



proop

Professional Operator Panel

10.1" Operator Panel - Proop I 0

5" Operator Panel - ProopBlack5

7" Operator Panel - Proop7

4.3" Operator Panel - ProopBlack4





ARM Cortex-A Series



8GB eMMC



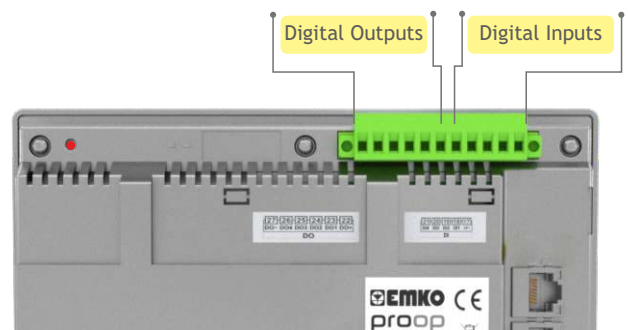
512 MB
DDR3 SDRAM

Datalogger and
Step Control Features
Recipe Definition
Multi-Language Editor

Internal Analogue / Digital Input and Output

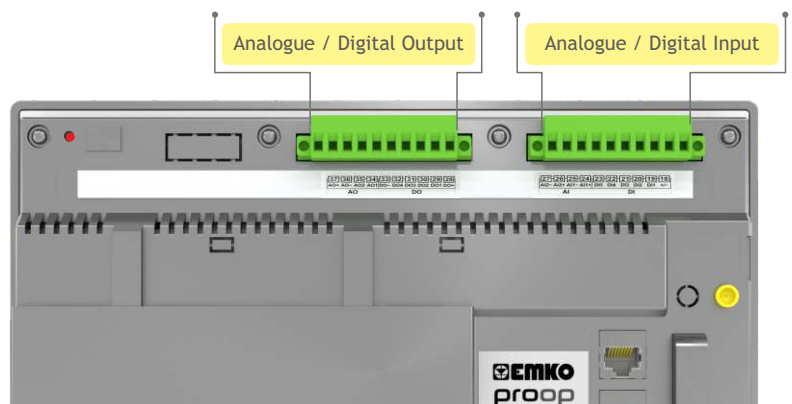
7" Operator Panel - Proop7

- 4 Digital input
- 4 Digital output



10" Operator Panel - Proop10

- 5 Digital input
- 4 Digital output
- 2 x 0/4...20 mA Analogue input
- 2 x 0/4...20 mA Analogue Output
- Optional Analogue input :
0...10 Vdc or 0...50 mV or PT-100
- Optional Analogue output :
0...10 Vdc



Macro:

Ensures processing of collected data and controlling internal input and outputs

C/C++ Ability to execute C codes in real time



COMPATIBLE with ERP/MES SYSTEMS

Full Compliance with ERP/MES production tracking applications

Macros and SQL client support for use in these applications

Mause, keyboard, barcode reader, barcode printer, RFID reader connection via USB



IOT / MQTT SUPPORT

Supporting MQTT (V3.1, V3.1.1 ve V5.0) as standard communication protocol in IoT applications

Possibility to use cloud services such as Microsoft Azure, Google Cloud, Amazon AWS IoT



SMB File Sharing

Access to folders and files in the panel connected to the work over windows file explorer



