

IRTP80 Series Robot
Teach Pendant User Guide



19012261A10

Overview

Thank you for purchasing Inovance IRTP80 teach pendant.

Cooperating with the robot controller, the IRTP80 teach pendant allows you to teach the robot. The IRTP80 teach pendant is equipped with a touch screen and physical buttons for easy operation. Supporting 6-axis robots, SCARA robots, and Delta robots, the IRTP80 teach pendant provides rich functions such as parameter configuration, teach and play, variable and I/O monitoring, and supports various processes such as vision calibration, palletizing, conveyor tracking.

Read through this user guide before use (installation, wiring, commissioning, running, maintenance, and inspection). Fully understand the safety precautions of the product before using the product.

The guide is subject to update without notice. You can download the latest version at www.inovance.com.



Figure 1 Product appearance

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Product Information

◆ Appearance

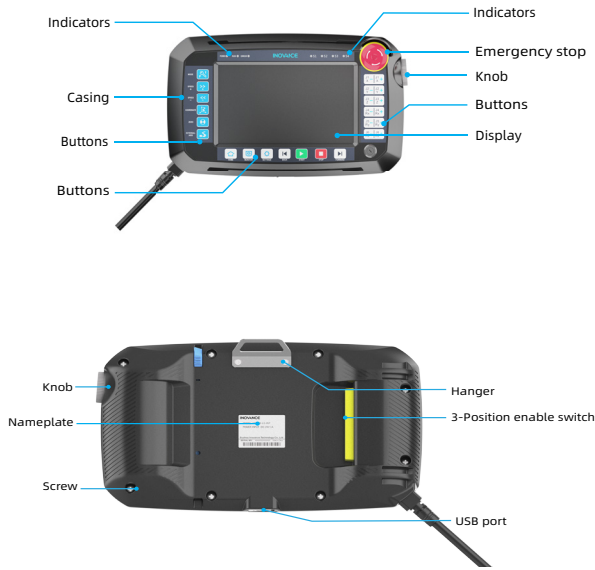


Figure 2 Appearance of IRTP80 teach pendant

◆ Model description

IRTP80 Series Teach Pendant	
Cable length	L5: 5 m L10: 10 m

◆ Technical data

Display	7-inch RFT-LCD, touchscreen, function buttons, IP54
Processor	ARM A8 600M, 1 Gbit RAM, 1 Gbit ROM
Communication	100Mbps EtherNet, functional I/O, USB2.0 (Max. output current: 0.2 A)
Panel	Mode switch button, safety enable switch, emergency stop button, movement keys
Power supply	Rated voltage: 24 V, input voltage: 24 V±20%
Weight	Without cable: Approx. 0.7 kg; With 5 m cable: Approx. 1.3 kg; With 10 m cable: Approx. 1.75 kg
Operating temperature	0°C to 45°C, in accordance with IEC 61131-2
Storage temperature	0°C to 70°C, in accordance with IEC 61131-2

◆ Buttons and switches

- Knob: Precisely controls the robot motion.
- Screen: Allows users to edit programs, monitor robot operation etc.
- Emergency stop switch: Stops the robot in emergent situations.
- 3-Position enable switch: A 3-position switch. Enables the robot when pressed to the middle position, disables the robot when fully pressed or when released.

◆ Description of indicators

POWER ●	Power indicator, ON when power supply is switched on
RUN ●	Run indicator, ON when in Auto mode
ERROR ●	Error indicator, ON when an error occurs
● S1 ● S2 ● S3 ● S4	S1 to S4 customer-customized indicators, which correspond to user-defined functions, display the status of the robot's general-purpose outputs Out[0] to Out[3] (ON: illuminated, OFF: extinguished). The specific function represented by each indicator is configured by the user.

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◆ Description of buttons

Button	Button name	Description
	Speed+	Increases the speed by 1% when pressed, or continuously increases the speed when pressed and hold.
	Speed-	Reduces the speed by 1% when pressed, or continuously reduces the speed when pressed and hold.
	Mode	Switches between manual mode and auto mode.
	External axis	Switches to the external axis of the robot, if any.
	Frame	Switches among the joint frame, world frame, base frame, tool frame, and user frame.
	Zero	In the manual mode and with the servo enabled, press this button to return all robot axes to absolute zero position.
	Start	In the auto mode, when pressed, the robot automatically moves according to the selected program. In the manual mode, when pressed and hold, the robot moves continuously; when released, the robot stops.
	Stop	When pressed during operation of the robot, the robot stops.
	Forward	In the manual mode, when pressed, the robot executes the selected line of program and the cursor jumps to the next line.
	Back	In the manual mode, when pressed, the robot executes the selected line of program and the cursor jumps to the previous line.
	Home	Displays the home screen when pressed.
	Monitor	Displays the monitoring interface when pressed.
	Settings	Displays the settings interface when pressed.

