

OptixPanel Compact Operator Panels

Bulletin 2800C

Equipment with the UL/cUL mark complies with the requirements of UL 61010-1, UL 61010-2-201, CSA C22.2 No. 61010-1, and CSA C22.2 No. 61010-2-201. Copies of the certificate of compliance are available at rok.auto/certifications.



ATTENTION: This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC 60664-1), at altitudes up to 2000 m (6561 ft) without derating.

This equipment is considered Group 1, Class A industrial equipment according to EN 61326-1. Without appropriate precautions, there can be potential difficulties with electromagnetic compatibility in other environments caused by conducted as well as radiated disturbance.

In addition to this publication, see the following:

- Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more installation requirements.
- UL 50, UL 50E, CSA C22.2, No. 94.1, and CSA C22.2, No. 94.2, as applicable, for explanations of the degrees of protection provided by enclosures.

European Union Directive and UKCA Compliance

This equipment meets the European Union Directive and UK requirements when installed within the European Union, UK, or EEA regions and have the CE or UKCA marking. A copy of the declaration of the conformity is available at rok.auto/certifications.



ATTENTION: This operator panel is intended to operate in an industrial or control room environment, which uses some form of power isolation from the public low-voltage mains. Some computer configurations cannot comply with the EN 61000-3-2 Harmonic Emissions standard as specified by the EMC Directive of the European Union. Obtain permission from the local power authority before you connect any computer configuration that draws more than 75 W of AC power directly from the public mains. All I/O cables are rated for indoor use only.

Installation Guidelines

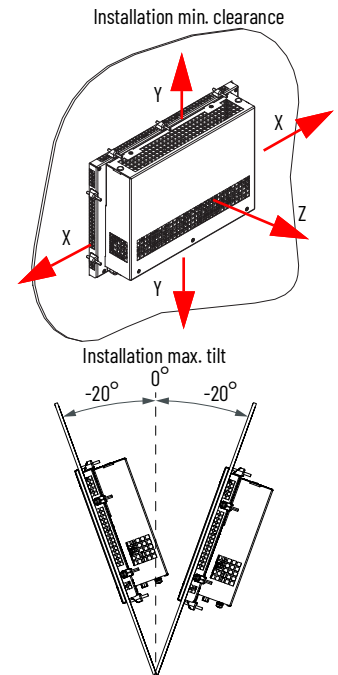
Follow these guidelines to make sure that your OptixPanel™ operator panel provides service with excellent reliability.

- When choosing the installation site, consider the following:
 - The site must have sufficient power.
 - The site must be indoors and non-hazardous.
 - The site must not expose the computer to direct sunlight.
- The operator panel can operate in the following environmental conditions:
 - Operating temperature: 0...50 °C (32...122 °F).
 - Storage temperature: -20...+60 °C (-4...140 °F).

Operation/storage relative humidity (RH) noncondensing: 20%...90%.

Follow these requirements to mount the operator panel.

- Choose a suitable mounting height.
- To help prevent overheating and to provide access to the I/O ports for cable connections, mount the operator panel with the following minimum clearances from all four sides of the outer frame and back of the operator panel chassis:
 - X direction ≥ 50 mm (1.96 in.)
 - Y direction ≥ 100 mm (3.93 in.)
 - Z direction ≥ 50 mm (1.96 in.)
- For optimal performance, mount the operator panel in the horizontal orientation and vertical (upright) position, so the I/O ports face down.



IMPORTANT

The vertical position can be tilted up to 20° forward or 20° backward from the upright position. However, this acceptable tilt angle range decreases the maximum operating air temperature to 45 °C (113 °F).

Prepare the Panel Cutout

Observe these guidelines to install the operator panel in a panel.



WARNING: Failure to follow these guidelines can result in personal injury or damage to the panel components. Take precautions so any metal fragments during the panel cutout do not enter components that are installed already in the panel.

AVERTISSEMENT: Lorsqu'un panneau est découpé, des morceaux de métal peuvent être produits. Vous devez prendre les mesures de sécurité nécessaires pour prévenir la pénétration des morceaux dans les composants déjà installés dans le panneau.

