Vac/dc - 48 Vdc isolated	24 Vac/dc
digital outputs	2 x 8 A 250 Vac	1: 1 x 5 A 250 Vac
	5 x 5 A 250 Vac	3: 3 x 3 A 250 Vac
analog outputs	5 x 0-10 V / 4..20 mA /switch 0..20 mA	2 x 0-10 V
digital inputs	8 x SELV	4 x SELV
	1 x voltage free fast counter 1 kHz	
analog inputs	2 x NTC 103 AT / NTC NK103 / D.I. 4 x NTC 103 AT / NTC NK103 / D.I. / Pt1000 / 4...20 mA / 0-10 V / 0-5 V	4 x NTC 103AT / NTC NK103 / D.I. / Pt1000 / PTC / 4...20 mA / 0-10 V / 0-5 V -
connectivity	CANBus isolated: CANopen RS485 isolated: Modbus RTU 1 x EVS Plugin (only EVS RS485, EVS CAN)	CANBus: CANopen - -
operating temperature	-10...+55 °C	-5...+55 °C

Electric, mount and dimensional diagrams





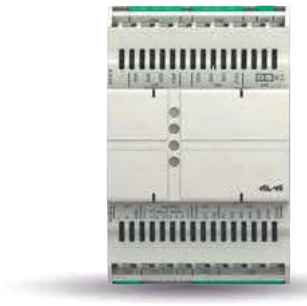


EVE7500

EVE4200

Expansions EVE6000, EVE10200

EVE6000

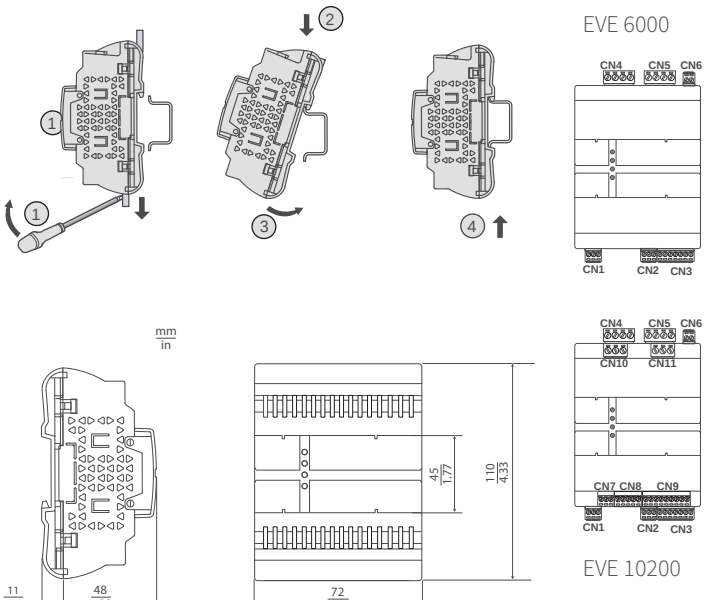


EVE10200

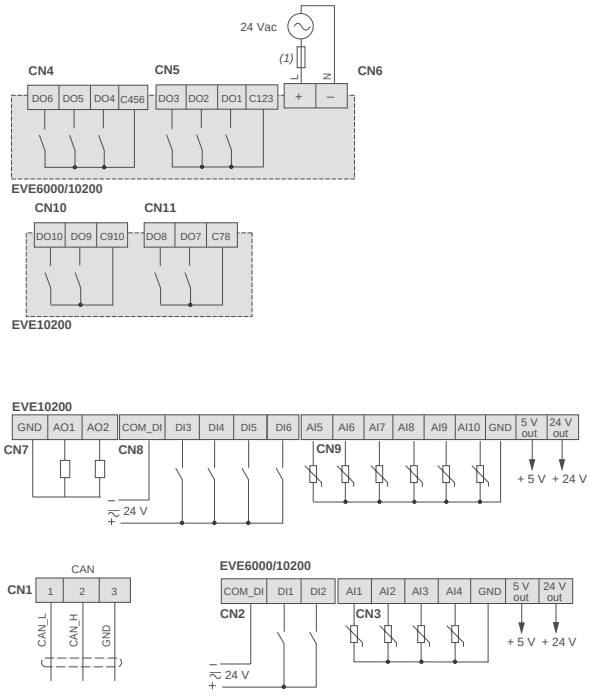
Technical data

	EVE6000	EVE10200
size	4 DIN	
mount	on DIN rail	
power supply	+24 Vac +20...+38 Vdc	
digital outputs	**6**: 6 x 3 A 250 Vac -	**10**: 10 x 3 A 250 Vac -
analog outputs	-	**2**: 2 x 0-10 V, 2 x 0-10 V /4...20 mA / ON-OFF / PWM / O.C. 24 Vdc 30 mA max
digital inputs	- **2** x pulse/frequency counters up to 2 kHz	**4** x SELV **2** x pulse/frequency counters up to 2 kHz
analog inputs	**4** x NTC 103 AT / NTC NK103 / D.I. / PTC KTY81 / Pt1000 / 0...20 mA / 4...20 mA / 0-10 V / 0-5 V	**10** x NTC 103 AT / NTC NK103 / D.I. / PTC KTY81 / Pt1000 / 0...20 mA / 4...20 mA / 0-10 V / 0-5 V
connectivity	CANBus: CANopen	
operating temperature	-20...+65 °C	

