ROBOTICS

Product manual

IRC5 Panel Mounted Controller



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Design 14

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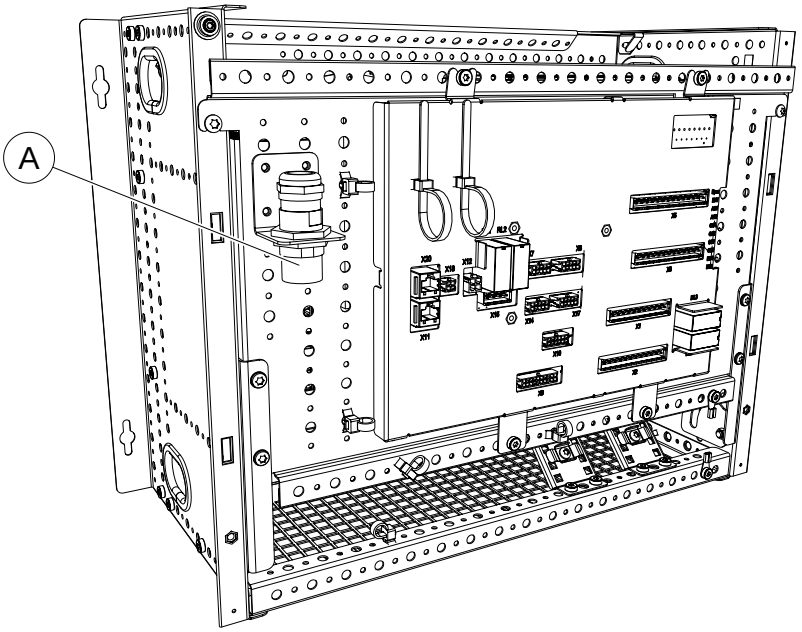
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2.5.8 Connecting a FlexPendant

Location of FlexPendant connector

The FlexPendant connector on the Panel Mounted Controller is located on the front of the controller.



xx1300001947

A	FlexPendant connector

Connecting a FlexPendant

CAUTION

Always inspect the connector for dirt or damage before connecting it to the controller. Clean or replace any damaged parts.

	Action	Info
1	Locate the FlexPendant socket connector on the controller or operator's panel.	The controller must be in manual mode.
2	Plug in the FlexPendant cable connector.	
3	Screw the connector lock ring firmly by turning it clockwise.	
4	The FlexPendant starts automatically when connected and verifies that it has the correct software installed. If an update is needed, this is shown.	*Updating the add-in FlexPendant SxTPU4 Software on page 82*

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Updating the add-in FlexPendant SxTPU4 Software

> **Note**
>
> The add-in is only available for the FlexPendant with the emergency stop located at the connector. All other FlexPendant versions will automatically update their software via the controller (if needed).

The FlexPendant with the emergency stop located at the connector has an add-in that enables support for different RobotWare versions. This is the **FlexPendant SxTPU4 Software** add-in. The version of the add-in is shown during start-up.

When connecting the FlexPendant, the add-in verifies that it has support for the RobotWare version on the controller. If the RobotWare version is not supported by default, then the add-in requires an update. There are two method to update the FlexPendant add-in. The update is distributed as a software package.

- The update can be installed using a USB drive.
- If the update is available on the controller, then the FlexPendant will update itself when connecting it to the controller.

Once the add-in is updated, the FlexPendant can be connected to other IRC5 controllers with the same RobotWare version without requiring additional updates.

Update using a USB drive

Use the following procedure to update the add-in using a USB drive.

1. Download the update from RobotStudio, in the tab **Add-Ins**.
2. Save the software package (.rspak) on a USB drive in the folder `SxTPU4`, located in the root folder.
3. With the FlexPendant connected to the controller, reset the FlexPendant with the USB drive connected.
4. The update starts automatically and takes approximately 3-4 minutes.

Update from the controller

Use the following procedure to update the add-in from the controller.

1. In RobotStudio, use **Installation Manager 6** to create or update a system on your controller. Add the product *FlexPendantSxTPU4Software*.
2. Connect the FlexPendant to the controller.
3. The update starts automatically and takes approximately 3-4 minutes.

Handling the FlexPendant cables

FlexPendant cables are allowed to be rolled up by hand with a minimum bending radius of 10 times the cable diameter. This also applies to the extension cable. For example, if the cable is 9.5 mm then it is allowed to roll it with a radius of 95 mm.