Network



Video Player

Play MP4 video files over the panel

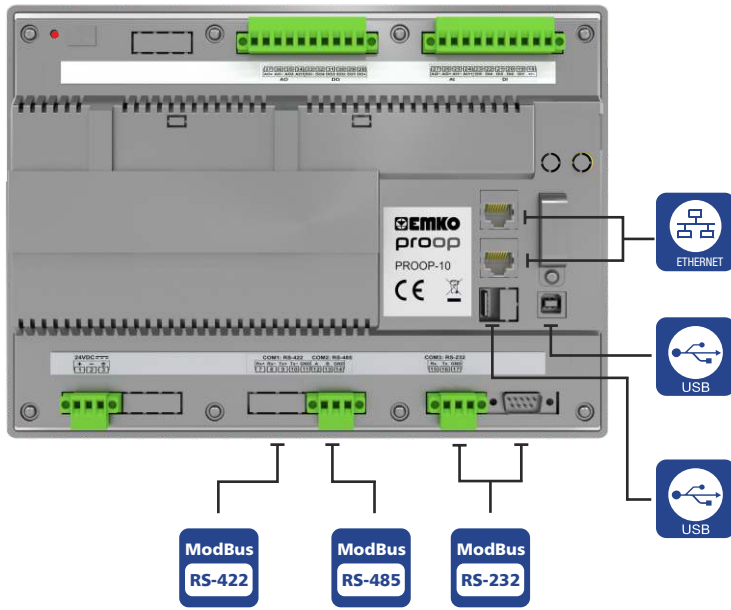


VNC

Remote Desktop feature



Communication Features



Internal

- IEEE 802.11 b/g/n standard
- 2.4 GHz frequency band
- Bitrate: max 72 Mbps
- WEP, WPA and WPA2 security protocols
- Soft-AP (access point) support
- Internal integrated antenna
- Certificates:
EN 301 489 (EMC immunity)
EN 300 328 (Radiated emissions)
EN 60950 (Safety standards)

Communication Protocols

| | |
|---------|----------------------|
| MODBUS | Modbus-RTU |
| MODBUS | Modbus-ASCII |
| MODBUS | Modbus TCP/IP |
| MODBUS | Modbus-ASCII(Slave) |
| MODBUS | Modbus-RTU(Slave) |
| MODBUS | Modbus TCP/IP(Slave) |
| SIEMENS | S7-300(ISOTCP) |
| SIEMENS | S7-400(ISOTCP) |
| SIEMENS | S7-1200(ISOTCP) |
| SIEMENS | S7-1500(ISOTCP) |
| BACNET | MS/TP |
| BACNET | IP |
| OMRON | Host Link |
| OMRON | FINS |
| DELTA | DVP Series PLC |

Project Download and Upload Via USB and Ethernet



- USB Input (With USB cable connection) : Project Upload
- USB Host Input (With Flash memory) : Upload
- USB Host Input for Keypad, Mouse Connection
- Barcode reader, Barcode Printer, RFID reader

High speed data transfer with ethernet project upload, project download, VNC remote connection and SMB file sharing

Project upload and data recording with USB 2.0

Regional Formatting Format Support



Time, date and number formats can be set for local territories.

User can create his own font library.

Microsoft Windows Font File Format (Windows FNT),
TrueType (TTF), PostScript Type1 (PFA/PFB), Bitmap Distribution Format (BDF),
CID-keyed Type1, Compact Font Format (CFF), OpenType fonts,
SFNT-based bitmap fonts, Portable Compiled Format (PCF),
Portable Font Resource (PFR), Type 42 (Limited support) supports font types.



Graphics / Visual Features

SVG
GIF
BMP
JPG
JPEG
PNG
TIFF
PPM
PGM
XPM
XBM

User can create his own picture library.

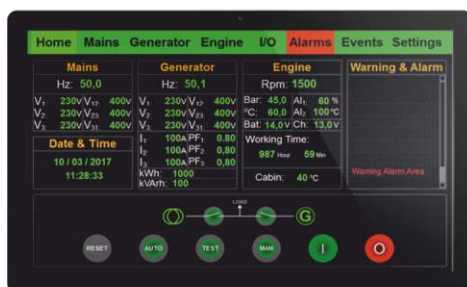
Over 100 vector-based prefabricated elements.

Vector based user defined image (SVG) support.

BMP, GIF, JPG, JPEG, PNG, PBM, PGM, PPM, TIFF, XBM, XPM format picture support.

Enhanced visual drawing infrastructure ; antialiasing, alphablending support.

Online / Offline Simulation Mode



Online Simulation:

The designed screen display, macro commands and PLC communication can be tested on the PC without being loaded on the Proop device.



Offline Simulation:

Pre-screening of the designed screen can be done without loading on the compilation and Proop device.



Multi-language support,
Free Type and Windows Font support,
Defining user image library,
Simulation feature,
Video playback feature.

C / C ++ real-time programming,
BACNET MSTP,
MODBUS-RTU / -ASCII (Master / Slave) communication,
Compatible with OMRON Host Link, DELTA DVP Series PLCs.