Electric, mount and dimensional diagrams



EVE6000 / EVE10200



EVE6000 / EVE10200

Plugin EVS

EVS RS485 | EVS ETH | EVS LON | EVS CAN | EVS RS232

Technical data

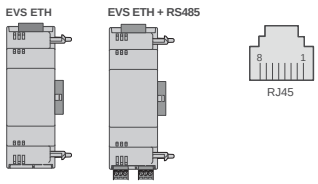
EVS	
size	2 DIN
mount	on DIN rail
power supply	from base EVD/EVC/AVD

Connectivity

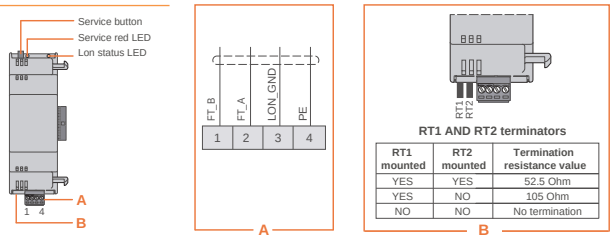
Model	Code	Hazardous voltage output	Connectivity protocol	Compatibility
EVS RS232	EVS10R2000000	1 x SPDT 5A 250 Vac	Modbus ASCII	FREE Advance - FREE Evolution
EVS RS485	EVS00R4000000	-	Modbus RTU	FREE Advance - FREE Evolution
EVS CAN	EVS00CA000000	-	CANopen	FREE Advance - FREE Evolution
EVS Bacnet	EVS00BM000000	-	Modbus RTU - BACnet MSTP	FREE Advance and FREE Evolution
EVS LONWORKS	EVS0LON000000	-	LON	FREE Advance - FREE Evolution
EVS ETH	EVS00ET000000	-	Modbus TCP - BACnet IP - WebServer	FREE Evolution
EVS Profibus	EVS00PB000000	-	Profibus DP Slave-V0	FREE Evolution
EVS ETH/RS485	EVS00EB000000	-	Modbus RTU - BACnet MSTP - Modbus TCP - BACnet IP - Webserver	FREE Evolution

Electric, mount and dimensional diagrams

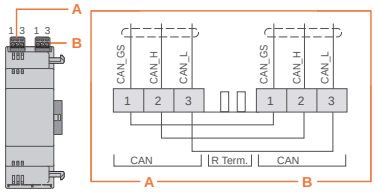
EVS ETHERNET



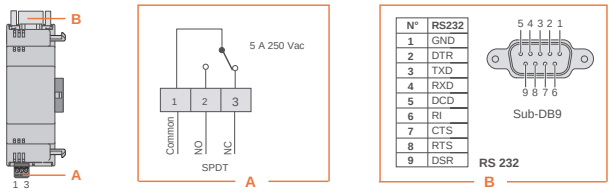
EVS LON



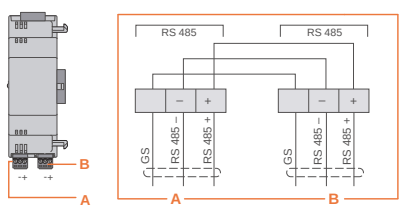
EVS CAN



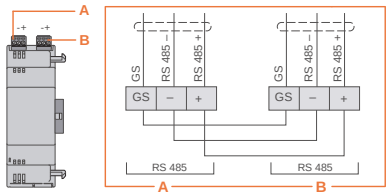
EVS RS232/R



EVS RS485 BACnet MS/TP



EVS RS485



Accessories

In association with FREE Smart, FREE Panel, FREE Evolution and FREE Advance, Eliwell supplies a vast range of accessories, from a protected transformer to IP68 temperature probes, ratiometric pressure transducers and pressure switches.

Single-phase (with currents from 2 to 9A) and three-phase fan modules are available.

No additional serial interfaces are required for connection of ratiometric pressure probes, external modules (such as fan modules) or terminals.

