

Autonics 10 inch Panel PC APC-1011

INSTRUCTION MANUAL



Thank you for choosing our Autonics product.
Please read the following safety considerations before use.

Safety Considerations

※Please observe all safety considerations for safe and proper product operation to avoid hazards.
※⚠ symbol represents caution due to special circumstances in which hazards may occur.

Warning Failure to follow these instructions may result in serious injury or death.
Caution Failure to follow these instructions may result in personal injury or product damage.

Warning

- Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss.** (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)
Failure to follow this instruction may result in personal injury, economic loss or fire.
- Do not use the unit in the place where flammable/explosive/corrosive gas, high humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present.**
Failure to follow this instruction may result in explosion or fire.
- Use the unit within the rated specifications.**
Failure to follow this instruction may result in fire or shortening the life cycle of the product.
- Do not connect, repair, or inspect the unit while connected to a power source.**
Failure to follow this instruction may result in fire.
- Check 'Power Wiring' and 'Serial Interface' before wiring.**
Failure to follow this instruction may result in fire.
- In preparation for product damage, communication error, or malfunction, install external limit switch, emergency stop switch, or other protection circuit.**
Failure to follow this instruction may result in personal injury, economic loss or fire.
- Since Lithium battery is embedded in the product, do not disassemble or burn the unit.**
Failure to follow this instruction may result in fire.
- Do not disassemble or modify the unit.**
Failure to follow this instruction may result in fire.
- Please contact to us for battery replacement.**

Caution

- Use dry cloth to clean the unit, and do not use water or organic solvent.**
Failure to follow this instruction may result in electric shock or fire.
- When connecting the power input, use AWG 23 cable or over and tighten the terminal screw with a tightening torque of 0.5 to 0.8N·m.**
Failure to follow this instruction may result in fire or malfunction due to contact failure.
- Keep the product away from metal chip, dust, and wire residue which flow into the unit.**
Failure to follow this instruction may result in fire or product damage.
- Do not push over 2 point at the same time.**
Failure to follow this instruction may result in malfunction.

Cautions during Use

- Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
- 24VDC power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
- Install a power switch or circuit breaker in the easily accessible place for supplying or disconnecting the power.
- Operate the product after supplying power to the product, input/output equipment, and load. If operate product before supplying power, it may result in output error or malfunction.
- Keep away from high voltage lines or power lines to prevent inductive noise. Do not use near the equipment which generates strong magnetic force or high frequency noise.
- Make a required space around the unit for radiation of heat, and do not block ventilation openings.
- Do not push the touch panel with a hard and sharp object or push the panel with excessive force. It may result in fire or malfunction.
- When skin is smeared with liquid crystal from the broken LCD, rinse with running water for over 15 minutes. If it gets into the eyes, rinse eyes with running water for over 15 minutes and contact a doctor.
- When system is down, push the power switch for 7 seconds and turn on again for rebooting the product.
- This unit may be used in the following environments.
 - ①Indoors (in the environment condition rated in 'Specifications')
 - ②Altitude max. 2,000m
 - ③Pollution degree 2
 - ④Installation category II

※The above specifications are subject to change and some models may be discontinued without notice.
※Be sure to follow cautions written in the instruction manual, user manual and the technical descriptions (catalog, homepage).

Specifications

General specifications

| | | |
|-------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Model | APC-1011 | |
| Power supply | 24VDC | |
| Allowable voltage range | 90 to 110% of power supply | |
| Power consumption | Max. 30W | |
| Hard disk | mSATA 64GB SSD | |
| System memory | DDR3L 4GB | |
| Indicator | Power indicator: green LED | |
| Speaker | Stereo speaker 2W+2W | |
| Watch dog timer | Watch Dog Timer (1 to 255 sec, software setting) | |
| Battery life cycle | 5 years at 25°C | |
| Real-time controller | RTC embedded | |
| Insulated resistance | Min. 100MΩ (at 500VDC megger) | |
| Ground | 3rd grounding (max. 100Ω) | |
| Noise immunity | ±0.5kV the square wave noise (pulse width: 1μs) by the noise simulator | |
| Withstanding voltage | 500VAC 50/60Hz for 1 minute | |
| Vibration | Mechanical | 0.75mm amplitude at frequency of 10 to 55Hz (for 1 minute) in each X, Y, Z direction for 1 hour |
| | Malfunction | 0.5mm amplitude at frequency of 10 to 55Hz (for 1 minute) in each X, Y, Z direction for 10 minutes |
| Shock | Mechanical | 300m/s ² (approx. 30G) in each X, Y, Z direction for 3 times |
| | Malfunction | 100m/s ² (approx. 10G) in each X, Y, Z direction for 3 times |
| Environment | Ambient temperature | 0 to 50°C, storage: -20 to 60°C |
| | Ambient humidity | 35 to 85%RH, storage: 35 to 85%RH |
| Language | Korean, English | |
| Protection structure | IP65 (front panel, IEC standard) | |
| Accessory | Fixing bracket: 8, mold bracket: 1, M3 bolt for mold bracket: 2 | |
| Approval | CE | |
| Weight | Approx. 2kg (approx. 1.6kg) | |

※1: Supported language can be added by downloading language pack. For more details about language pack, please visit Microsoft website.
※2: The weight includes packaging. The weight in parenthesis is for unit only.
※Environment resistance is rated at no freezing or condensation.