- Plan the panel cutout area that is needed for your operator panel.
- To ensure installation with the proper IP protection grade, the following conditions have to be satisfied:
 - The mounting panel material must be 3...6 mm (0.11...0.24 in.) thick with a max deformation limit on the plane of 0.5 mm (0.01 in.).
 - For a uniform gasket seal, the roughness of the panel surface must be ≤ 120 microns (Rz 120).
- Verify that the area around the panel is clear of obstructions.

Table 1 - Cut Out dimensions

Display Size, in.	Format ⁽¹⁾	Panel Cutout Dimensions ⁽²⁾ [mm (in.)]	
		A	B
4.3	W	129.5 (5.09)	88.5 (3.48)
7.0	W	195.0 (7.67)	138.5 (5.45)

(1) Widescreen (W) format is offered with analog resistive and projective capacitive (PCAP) touch screens.

(2) Tolerance ± 1 mm (0.04 in.).

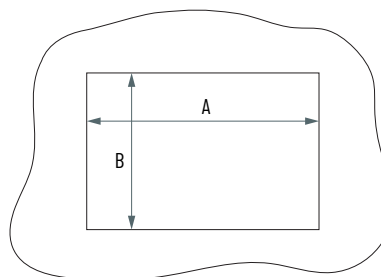
Required Tools for Installation



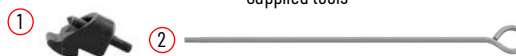
Tools required:

- Panel cutout tools.
- Hexagonal key 1.5 mm (supplied) and torque limiting screwdriver with a 1.5 mm hex key bit.
- Mounting clips (supplied), for the needed quantity, see [Figure 1 on page 3](#)
- Safety glasses.

Panel Cutout Areas



Supplied tools



Sequence No.	Description
1	Clip
2	Hexagonal key

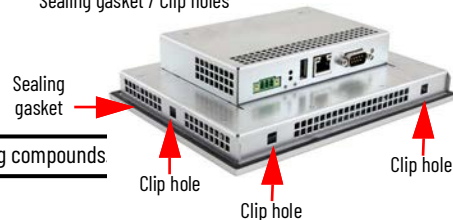
Install the operator panel

To install the operator panel in the panel cutout, perform the following steps.

IMPORTANT You need two people to install the operator panel; one person holds the operator panel in place while the second person installs the mounting clips.

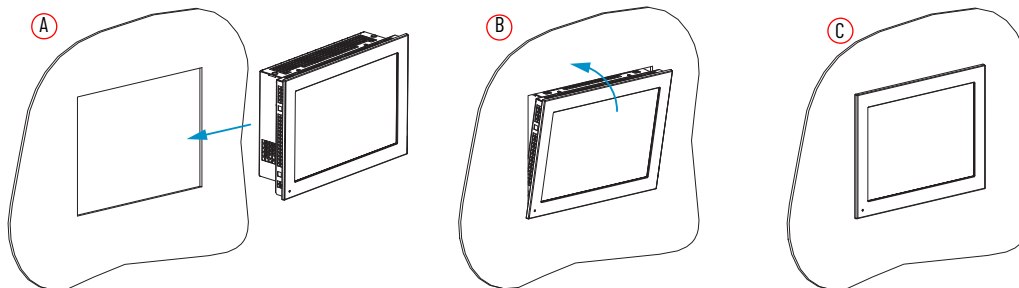
1. Remove all electrical power from the panel before you make the cutout.
2. Cut an opening in the panel area to the dimensions needed for your operator panel.
3. After the cutout is completed, clean the panel area of all debris and metal fragments.
4. Make sure that the sealing gasket is positioned properly on the computer.

Sealing gasket / Clip holes

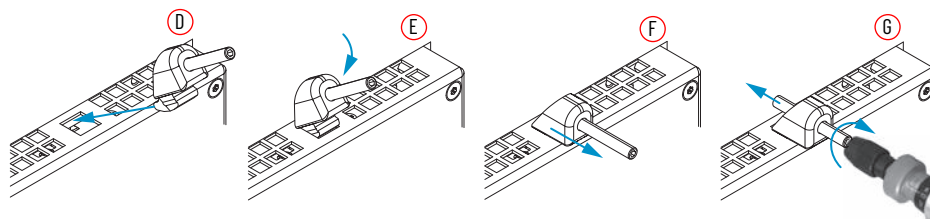


IMPORTANT The gasket is a part of the display and forms a compression-type seal. Do not use sealing compounds

5. From the front of the panel, insert the operator panel into the cutout (A) and rotate it (B) until it adheres completely to the panel (C).