ARM Cortex-A Series



8GB eMMC



512 MB
DDR3 SDRAM



50000 hours
Backlight Life

Technical Specifications

System

| | |
|---------------------|--|
| Communication Ports | 1x RS-232 + 1x RS485 + 1x USB host + 1x USB device |
| Real Time Clock | Internal |

Environmental Conditions

| | |
|---------------------------|----------------------|
| Protection Class | Ip65 |
| Operating Tem. / Humidity | 0...50°C / 0...90%RH |
| Storage Temperature | -20...60°C |

Communication Ports

| | |
|--------|----------------------|
| RS-232 | Max. 230400 Baudrate |
| RS-485 | Max. 57600 Baudrate |

Display

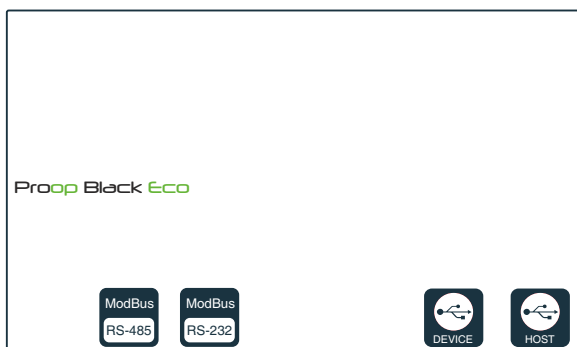
| | |
|---------------|--------------------|
| LCD Backlight | Led |
| Touch Method | Resistive Analogue |

Power

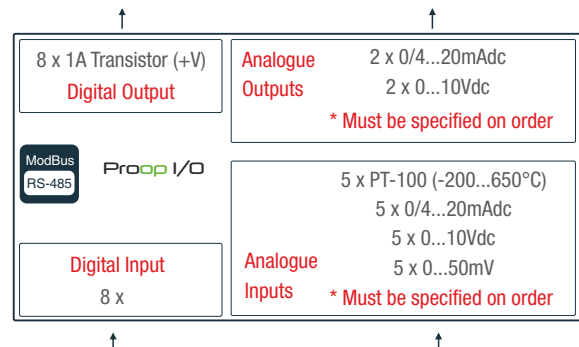
| | |
|--------------------|---|
| Operating Voltage | 18...30Vdc |
| Power Consumption | 5W (4.3", 5") , 6W (7") |
| RTC Battery / Life | Cr2032 button cell lithium bat. 3V / 10years |



Professional Operator Panel



Optional Input / Output Expansion Module



* 2 fast counters can be defined
* Maximum count frequency of a high-speed counter Maximum 10 kHz for encoder inputs, 15 kHz for counter inputs.

Product Codes

| Proop Black Eco | Display Type | Display Colors | Display Resolution | Luminance (Cd/m2) | Device Dimensions | Panel Cut-Out | Weight |
|-------------------|--------------|----------------|--------------------|-------------------|-------------------|---------------|--------|
| Proop.black-4.eco | 4.3" TFT | 260K colors | 480x272 | 530 | 153x105x50mm | 143x97mm | 350gr |
| Proop.black-5.eco | 5" TFT | 260K colors | 800x480 | 330 | 153x105x50mm | 143x97mm | 350gr |
| Proop.black-7.eco | 7" TFT | 260K colors | 800x480 | 300 | 206x152x50mm | 196x142mm | 700gr |

Proop Black Lite Series

Proop Black Lite



10.1" TFT LCD
Touch screen

7" TFT LCD
Touch screen



Proop Lite



7" TFT LCD
Touch screen

10.1" TFT LCD
Touch screen

Multi-language support, Free Type and Windows Font support,
Defining user image library,
Simulation feature,
MQTT communications protocol,
SQL client property,
VNC remote control feature,

SMB file sharing,
Video playback feature,
C / C ++ real-time programming,
BACNET MSTP, MODBUS-RTU / -ASCII (Master / Slave) communication,
Communication with SIEMENS, BACKNET IP, OMRON FINS, MODBUS TCP,
Compatible with OMRON Host Link, DELTA DVP Series PLCs.