Wiring

- ◆ Connecting IRTP80 to controller
Connect the IRTP80 teach pendant to the controller via a connection cable, as shown below.

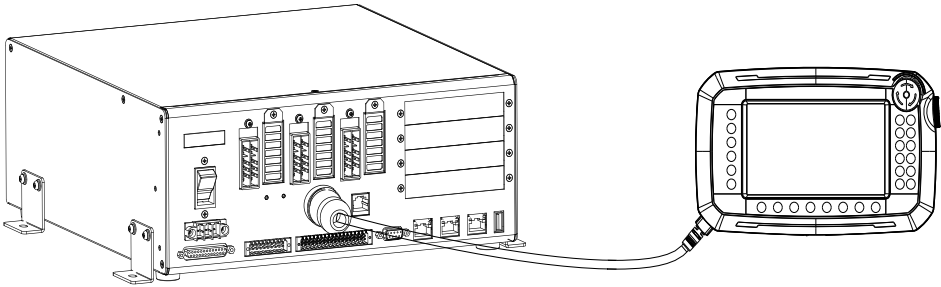
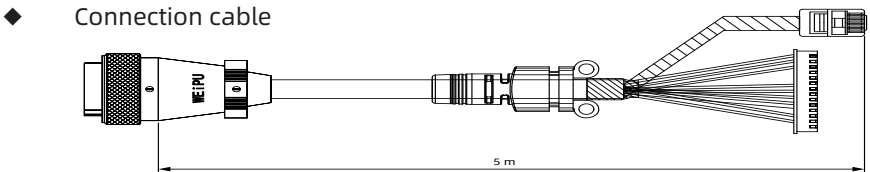
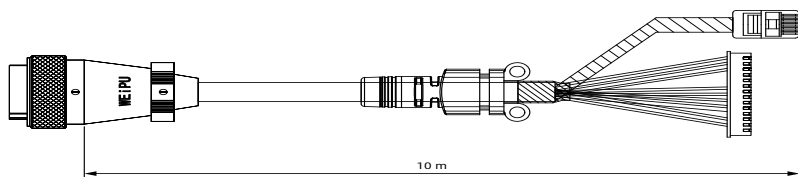


Figure 3 Connection between IRTP80 and controller

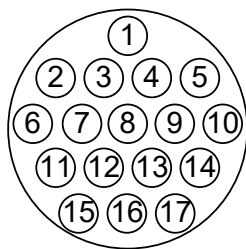


◆ Connection cable



Product code	Description	Remark
01640010	Teach Pendant-I RTP80-L5: I RTP80 series robot teach pendant with 5 m cable	Standard version with 5 m cable
01640047	Teach Pendant-I RTP80-L10: I RTP80 series robot teach pendant with 10 m cable	Standard version with 10 m cable
01640049	Teach Pendant-I RTP80-L5-INT: I RTP80 series robot teach pendant with 5 m cable	International version (English)
01640051	Teach Pendant-I RTP80-L10-3D-HJ: I RTP80 series robot teach pendant with 10 m cable	RAM (DDR) capacity upgraded to 2 Gbit

◆ Definition of connector pins



No.	Signal	Description	No.	Signal	Description
1	24V	24 V power supply	10	24V	24 V power supply
2	GND	Power supply ground	11	PE	Shielding ground
3	E-STOP1-A	Emergency stop terminal 1-A	12	TP_TX+	Ethernet data TX+
4	E-STOP1-B	Emergency stop terminal 1-B	13	TP_TX-	Ethernet data TX-
5	E-STOP2-A	Emergency stop terminal 2-A	14	TP_RX+	Ethernet data RX+
6	E-STOP2-B	Emergency stop terminal 2-B	15	TP_RX-	Ethernet data RX-
7	-	Reserved	16	PE	Shielding ground
8	-	Reserved	17	NET_SEL	Network port selection input signal
9	DMS_NO	3-Position enable switch	-	-	-

Operation

◆ Teaching operations

1. Selecting the teaching speed

You can adjust the robot motion speed through the four speed buttons on the touch screen: 5%, 25%, 50%, 75% and 100%.

Also, you can adjust the speed using the physical speed buttons. For example:



: Increases the speed by 1% when pressed, or continuously increases the speed when pressed and hold



: Decreases the speed by 1% when pressed, or continuously decreases the speed when pressed and hold

2. Selecting the frame

The robot can work in different frames. Before operating the robot, you must select the frame for the robot. The frames includes joint frame, base frame, tool frame, and user frame. You can select the frame in two ways:

Press button on the teach pendant; or

Click icon to enter the axis control panel.

3. Switching the external axis



: External axis switch button. Switches to the external axis of the robot, if any.