6. Slide the mounting clips into the holes on all four sides of the operator panel and repeat the procedure in [step 7](#) through [step 9](#) for all clips.

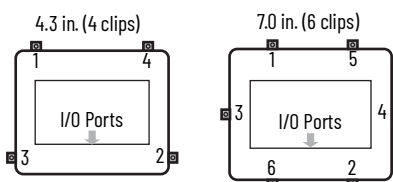


7. Insert the clip into the mounting hole side (D).
8. Rotate it down (E) and pull it outward (F).
9. According to the tighten sequence in Figure 1, tighten the mounting clips (G) with the supplied hexagonal key and verify the torque of 0.2 N•m (1.8 lb•in) with a limiting screwdriver (needed a 1.5 mm hex key bit).

Figure 1 - Mounting clips tighten and torque sequence by display size



ATTENTION: Tighten the mounting clips to the specified torque to provide a proper seal and to help prevent product damage. Rockwell Automation assumes no responsibility for water or chemical damage to the computer or other equipment within the enclosure because of improper installation.



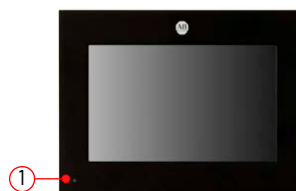
Connectors/LEDs/Buttons

- Connect peripheral cables to the appropriate I/O ports on the computer. To comply with EN 61326-1, use the following for cable types. All I/O cables must be used only indoors, and USB cables must be less than 3 m (9.84 ft) long.

Table 2 - Connectors / LEDs / Buttons

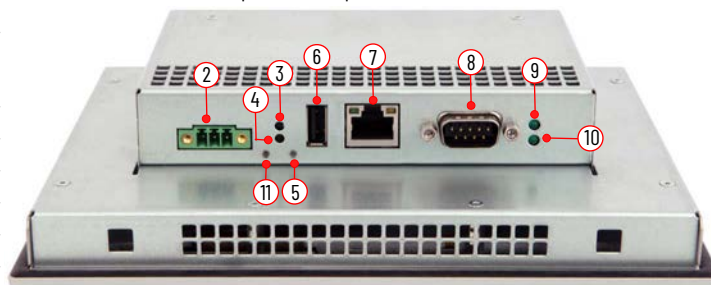
Item No.	Description	Required cable	LED Color	Function
1	Front Power On LED	—	Green	Indicates that the system is powered on and boot sequence was successful.
2	DC power	Unshielded	—	Power connector.
3	Restart button	—	—	Forces an internal reset, as if power was lost temporarily and then returned. IMPORTANT: Use this button only if there are no better options, like keyboard or mouse commands, or if the resumed DC power does not restart the computer. System reset can cause data loss and possible corruption to the operating system.
4	Factory reset button	—	—	Allows the total restoration of the firmware and factory settings with the deletion of all application data.
5	Factory Reset LED	—	Blue	Factory reset procedure in progress.
			OFF	Standard/common status.
6	USB 2.0	Shielded	—	USB 2.0 connector.
7	LAN	Shielded	—	RJ45 connector.
8	COM	Shielded	—	RS232/422/485 serial port connector.
9	LED COM1 TX	—	Green	Transmission signal for COM interface.
10	LED COM1 RX	—	Green	Receive signal for COM interface.
11	Restart / Power LED	—	Red	Power supply ON and Boot sequence FAIL. Restart button pressed.
			Green	Power supply ON and correct BOOT sequence.

OptixPanel front view*



*LED 1 is present only in: OptixPanel Compact systems 7.0 in. size.