ARM Cortex-A Series



8GB eMMC



512 MB
DDR3 SDRAM



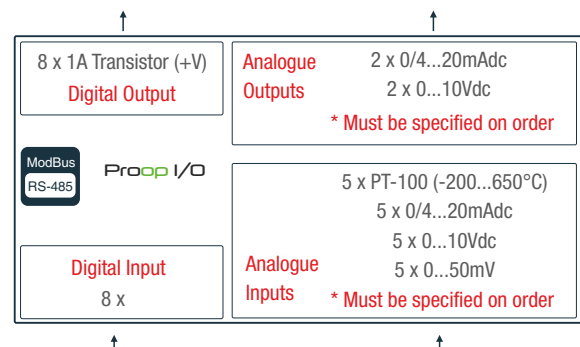
50000 hours
Backlight Life



Professional Operator Panel



Optional
Input / Output Expansion Module



* 2 fast counters can be defined
* Maximum count frequency of a high-speed counter Maximum 10 kHz for encoder inputs, 15 kHz for counter inputs.

Technical Specifications

Dimensions

| | |
|-------------------|--|
| Device Dimensions | 7" (206x152x50mm) , 10.1" (278x200x50mm) |
| Panel Cut-Out | 7" (196x142mm) , 10.1" (265x186mm) |
| Weight | 7" (700gr) , 10.1" (1300gr) |

Environmental Conditions

| | |
|---------------------------|----------------------|
| Protection Class | Ip65 |
| Operating Tem. / Humidity | 0...50°C / 0...90%RH |
| Storage Temperature | -20...60°C |

Communication Ports

| | |
|--------|----------------------|
| RS-232 | Max. 230400 Baudrate |
| RS-485 | Max. 57600 Baudrate |

Display

| | |
|---------------|--------------------|
| LCD Backlight | Led |
| Touch Method | Resistive Analogue |

Power

| | |
|--------------------|---|
| Operating Voltage | 18...30Vdc |
| Power Consumption | 6W (7"), 8W (10.1") |
| RTC Battery / Life | Cr2032 button cell lithium bat. 3V / 10years |

Product Codes



| Proop Lite | Display Type | Display Colors | Display Resolution | Luminance (Cd/m2) | Ethernet (10/100 Mbps) | Wifi (IEEE 802.11b/g/n) |
|---------------|--------------|----------------|--------------------|-------------------|------------------------|-------------------------|
| Proop-7L.wi | 7" TFT | 260K color | 800x480 | 300 | | 1x |
| Proop-7L.E | 7" TFT | 260K color | 800x480 | 300 | 1x | |
| Proop-7L.Ewi | 7" TFT | 260K color | 800x480 | 300 | 1x | 1x |
| Proop-10L | 10.1" TFT | 16M color | 1024x600 | 270 | | |
| Proop-10L.wi | 10.1" TFT | 16M color | 1024x600 | 270 | | 1x |
| Proop-10L.E | 10.1" TFT | 16M color | 1024x600 | 270 | 1x | |
| Proop-10L.Ewi | 10.1" TFT | 16M color | 1024x600 | 270 | 1x | 1x |

Product Codes



| Proop Black Lite | Display Type | Display Colors | Display Resolution | Luminance (Cd/m2) | Ethernet (10/100 Mbps) | Wifi (IEEE 802.11b/g/n) |
|---------------------|--------------|----------------|--------------------|-------------------|------------------------|-------------------------|
| Proop.black-7L.wi | 7" TFT | 260K color | 800x480 | 300 | | 1x |
| Proop.black-7L.E | 7" TFT | 260K color | 800x480 | 300 | 1x | |
| Proop.black-7L.Ewi | 7" TFT | 260K color | 800x480 | 300 | 1x | 1x |
| Proop.black-10L | 10.1" TFT | 16M color | 1024x600 | 270 | | |
| Proop.black-10L.wi | 10.1" TFT | 16M color | 1024x600 | 270 | | 1x |
| Proop.black-10L.E | 10.1" TFT | 16M color | 1024x600 | 270 | 1x | |
| Proop.black-10L.Ewi | 10.1" TFT | 16M color | 1024x600 | 270 | 1x | 1x |