Performance specifications

System performance

| | |
|------------------|-----------------------------------------------------------|
| CPU | Integrated Intel®J3160/1.6GHz Quad core processor, TDP 6W |
| Operating system | Windows 10 IoT Enterprise Entry (64bit) |

Display performance

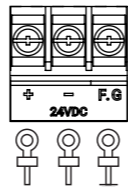
| | |
|----------------|-------------------------------------|
| LCD type | IPS TFT Color LCD |
| Touch method | Resistive |
| Resolution | WXGA 1280×800 |
| Contrast | 16:10 |
| Display area | 216.96×135.6mm |
| Color | 16,777,216 color |
| LCD view angle | Within 85° of top/bottom/left/right |
| Backlight | White LED |
| Backlight MTBF | 50,000hrs (LED Backlighting) |
| Luminance | 350cd/m ² |

Interface type

| | |
|----------|--------------------------------------------|
| HDMI | 1 |
| USB | USB 3.0 HOST: 1, USB 2.0 HOST: 2 |
| VGA | 1 |
| Ethernet | Gigabit Ethernet: 2 |
| Audio | 1 |
| Serial | RS232C/RS422/RS485: 1 (jumper pin setting) |

Power Wiring

- For power supply, use the wire of which cross section is at least 0.75mm² and use the wire of which cross section is at least 1.25mm² for grounding.
- Use round terminal with at least 3mm of internal diameter and less than 6mm of external diameter.
- Do not apply power before power line connection.
- Check power polarity.
- Tighten the terminal screw with 0.5 to 0.8N·m torque.
- Ground resistance should be less than 100Ω and ground it separately.



Software Installation

You can download and use software programs for Autonics products in APC-1011. Please refer to the catalogue or user manual for detailed information about software programs for APC-1011.

※Newly purchased APC-1011 has Vision Master program as default.

Installation

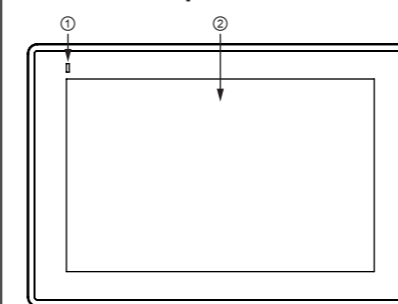
Installation using PC

- Download program to install from Autonics website (www.autonics.com).
- Save the downloaded installation file in a USB driver and plug the USB driver to USB port of APC-1011 to move the installation file.
- Touch the installation file in APC-1011 to install the program.

Direct installation

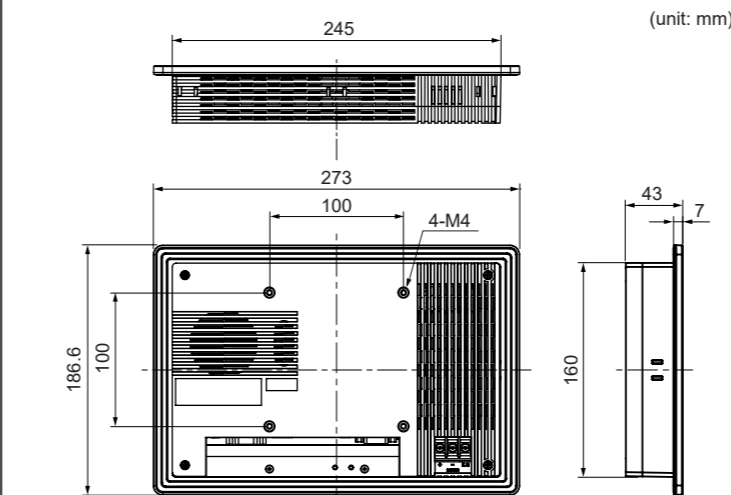
- Plug LAN cable to Ethernet port of APC-1011 to connect to Internet.
- Access to Autonics website (www.autonics.com) in APC-1011 to download program.
- Touch the downloaded installation file in APC-1011 to install the program.

Unit Description

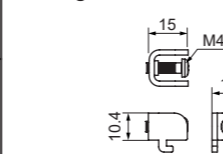


| No. | Description |
|-----|-----------------------------------------|
| ① | Operation indicator (green LED) |
| ② | LCD screen |
| ③ | HDMI |
| ④ | VGA |
| ⑤ | USB 2.0 |
| ⑥ | Ethernet |
| ⑦ | USB 3.0 |
| ⑧ | Audio |
| ⑨ | RS232C/RS485/RS422 (jumper pin setting) |
| ⑩ | Power switch |
| ⑪ | Power terminal |
| ⑫ | Fixing bracket mounting slot |
| ⑬ | Mold bracket mounting hole |
| ⑭ | VESA hole |