OptixPanel Compact - rear view



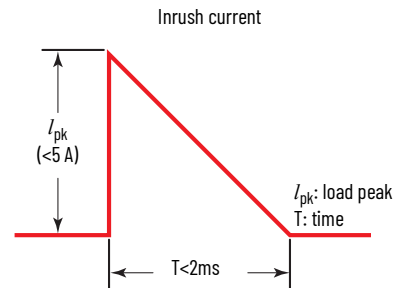
DC Power Supply Guidelines

All panel PCs have the following features:

- The internal power supply of the operator panel has a galvanically isolated DC-DC converter board for increased electrical noise immunity.
- Reverse polarity circuitry, overvoltage, and a 3 A soldered fuse provide input power protection.

Follow these guidelines to select the DC power to supply the computer.

- The operator panel must be powered with a voltage of 24V DC (18...32V DC SELV input voltage range).
- Power consumption is rated at 11 W max @ 50 °C (122 °F) ambient temperature.



Connect DC Power



ATTENTION: The system has to be powered with a 24V DC (18...32V) power supply that satisfies the requirements of safe extra low voltage (SELV) in accordance with IEC/EN/DIN EN/UL61010-1 and UL61010-2-201. The power supply has to fulfill the requirements NEC Class2 or LPS in accordance with IEC/EN/DIN EN/UL61010-1 and UL61010-2-201.

To minimize ground loop currents and noise, we recommend that DC powered models use only one grounded connection.

Install the Factory-supplied DC Power Connector Assembly



Tools required:

- Adjustable torque screwdriver with M2 and M3 flat-blade screw bits.
- Wire stripper, cutter, and crimper tool.
- Cutting pliers.

Terminal block cabling procedure

Table 3 - Terminal Block Connection Specifications

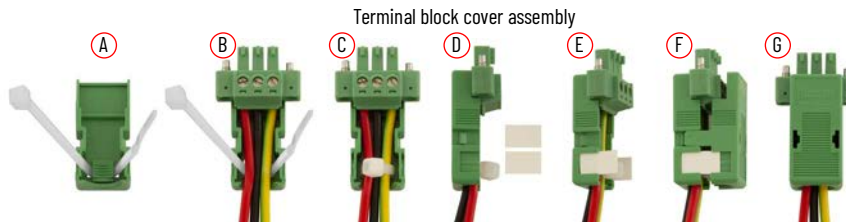
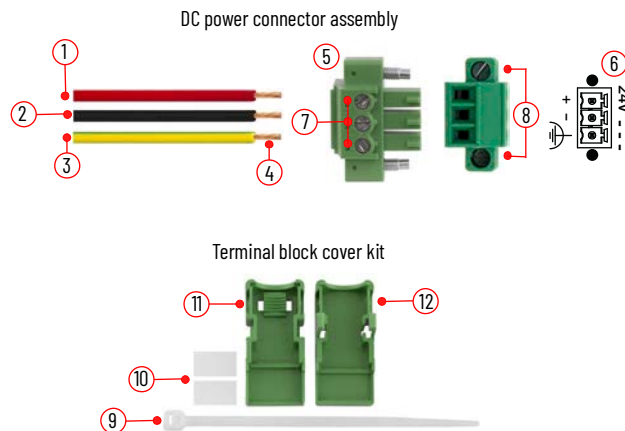
Item No.	Description	Value
1	DC+ (24V DC nominal)	1.5 mm ² (16 AWG) wire
2	DC- (0V DC nominal)	
3	Ground wire	
4	Stripped wire length	7 mm (0.275 in.)
5	Terminal block	—
6	Polarity symbol	—
7	Torque range to secure DC power wires	0.22...0.25 N•m (0.16...0.18 ft•lb)
8	Torque value to reinstall DC terminal block to computer	0.3 N•m (0.22 lb•in)
9	Cable tie (qty: 1)	—
10	Labels (qty: 2)	—
11	Half cover with cable tie slot	—
12	Half closing cover	—

1. Remove the DC terminal block (5) from the operator panel.
2. Use wires not included, (1)(2)(3) with 1.5 mm² (16 AWG) cross section.



The colors of wires should follow regulations applicable where the system will be used.