Proop Control Series

Proop Black Control



Proop Control



10.1" TFT LCD
Touch screen

7" TFT LCD
Touch screen

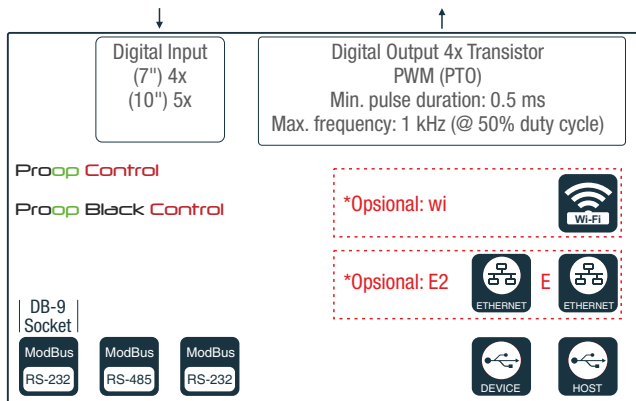
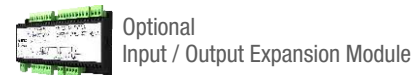


7" TFT LCD
Touch screen

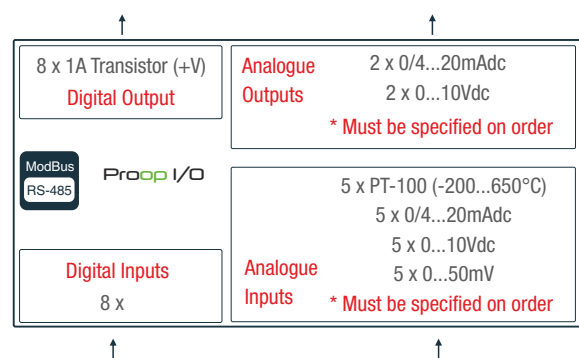
10.1" TFT LCD
Touch screen

Multi-language support, Free Type and Windows Font support,
Defining user image library,
Simulation feature,
MQTT communications protocol,
SQL client property,
VNC remote control feature,

SMB file sharing,
Video playback feature,
C / C ++ real-time programming,
BACNET MSTP, MODBUS-RTU / -ASCII (Master / Slave) communication,
Communication with SIEMENS, BACKNET IP, OMRON FINS, MODBUS TCP,
Compatible with OMRON Host Link, DELTA DVP Series PLCs.



* Optical Isolated Digital Inputs and Outputs
* Digital Input and Output Sampling Period 50 ms.



* 2 fast counters can be defined
* Maximum count frequency of a high-speed counter Maximum 10 kHz for encoder inputs, 15 kHz for counter inputs.

Technical Specifications

Dimensions

| | |
|-------------------|--|
| Device Dimensions | 7" (206x152x50mm) , 10.1" (278x200x50mm) |
| Panel Cut-Out | 7" (196x142mm) , 10.1" (265x186mm) |
| Weight | 7" (700gr) , 10.1" (1300gr) |

Environmental Conditions

| | |
|---------------------------|----------------------|
| Protection Class | Ip65 |
| Operating Tem. / Humidity | 0...50°C / 0...90%RH |
| Storage Temperature | -20...60°C |

Communication Ports

| | |
|--------|----------------------|
| RS-232 | Max. 230400 Baudrate |
| RS-485 | Max. 57600 Baudrate |

Display

| | |
|---------------|--------------------|
| LCD Backlight | Led |
| Touch Method | Resistive Analogue |

Power

| | |
|--------------------|---|
| Operating Voltage | 18...30Vdc |
| Power Consumption | 6W (7"), 8W (10.1") |
| RTC Battery / Life | Cr2032 button cell lithium bat. 3V / 10years |