Extension cables are not allowed to be used in chains.

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3.4 Function tests

3.4.1 Function test of emergency stop

Overview

Perform this test on the emergency stop button both on the operating panel and on the FlexPendant.

Performing the function test

	Action	Note
1	Make a visual inspection of the emergency stop button to make sure it is not physically damaged.	If any damage is found on the emergency stop button, it must be replaced.
2	Start the robot system.	
3	Press the emergency stop button.	The test is passed if the event message **10013 Emergency stop state** appears in the event log. If either of the following happens, then the test is failed and the root cause must be found: • if the event message **10013 Emergency stop state** does not appear • if the event message **90223 Emergency stop conflict** appears
4	After the test, release the emergency stop button and press the motors on button to reset the emergency stop state.	

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3.4.3 Function test of three-position enabling device

Performing the function test

	Action	Note
1	Start the robot system and turn the mode switch to manual mode.	
2	Press the three-position enabling device to the middle position and then hold the enabling device in this position.	This test is passed if the event message **10011 Motors ON state** appears in the event log. If either of the following happens, then the test is failed and the root cause must be found: • if the event message **10011 Motors ON state** does not appear • if the event message **90224 Enabling Device conflict** appears
3	While still holding the three-position enabling device pressed, press the enabling device harder to the enable the device's third position.	This test is passed if the event message **10012 Safety guard stop state** appears in the event log. If either of the following happens, then the test is failed and the root cause must be found: • if the event message **10012 Safety guard stop state** does not appear • if the event message **90224 Enabling Device conflict** appears

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7.2 FlexPendant parts

FlexPendant versions

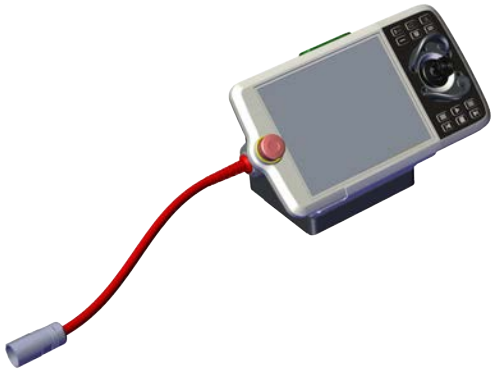
The FlexPendant is available in different versions, as the hardware has been updated over the years. The exact appearance on the graphics might therefore differ slightly from reality.

> **Note**
>
> The different versions support many, but not all, versions of the IRC5 controllers/RobotWare versions. Contact your local ABB office for more information about compatibility.

The FlexPendant holder is available in different versions, that fit different FlexPendant versions. The holder is compatible with the FlexPendant that it is delivered with.

> **Note**
>
> The FlexPendant for IRC5 is not compatible with OmniCore, and vice versa.

FlexPendant with emergency stop at the connector



xx2100001802

Article number	Description
3HAC087622-001	FlexPendant 10 m
3HAC087622-002	FlexPendant 30 m
3HAC084673-001	10 m cable for FlexPendant
3HAC084673-002	30 m cable for FlexPendant
3HAC055665-002	FlexPendant extension cable 15 m
3HAC055665-003	FlexPendant extension cable 22 m
3HAC055665-004	FlexPendant extension cable 30 m
3HAC079391-001	TPU Holder asm (assembly)

The extension cables cannot be used together with an external operator panel (option 733-3 or 733-4).

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FlexPendant with emergency stop at the outer edge



xx0300000449

Article number	Description
3HAC028357-001	FlexPendant with cable 10 m
3HAC031683-001	Cable 10 m for FlexPendant
3HAC031683-004	Cable 30 m for FlexPendant
3HAC055665-002	FlexPendant extension cable 15 m
3HAC055665-003	FlexPendant extension cable 22 m
3HAC055665-004	FlexPendant extension cable 30 m
3HAC033498-001	FlexPendant holder
3HAC033596-002	FlexPendant holder upper part
3HAC025042-001	Cable holder bracket
3HAC026357-001	Cable bracket
3HAC035075-001	Set of stylus
3HAC028357-050	TPU hand strap

The extension cables cannot be used together with an external operator panel (option 733-3 or 733-4).

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