

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6AV2125-2AE23-0AX0

ADVANCED MOBILE PANEL CONNECTION BOX

Used with the applicable SIMATIC HMI Connection Box Advanced configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens 6AV2125-2AE23-0AX0 official product technical data, applicable pages 5, 18, 19, 211, 216, 217, 218

Naming conventions

Term	Applies to
Control cabinet	Mounted cabinet, enclosure, terminal box, panel, control panel
Plant	System, machining center, one or more machines
F-system	Fail-safe automation system with fail-safe Mobile Panel
Connection box	• Connection box compact • Connection box standard • Connection box advanced
HMI device Mobile Panel	• KTP700 Mobile • KTP700F Mobile • KTP900 Mobile • KTP900F Mobile
Fail-safe Mobile Panel	• KTP700F Mobile • KTP900F Mobile
Safety-related operator control	• Emergency stop / stop button • Enabling button
Storage medium	• SD memory card • USB flash drive
WinCC	• WinCC Comfort V13 SP1 or higher • WinCC Advanced V13 SP1 or higher
STEP 7	STEP 7 V13 SP1 or higher
Safety optional package	STEP 7 Safety Advanced V13 SP1 or later optional package

Information on standards

You can find detailed information on standards including year of publication and corresponding supplements in the section "Standards on operating safety (Page 200)".

Standards and supplements will be referenced in the remainder of the document without citation of the year of publication, for example, "EN 61000-6-4 +A1".

Figures

This document contains figures of the devices described. The figures can deviate from the particularities of the delivered device.

See also

Terms for fail-safe operation (Page 23)

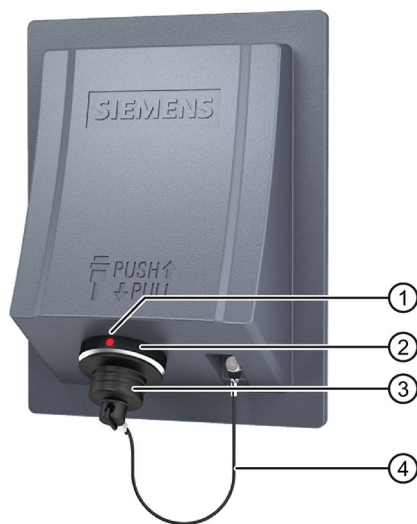
1.4 Connection boxes

The connection boxes are available in the following versions:

- Connection box compact, article number 6AV2125-2AE03-0AX0
- Connection box standard, article number 6AV2125-2AE13-0AX0
- Connection box advanced, article number 6AV2125-2AE23-0AX0

Connection box compact

The figure below shows the connection box compact.

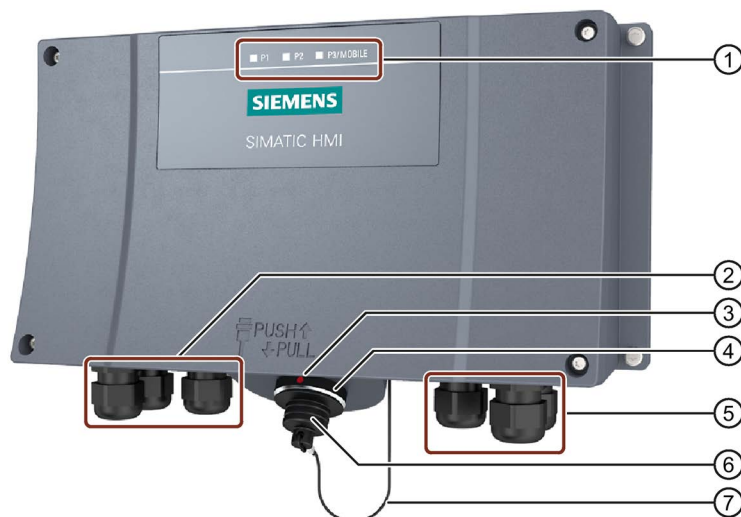


- ① Positioning mark
There is also a red positioning mark on the connecting cable. Align this mark with the positioning mark on the connection box when connecting.
- ② Connection socket for the connecting cable
- ③ Cover cap
- ④ Safety strap