Product Codes



| Proop Control | Display Type | Display Colors | Display Resolution | Luminance (Cd/m2) | Ethernet (10/100 Mbps) | Wifi (IEEE 802.11b/g/n) | Digital Inputs | Digital Outputs (Transistor) |
|---------------|--------------|----------------|--------------------|-------------------|------------------------|-------------------------|----------------|------------------------------|
| Proop-7C | 7" TFT | 260K color | 800x480 | 300 | | 1x | 4x | 4x |
| Proop-7C.wi | 7" TFT | 260K color | 800x480 | 300 | | | 4x | 4x |
| Proop-7C.E | 7" TFT | 260K color | 800x480 | 300 | 1x | | 4x | 4x |
| Proop-7C.E2 | 7" TFT | 260K color | 800x480 | 300 | 2x | | 4x | 4x |
| Proop-7C.Ewi | 7" TFT | 260K color | 800x480 | 300 | 1x | 1x | 4x | 4x |
| Proop-7C.E2wi | 7" TFT | 260K color | 800x480 | 300 | 2x | 1x | 4x | 4x |
| Proop-10C | 10.1" TFT | 16M color | 1024x600 | 270 | | | 5x | 4x |
| Proop-10C.wi | 10.1" TFT | 16M color | 1024x600 | 270 | | 1x | 5x | 4x |
| Proop-10C.E | 10.1" TFT | 16M color | 1024x600 | 270 | 1x | | 5x | 4x |
| Proop-10C.Ewi | 10.1" TFT | 16M color | 1024x600 | 270 | 1x | 1x | 5x | 4x |

Product Codes



| Proop Black Control | Display Type | Display Colors | Display Resolution | Luminance (Cd/m2) | Ethernet (10/100 Mbps) | Wifi (IEEE 802.11b/g/n) | Digital Inputs | Digital Outputs (Transistor) |
|---------------------|--------------|----------------|--------------------|-------------------|------------------------|-------------------------|----------------|------------------------------|
| Proop.black-7C | 7" TFT | 260K color | 800x480 | 300 | | 1x | 4x | 4x |
| Proop.black-7C.wi | 7" TFT | 260K color | 800x480 | 300 | | | 4x | 4x |
| Proop.black-7C.E | 7" TFT | 260K color | 800x480 | 300 | 1x | | 4x | 4x |
| Proop.black-7C.E2 | 7" TFT | 260K color | 800x480 | 300 | 2x | | 4x | 4x |
| Proop.black-7C.Ewi | 7" TFT | 260K color | 800x480 | 300 | 1x | 1x | 4x | 4x |
| Proop.black-7C.E2wi | 7" TFT | 260K color | 800x480 | 300 | 2x | 1x | 4x | 4x |
| Proop.black-10C | 10.1" TFT | 16M color | 1024x600 | 270 | | | 5x | 4x |
| Proop.black-10C.wi | 10.1" TFT | 16M color | 1024x600 | 270 | | 1x | 5x | 4x |
| Proop.black-10C.E | 10.1" TFT | 16M color | 1024x600 | 270 | 1x | | 5x | 4x |
| Proop.black-10C.Ewi | 10.1" TFT | 16M color | 1024x600 | 270 | 1x | 1x | 5x | 4x |

Proop Process

Proop Black Process



Proop Process



10.1" TFT LCD
Touch screen



10.1" TFT LCD
Touch screen

- Multi-language support, Free Type and Windows Font support,
- Defining user image library,
- Simulation feature,
- MQTT communications protocol,
- SQL client property,
- VNC remote control feature,

- SMB file sharing,
- Video playback feature,
- C / C++ real-time programming,
- BACNET MSTP, MODBUS-RTU / -ASCII (Master / Slave) communication,
- Communication with SIEMENS, BACKNET IP, OMRON FINS, MODBUS TCP,
- Compatible with OMRON Host Link, DELTA DVP Series PLCs.