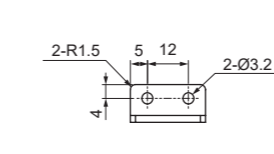
Dimension



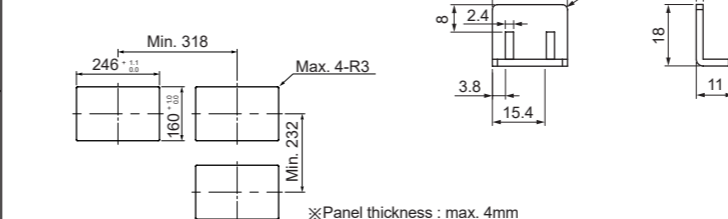
Fixing bracket



Mold bracket



Panel cut out



Manual

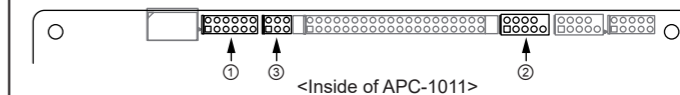
For the detailed information and instructions, please refer to the user manual, and be sure to follow cautions written in the technical descriptions (catalog, website). Visit our website (www.autonics.com) to download manuals.

Battery Replacement

Please contact our service center to replace battery. It may cause an explosion or a fire when using improper battery.

Serial Interface

- All devices which are connectable with APC-1011 including PC, PLC, serial printer, barcode reader, and dedicated connectors can be connected to any of RS232C, RS485 and RS422 ports.
- Changing serial interface
 - 1) Open the rear case of APC-1011 with a screw driver.
 - 2) Set the serial interface selecting jumper pin (①) with the jumper bar to serial interface to use.
 - 3) When setting to RS232C, connect the D-sub connector to COM2 (②). When setting to RS485/RS422, connect the D-sub connector to JP12 (③).



| No. | Name | RS232C (default) | RS485 | RS422 |
|-----|-------------------------------------|-------------------------------|-------------------------------|-------------------------------|
| ① | Serial interface setting jumper pin | 2 4 6 8 10 12 1 3 5 7 9 11 | 2 4 6 8 10 12 1 3 5 7 9 11 | 2 4 6 8 10 12 1 3 5 7 9 11 |
| ② | COM2 | 2 4 6 8 10 1 3 5 7 9 | — | — |
| ③ | JP12 | — | 2 4 6 1 3 5 | — |

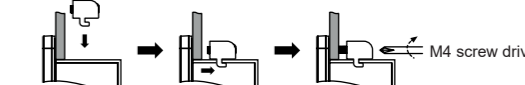
D-sub connector by type of serial interface

| Port | Pin | Port | Pin | Port | Pin |
|--------|-------|-------|------------|-------|------------|
| RS232C | 1 DCD | RS422 | 1 TXD- | RS485 | 1 DATA- |
| | 2 RXD | | 2 TXD+ | | 2 DATA+ |
| | 3 TXD | | 3 RXD- | | 3 Disabled |
| | 4 DTR | | 4 RXD+ | | 4 Disabled |
| | 5 GND | | 5 GND | | 5 Disabled |
| | 6 DSR | | 6 GND | | 6 Disabled |
| | 7 RTS | | 7 Disabled | | 7 Disabled |
| | 8 CTS | | 8 Disabled | | 8 Disabled |
| | 9 RI | | 9 Disabled | | 9 Disabled |

Installation

Installing on panel

- Set APC-1011 in panel.
- Set fixing brackets in slots (3 in top, 2 in bottom, 2 in side).
- Tighten fixing brackets with the M4 screw driver with the tightening torque of 0.3 to 0.5N·m.



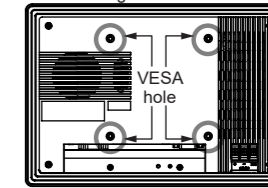
- When additional fixing bracket is in need on the bottom, connect the mold bracket on the rear of the product, before set fixing bracket. Tighten mold bracket with the M3 screw driver with the tightening torque of 0.3 to 0.5N·m.



Mold bracket mounting hole
※When using the mold bracket, install it with the included bolts (M3×8mm). If you use a bolt out of the specification, it may result in product damage.

Installing with holder

You have to purchase 100×100mm holder separately. Autonics does not have dedicated holder. Fix the purchased holder to the VESA hole on the rear of the product, using M4 Screw driver. Way to fix holder can be different according to each holder.



Major Products

- Photoelectric Sensors
- Fiber Optic Sensors
- Door Sensors
- Door Side Sensors
- Area Sensors
- Proximity Sensors
- Pressure Sensors
- Rotary Encoders
- Connector/sockets
- Switching Mode Power Supplies
- Control Switches/Lamps/Buzzers
- I/O Terminal Blocks & Cables
- Stepper Motors/Drivers/Motion Controllers
- Graphic/Logic Panels
- Field Network Devices
- Laser Marking System (Fiber, Co., Nd:yag)
- Laser Welding/Cutting System
- Temperature Controllers
- Temperature/Humidity Transducers
- SSRs/Power Controllers
- Counters
- Timers
- Panel Meters
- Tachometer/Pulse (Rate)Meters
- Display Units
- Sensor Controllers

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