FREE Smart accessories

Converters, interfaces, programming keys

Code	Description	Details
SAR0RA00X701	USB/485 MINI KIT converter	-
DMI1003002000	DMI100-3 Manufacturer interface module	For FREE Smart only
MFK100T000000	MFK: programming key for parameter, application upload/download	For FREE Smart only

Wiring

Code	Description	Details
COLV0000E0100	I/O connection wiring - safety extra low voltage (SELV) - 1 m cable	FREE Smart 12...24V only
COLV000035100	RS485 Wiring	FREE Smart 12...24V only
COLV000042100	Wiring AO3-4-5 -1 m cable	FREE Smart 12...24V only

Connectivity

Code	Description	Details
BA10000R3700	BusAdapter 150 TTL-RS485	For FREE Smart only

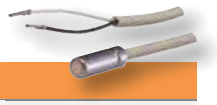
Humidity module

Code	Description	Details
KP100000	Humidity module %RH	For SKW terminal

Demo Case

Code	Description	Details
VAL00031K	Demo Case for FREE Smart	-

Temperature probes*



Code	Description	Details
SN8DED11502C0	NTC 103AT 5X20 1.5 mt TPE IP68	-
SN8DAE11502C0	NTC 103AT 6X20 1.5 mt TPE IP68	-
SN9DAE11502C6	Pt1000 6X20 1.5 mt IP68	FREE Smart 4500
SN9DED11502C6	Pt1000 5X20 1.5 mt IP68	

Transformers

Code	Description	Details
TF411205	Transformer 230 Vac/12 V 6 VA (protected)	For FREE Smart only
TF411210	Transformer 230 Vac/12 V 11 VA (protected)	For FREE Smart only
TF111211	Transformer 220 Vac/24 V-24 V 16 VA	For FREE Smart only

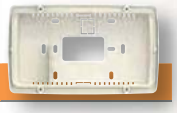
KEY: SELV = Safety Extra Low Voltage
*different cable lengths available on request

FREE Advance, FREE Evolution and FREE Panel accessories

Converters, interfaces, programming keys

Code	Description	Details
SAR0RA00X701	USB/485 MINI KIT converter	-
EVA00USCA0000	USB/CAN converter	-

Base plates



Code	Description	Details
EVA00WMRC0000	Kit (4 Pcs) White base plate for wall mount	For EVP/EVK
EVA00WMRC0001	Kit (4 Pcs) Black base plate for wall mount	For EVP/EVK
AVA00WMRC0000	White base plate for wall mount	Per AVP1000
AVA00WMRC0001	Grey base plate for wall mount	Per AVP1000

Demo Case

Code	Description	Details
VAL00033K	Demo Case for FREE Evolution	-
VAL00034	Demo Case for FREE Advance	-

Temperature probes*

Code	Description	Details
SN8DED11502C0	NTC 103 AT 5X20 1.5 m TP IP68	-
SN8DAE11502C0	NTC 103 AT 6X20 1.5 m TP IP68	-
SN9DAE11502C6	Pt1000 6X20 1.5 m IP68	FREE Evolution / FREE Advance
SN9DED11502C6	Pt1000 5X20 1.5 m IP68	

Transformers

Code	Description	Details
TF111202	Transformer 230V~/24 V 25 VA	For FREE Evolution only
TF111205	Transformer 230V~/24 V 35 VA DIN rail mount	FREE Evolution / FREE Advance

FREE range accessories

Pressure transducers

Code	Description	Details
TD220050	EWPA050 4…20 mA / 0...667 psi / 0..50 bar IP54** 2 m cable	1/4 SAE MALE
TD220007	EWPA007 4…20 mA / -7...101.5 psi /-0.5..7 bar IP54** 2 m cable	1/4 SAE MALE
TD320050	EWPA050 4…20 mA / 0...667 psi / 0..50 bar IP54** 2 m cable	1/4 SAE FEMALE
TD320007	EWPA007 4…20 mA / -7...101.5 psi /-0.5..7 bar IP54** 2 m cable	1/4 SAE FEMALE

Ratiometric transducers

Code	Description	Details
TD420010	EWPA 010 R 0...145 psi / 0...10 bar IP67 2 m cable (packard connector)	Female connection
TD420030	EWPA 030 R 0...508 psi / 0...30 bar IP67 2 m cable (packard connector)	Female connection
TD420050	EWPA 050 R 0...667 psi / 0...50 bar IP67 2 m cable (packard connector)	Female connection

Expansions, fan modules

Code	Description	Details
MW320100	EXP11 250 V 10 A expansion with DIN rail mount base	Open Collector Output
MW991012	CFS05 TANDEM TRIAC 5+5 A 250 V	-
CFS Modules	CFS - Single-phase speed regulators for currents from 2 A to 9 A	Various articles available

KEY: SELV = Safety Extra Low Voltage
*different cable lengths available on request **optional IP67 version with packard connector

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