ARM Cortex-A Series



8GB eMMC



512 MB
DDR3 SDRAM



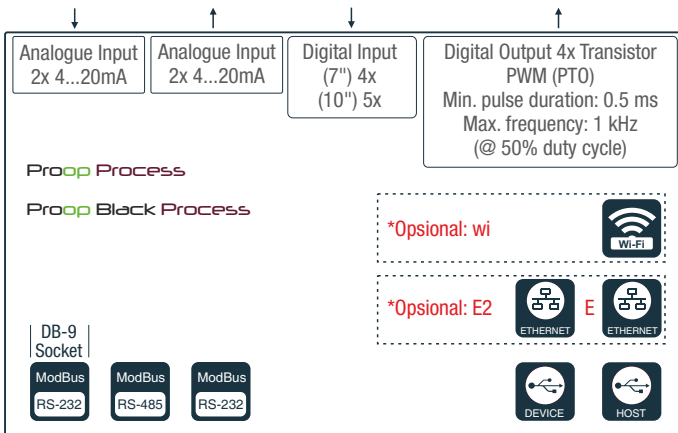
50000 hours
Backlight Life



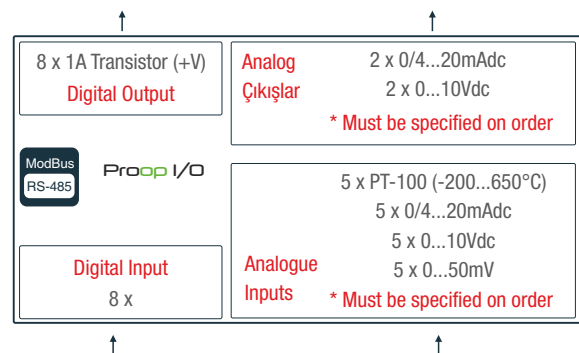
Professional Operator Panel



Optional
Input / Output Expansion Module



+



* Optical Isolated Digital Inputs and Outputs
* Digital Input and Output Sampling Period 50 ms
* Analog Input and Output Resolution 14 Bit Sampling Period 50 msec.

* 2 fast counters can be defined
* Maximum count frequency of a high-speed counter Maximum 10 kHz for encoder inputs, 15 kHz for counter inputs.

Technical Specifications

Dimensions

| | |
|-------------------|----------------------|
| Device Dimensions | 10.1" (278x200x50mm) |
| Panel Cut-Out | 10.1" (265x186mm) |
| Weight | 10.1" (1300gr) |

Environmental Conditions

| | |
|---------------------------|----------------------|
| Protection Class | Ip65 |
| Operating Tem. / Humidity | 0...50°C / 0...90%RH |
| Storage Temperature | -20...60°C |

Communication Ports

| | |
|--------|----------------------|
| RS-232 | Max. 230400 Baudrate |
| RS-485 | Max. 57600 Baudrate |

Display

| | |
|--------------------|--------------------|
| Display Colors | 16M Renk |
| Display Resolution | 1024x600 |
| Luminance (Cd/m2) | 270 |
| LCD Backlight | Led |
| Touch Method | Resistive Analogue |

Power

| | |
|--------------------|---|
| Operating Voltage | 18...30Vdc |
| Power Consumption | 8W (10.1") |
| RTC Battery / Life | Cr2032 button cell lithium bat. 3V / 10years |

Product Codes

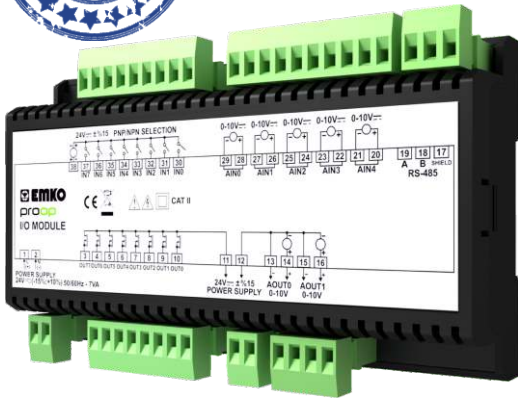


| Proop Process | Ethernet (10/100 Mbps) | Wifi (IEEE 802.11b/g/n) | Digital Inputs | Digital Outputs (Transistor) | Analogue Inputs | Analogue Outputs |
|----------------------------|---------------------------|----------------------------|----------------|---------------------------------|--------------------|---------------------|
| Proop-10P.0.D5.D4.AC.AC | | | 5x | 4x | 2x 4...20mA | 2x 4...20mA |
| Proop-10P.wi.D5.D4.AC.AC | | 1x | 5x | 4x | 2x 4...20mA | 2x 4...20mA |
| Proop-10P.E.D5.D4.AC.AC | 1x | | 5x | 4x | 2x 4...20mA | 2x 4...20mA |
| Proop-10P.Ewi.D5.D4.AC.AC | 1x | 1x | 5x | 4x | 2x 4...20mA | 2x 4...20mA |
| Proop-10P.E2.D5.D4.AC.AC | 2x | | 5x | 4x | 2x 4...20mA | 2x 4...20mA |
| Proop-10P.E2wi.D5.D4.AC.AC | 2x | 1x | 5x | 4x | 2x 4...20mA | 2x 4...20mA |