Interfaces

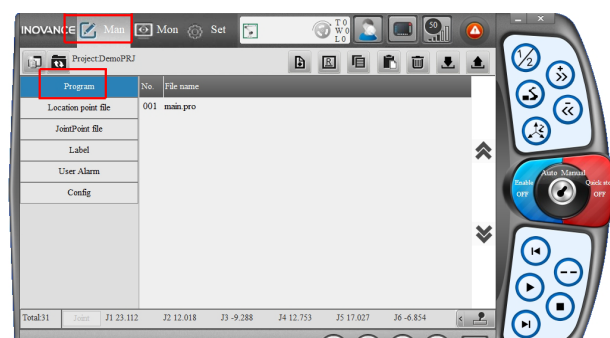
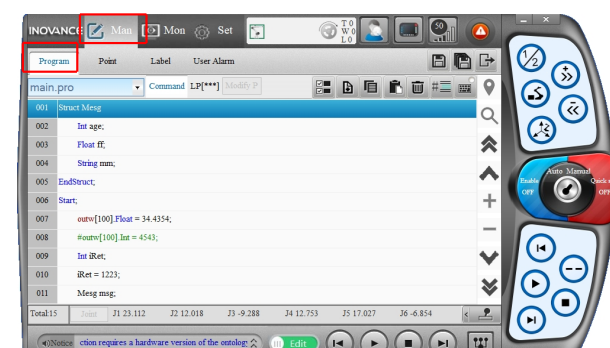


Do not use sharp hard objects other than stylus and fingers to operate the touch screen to avoid damage!

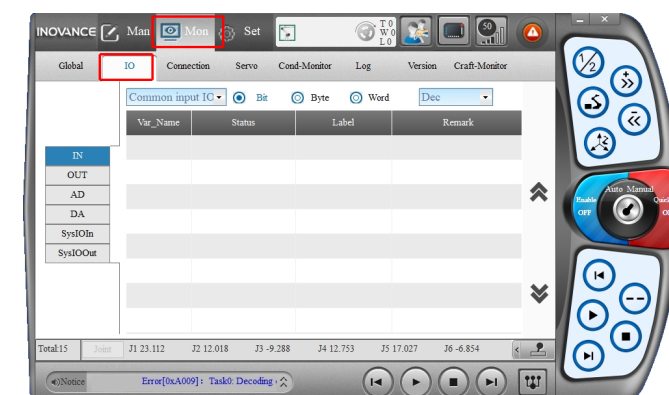
◆ Startup interface



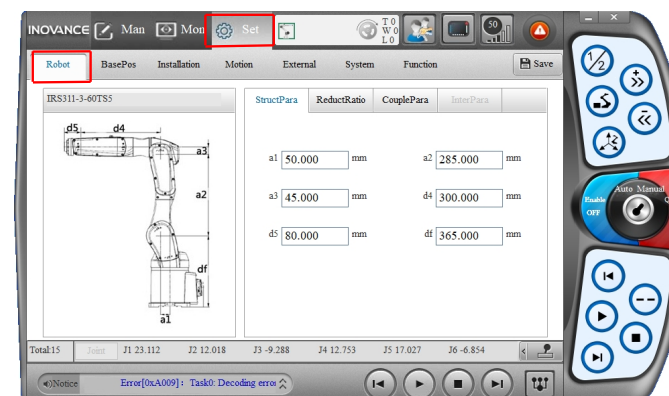
◆ Programming interface



◆ Monitoring interface



◆ Setting interface



INOVANCE Warranty Agreement

- ◆ Inovance provides a 12-month free warranty service to the product from the date of factory shipment. The free warranty service covers free repairs and replacements in the case of product failure or damage caused by defects of the product under normal use conditions.
- ◆ Paid warranty service will be provided in the following scenarios:
 - a) The warranty period for the product on site has expired.
 - b) Damage is caused by improper operations violating the user guide of the product.
 - c) Damage is caused by inadequate protection measures in harsh environments, such as severe dust, humidity, and high temperatures.
 - d) Damage is caused by natural disasters, such as lightning, fire, floods, and earthquakes.
 - e) Damage is caused by peripheral equipment faults, such as poor wiring, water ingress, and abnormal voltages.
 - f) Additional support is required for equipment commissioning and installation.
 - g) New features, modifications, program changes, application issues, and selection errors.
- ◆ If the equipment is faulty or damaged, fill in the Product Warranty Card correctly and in detail.
- ◆ The maintenance fee will be charged according to the latest Maintenance Price List of Inovance.
- ◆ The Warranty Card is not re-issuable. Keep the card well and present it to the maintenance personnel during maintenance.
- ◆ If there is any problem during the service, contact Inovance's agent or Inovance directly.
- ◆ Inovance reserves the rights for explanation of this agreement.

INOVANCE Product Warranty Card

Customer Information	Company address:	
	Company name:	Contact person:
	P.C.:	Tel.:
Product Information	Product model:	
	Product barcode (attached here):	
	Agent name:	
Failure Information	Description:	
	Recorded by:	

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More info on My Inovance