Connection box standard and connection box advanced

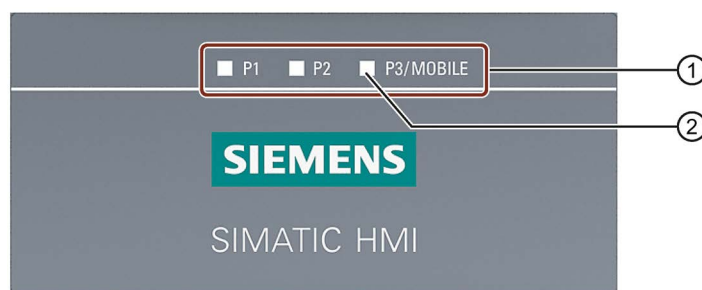
The figure below shows the connection box standard or the connection box advanced. The connection box advanced also features:

- Real-time Ethernet
- F-signal transmission



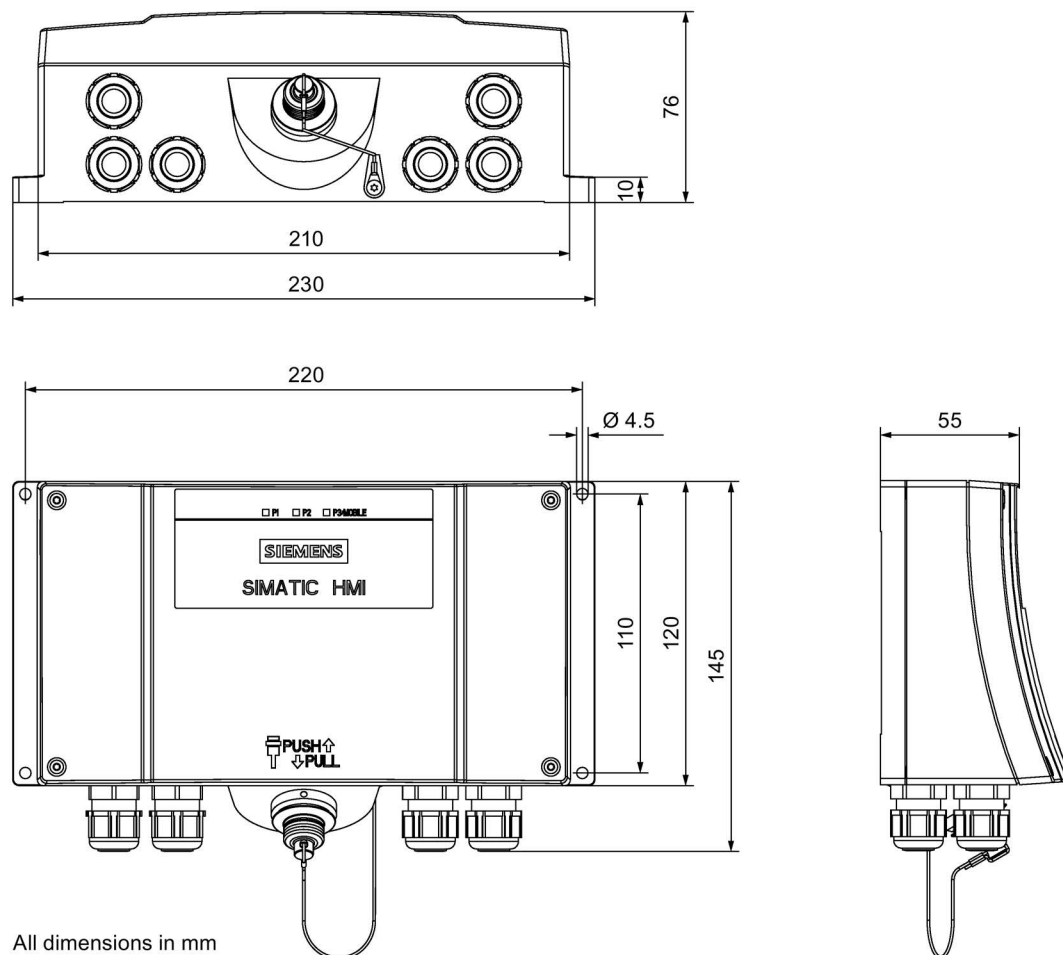
- ① LED display
- ② Screw glands for the data cables
- ③ Positioning mark
There is also a red positioning mark on the connecting cable. Align this mark with the positioning mark on the connection box when connecting.
- ④ Connection socket for the connecting cable
- ⑤ Screw glands for power supply cables and F-signal
- ⑥ Cover cap
- ⑦ Safety strap

There are three LEDs on the front of the connection box that indicate the status of communication.