3. Strip 7 mm (0.275 in.) from the end of each power wire (4).
4. Insert each stripped end into the DC terminal block and fix it with the corresponding screws (7) with 0.22...0.25 N•m (0.16...0.18 ft•lb) torque.

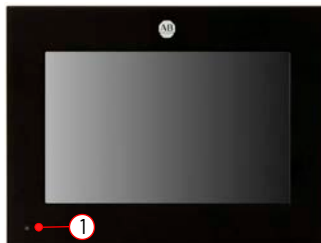
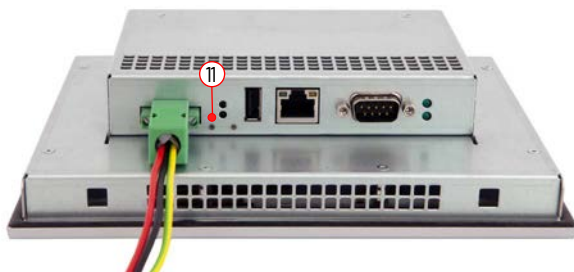


5. Insert the cable tie (9) through the slots of the terminal block (11) connector clamp [step (A)].
6. Slide the connector half with the attached tie onto the end of the DC terminal block [step (B)].
7. Tighten the tie and remove the excess part [step (C)].

8. Install the white labels (10) supplied with the terminal block cover kit [steps (D)(E)]. The white label can be used for identification or other information.
9. Align and install the other connector (12) clamp half [step (F)] to complete the assembly [step (G)]. When installed correctly, both tabs of the clamp half lock into place.

Connect DC Power

1. Connect the DC terminal block (complete with cables and cover) to the operator panel chassis and fix it with the corresponding screws (8) with 0.3 N•m (0.22 ft•lb) torque.
2. Power on the system.
3. Front Power LED (1) and Restart/Power LED (11) light green.
4. The operating system desktop appears after few seconds.



On OptixPanel Compact systems front LED (b) is present only on 7.0 in. size.

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation. You can view or download publications at rok.auto/literature.

Resource	Description
OptixPanel Compact User Manual, publication 2800C-UM001	Provides details on how to install, configure, operate, and troubleshoot the OptixPanel operator panels.
OptixPanel Technical Data, publication 2800-TD001	Provides technical specifications about the OptixPanel operator panels.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines to install a Rockwell Automation industrial system.
Product Certifications website rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, Knowledgebase, and product notification updates.	rok.auto/support
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Technical Documentation Center	Quickly access and download technical specifications, installation instructions, and user manuals.	rok.auto/techdocs
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

Documentation Feedback

Your comments help us serve your documentation needs better. If you have any suggestions on how to improve our content, complete the form at rok.auto/docfeedback.





Waste Electrical and Electronic Equipment (WEEE)



At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

Rockwell Otomasyon Ticaret A.Ş. Kar Plaza İş Merkezi E Blok Kat:6 34752 İçerenköy, İstanbul, Tel: +90 (216) 5698400 EEE Yönetmeliğine Uygundur

Connect with us.    

rockwellautomation.com — expanding **human possibility**[®]

AMERICAS: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2663 0600, Fax: (32) 2 663 0640

ASIA PACIFIC: Rockwell Automation SEA Pte Ltd, 2 Corporation Road, #04-05, Main Lobby, Corporation Place, Singapore 618494, Tel: (65) 6510 6608, FAX: (65) 6510 6699

UNITED KINGDOM: Rockwell Automation Ltd., Pitfield, Kiln Farm, Milton Keynes, MK11 3DR, United Kingdom, Tel: (44)(1908) 838-800, Fax: (44)(1908) 261-917

Allen-Bradley, expanding human possibility, OptixPanel, and Rockwell Automation are trademarks of Rockwell Automation, Inc. Trademarks not belonging to Rockwell Automation are property of their respective companies.

Publication 2800C-IN001B-EN-P - June 2023 | Supersedes Publication 2800C-IN001A-EN-P - June 2023
Copyright © 2023 Rockwell Automation, Inc. All rights reserved. Printed in the U.S.A.



PN-696497

PN-696497
DIR 10007325296.01 (Version 01)
Vendor Code: 80460122.01