Product Codes



| Proop Black Process | Ethernet (10/100 Mbps) | Wifi (IEEE 802.11b/g/n) | Digital Inputs | Digital Outputs (Transistor) | Analogue Inputs | Analogue Outputs |
|-----------------------------------|---------------------------|----------------------------|----------------|---------------------------------|--------------------|---------------------|
| Proop.black -10P.0.D5.D4.AC.AC | | | 5x | 4x | 2x 4...20mA | 2x 4...20mA |
| Proop.black -10P.wi.D5.D4.AC.AC | | 1x | 5x | 4x | 2x 4...20mA | 2x 4...20mA |
| Proop.black -10P.E.D5.D4.AC.AC | 1x | | 5x | 4x | 2x 4...20mA | 2x 4...20mA |
| Proop.black -10P.Ewi.D5.D4.AC.AC | 1x | 1x | 5x | 4x | 2x 4...20mA | 2x 4...20mA |
| Proop.black -10P.E2.D5.D4.AC.AC | 2x | | 5x | 4x | 2x 4...20mA | 2x 4...20mA |
| Proop.black -10P.E2wi.D5.D4.AC.AC | 2x | 1x | 5x | 4x | 2x 4...20mA | 2x 4...20mA |



Proop-I/O

I/O Module Proop Rear Panel Mounting



I/O Module Mounting on DIN-Rail



Technical Specifications

System Resources

Communication Ports 1x RS485

Environmental Conditions

Working Temperature 0...50°C

Humidity 0...90%RH

Supply

Module Supply Voltage 24 Vdc/ac (Insulated)

Size / Weight

Size 190 x 90 x 35mm

Weight 238gr

Communication Port

RS-485 Max. 57600 Baudrate

Inputs / Outputs

Digital Sample Rate 50 msec.

Analogue Sample Rate 250 msec.

Resolution 14 Bit

| Proop-I/O | 2 | 2 | 1 | 3 | E | F |
|------------------------------|--------------------------|---|---|---|---|---|
| Module Supply Voltage | 24Vdc/Vac (Insulated) | | | | | |
| Communication | RS-485 (Insulated) | | | | | |
| Digital Inputs | 8x Digital | | | | | |
| Digital Outputs | 8x 1A Transistor (+V) | | | | | |
| E Analogue Inputs | 5x Pt-100 (-200...650°C) | | | | | |
| | 5x 0/4...20mAdc | | | | | |
| | 5x 0...10Vdc | | | | | |
| | 5x 0...50mV | | | | | |
| F Analogue Outputs | 2x 0/4...20mAdc | | | | | |
| | 2x 0...10Vdc | | | | | |

Ürün kodları

| Proop-I/O | Digital Inputs | Digital Outputs | Analogue Inputs | Analogue Outputs |
|-------------------------|----------------|-----------------------|--------------------------|------------------|
| Proop-I/O.P.2.2.1.3.1.1 | 8x Digital | 8x 1A Transistor (+V) | 5x Pt-100 (-200...650°C) | 2x 0/4...20mAdc |
| Proop-I/O.P.2.2.1.3.2.1 | 8x Digital | 8x 1A Transistor (+V) | 5x 0/4...20mAdc | 2x 0/4...20mAdc |
| Proop-I/O.P.2.2.1.3.3.1 | 8x Digital | 8x 1A Transistor (+V) | 5x 0...10Vdc | 2x 0/4...20mAdc |
| Proop-I/O.P.2.2.1.3.4.1 | 8x Digital | 8x 1A Transistor (+V) | 5x 0...50mV | 2x 0/4...20mAdc |
| Proop-I/O.P.2.2.1.3.1.2 | 8x Digital | 8x 1A Transistor (+V) | 5x Pt-100 (-200...650°C) | 2x 0...10Vdc |
| Proop-I/O.P.2.2.1.3.2.2 | 8x Digital | 8x 1A Transistor (+V) | 5x 0/4...20mAdc | 2x 0...10Vdc |
| Proop-I/O.P.2.2.1.3.3.2 | 8x Digital | 8x 1A Transistor (+V) | 5x 0...10Vdc | 2x 0...10Vdc |
| Proop-I/O.P.2.2.1.3.4.2 | 8x Digital | 8x 1A Transistor (+V) | 5x 0...50mV | 2x 0...10Vdc |