- ① LED display of the three Ethernet ports:
 - P1: Fast Connector X1
 - P2: Fast Connector X2
 - P3: Connection socket for the Mobile Panel
- ② LED

11.6.6 Dimension drawing for connection box standard and connection box advanced



11.7.3 Connection boxes

Mechanics

Weight without packaging	
• Connection box compact • Connection box standard • Connection box advanced	• Approx. 250 g • Approx. 750 g • Approx. 750 g

Power supply

The information in the table below applies to all connections boxes.

Rated voltage	+24 V DC
Range, permitted	19.2 ... 28.8 V ($\pm 20\%$)
Transients, maximum permitted	35 V (500 ms)
Time between two transients	≥ 50 s
Enabling button	
• Supply voltage • Amperage, max.: • Amperage, min.:	• 24 VDC • 300 mA • 10 mA
Emergency stop / stop button for fail-safe Mobile Panel	
• Supply voltage • Amperage, max.: • Amperage, min.:	• 24 VDC • 500 mA • 10 mA
Cable length between connection box and PLC	≤ 30 m
Fuse, internal	Electronic
Current load PLC-accompanying signals	< 100 mA
Recovery time	≥ 1 s

Power consumption of the connection box compact

Current consumption without Mobile Panel	
• Typical • Continuous current, maximum • Inrush current I^2t	• Approx. 20 mA • Approx. 50 mA • Approx. 0.1 A²s
Current consumption with Mobile Panel	
• Typical • Continuous current, maximum • Inrush current I^2t	• Approx. 550 mA • Approx. 700 mA • Approx. 0.6 A²s

Power consumption of the connection box standard

Current consumption without Mobile Panel • Typical • Continuous current, maximum • Inrush current I^2t	• Approx. 100 mA • Approx. 150 mA • Approx. 0.5 A²s
Current consumption with Mobile Panel • Typical • Continuous current, maximum • Inrush current I^2t	• Approx. 600 mA • Approx. 750 mA • Approx. 0.6 A²s
Industrial Ethernet switch name article number	SCALANCE XF208, 6GK5208-0BA00-2AF2

Documents for the SCALANCE XF208 are available over the following links:

- "SCALANCE XF208" operating instructions
(<http://support.automation.siemens.com/WW/view/en/63203772>)
- "SCALANCE XF208" configuration manual
(<http://support.automation.siemens.com/WW/view/en/63203765>)

Power consumption of the connection box advanced

Current consumption without Mobile Panel • Typical • Continuous current, maximum • Inrush current I^2t	• Approx. 100 mA • Approx. 150 mA • Approx. 0.5 A²s
Current consumption with Mobile Panel • Typical • Continuous current, maximum • Inrush current I^2t	• Approx. 600 mA • Approx. 750 mA • Approx. 0.6 A²s
Industrial Ethernet switch name article number	SCALANCE XF204 IRT, 6GK5204-0BA00-2BF2

Documents for the SCALANCE XF204 IRT are available at the following links:

- "SCALANCE XF204 IRT" operating Instructions
(<http://support.automation.siemens.com/WW/view/en/63203775>)
- "SCALANCE XF204 IRT" configuration manual
(<http://support.automation.siemens.com/WW/view/en/63203768>)

Insulation testing, protection class and degree of protection

Insulation testing

The insulation strength is demonstrated in the type test with the following test voltages in accordance with IEC 61131-2:

Circuits with rated voltage of U_i	Test voltage
< 50 V	500 V AC to other circuits / to ground

Protection class

Protection class III according to IEC 61131-2

Protection against foreign objects and water

The device meets the requirements of IEC 60529.

Degree of protection	Validity
IP65 all-round	- For connection box compact: The connection box has been installed as described in this document. - For connection boxes standard and advanced: All unused screw connections are capped.
Type 4X/Type 12 (indoor use only)	Applies if indicated on the nameplate

11.7.4 Power consumption specifications

The connection box and Mobile Panel must be taken into consideration when calculating the power consumption. The tables below show typical values for the power consumption.

Note

The actual power consumption may vary depending on the configuration and the load at the interfaces of the Mobile Panel deviating from the specified values. The following factors affect the power consumption, for example:

- The display brightness set on the Mobile Panel
- The load on the USB interface of the Mobile Panel
- The length of the connecting cable

Connection box	Power consumption, typical
Connection box compact	0.5 W
Connection box standard	2.4 W
Connection box advanced	2.8 W

Mobile Panel	Power consumption, typical
KTP700 Mobile	7 W
KTP700F Mobile	8 W
KTP900 Mobile	9 W
KTP900F Mobile	10 W