



Harmony GTUX

eXtreme outdoor HMI panels for
harsh outdoor environment



Harmony

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Advanced operator interface and industrial relays

Harmony operator interface and industrial relays enhance operational efficiency and equipment availability across industrial and building applications. **Harmony** includes intelligent connected products and edge terminals that visualize, gather and process data, enabling informed operator decisions.

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References		Modicon TM3 I/O expansion modules for Modicon controllers Analog I/O modules				
	References					
Modicon TM3 analog input modules						
Number and type of channels	Input range	Output range	Resolution	Input terminal (internal pin(s))	Reference	Weight (kg)
2 voltage inputs	–15...+15 VDC	–	16 bits or 12 bits	1	TM3AI250	0.115
	–20...+20 VDC	–	16 bits or 12 bits	2	TM3AI250	0.115
4 voltage inputs	–15...+15 VDC	–	12 bits or 16 bits	1	TM3AI450	0.130
	–20...+20 VDC	–	12 bits or 16 bits	2	TM3AI450	0.130
4 voltage inputs	–15...+15 VDC	–	12 bits or 16 bits	1	TM3AI450	0.130
	–20...+20 VDC	–	12 bits or 16 bits	2	TM3AI450	0.130
4 voltage or temperature inputs (V)	–15...+15 VDC (–20...+20 VDC, 0...125 °C) (0...125 °C, 0...125 °C, 0...125 °C) (0...125 °C, 0...125 °C, 0...125 °C)	–	12 bits or 16 bits	1	TM3AI450	0.130
	–15...+15 VDC (–20...+20 VDC, 0...125 °C) (0...125 °C, 0...125 °C, 0...125 °C)	–	12 bits or 16 bits	2	TM3AI450	0.130
4 differential temperature inputs (°C)	–20...+20 VDC (0...125 °C, 0...125 °C, 0...125 °C)	–	12 bits or 16 bits	1	TM3AI450	0.130
	–20...+20 VDC (0...125 °C, 0...125 °C, 0...125 °C)	–	12 bits or 16 bits	2	TM3AI450	0.130

Each commercial reference presented in a catalog contains a hyperlink.
Click on it to obtain the technical information of the product:

- Characteristics, Dimensions and drawings, Mounting and clearance, Connections and schemas, Performance curves
- Product image, Instruction sheet, User guide, Product certifications, End of life manual

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Modicon TM3

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TM3AI2H

Module TM3 - 2 analog inputs high resolution

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User guide

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CAD Document

Characteristics

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Main

range of product

product or component type

range compatibility

Modicon TM3

Analog input module

Modicon M251

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Harmony GTUX eXtreme outdoor HMI panels

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Harmony GTUX

eXtreme outdoor HMI panels

Sunlight readable

Harmony GTUX eXtreme outdoor HMI panels

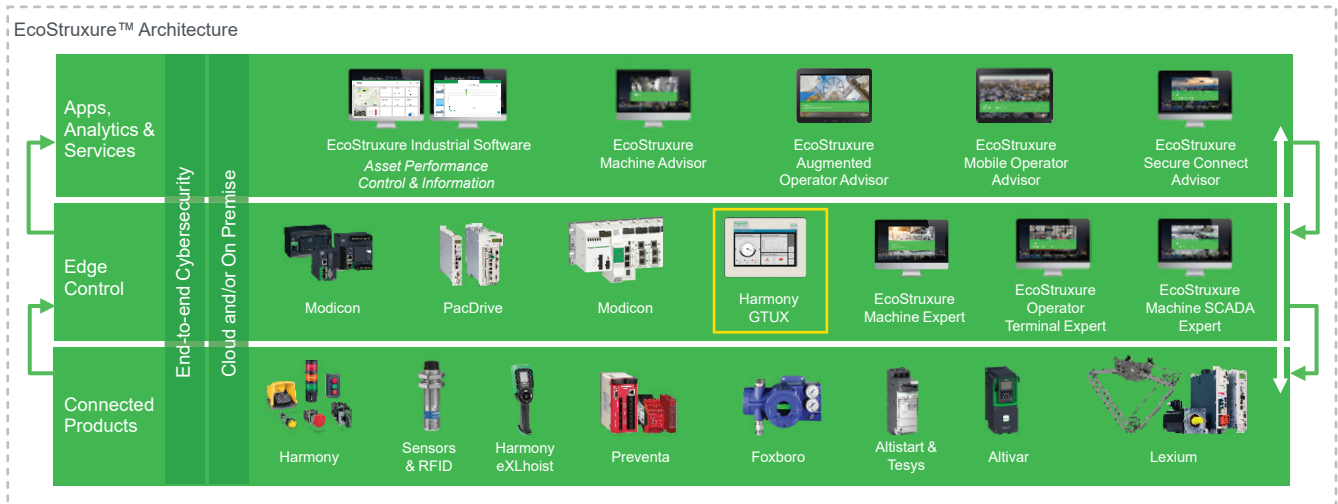
Harmony GTUX is a modularly designed robust terminal suitable for harsh outdoor environments. Features like high brightness and UV protection to direct sunlight, protection against water and dust, and supporting a wide range of temperatures make it an ideal choice for direct outdoor operation in O&G, WWW, and MMM segments.

Harmony eXtreme panels can be used in applications like smart energy generation (solar, wind turbine, biomass, hydropower genset, etc.), hoisting, compressor, pumping, and car charging/washing.



EXtreme outdoor HMI panels

EcoStruxure is Schneider Electric's innovative IoT architecture addressing the needs of automation applications for a wide range of industries. The Harmony GTUX panels meet IIoT challenges at the Edge Control level by enabling secured communication from connected products on the shop floor to the required software and applications on the top floor. This provides improved profitability and new business opportunities through enhanced asset performance for more efficient operation and maintenance of capital assets.



- Remote visualization with WebGate feature and with Vijeo Air/Air+ Apps
- Remote maintenance with EcoStruxure Secure Connect Advisor

Sunlight readable

- > Clear visibility and resistant under direct sunlight
- > High brightness LCD (1,000 cd/m²)
- > Anti-reflection (anti-glare surface)
- > Maximum brightness (no overlay, glass touch panel)



Harmony GTUX exposed to bright sunlight

+ Harmony GTUX → Designed and built for harsh outdoor environments

Powerful visualization and control in
eXtreme environment and fully
integrated into EcoStruxure Machine
Expert software



360°



Click on the images for 3D 360° view

Robustness

- > UV protected surface design and gasket
- > Dust proof and water proof (IP66F , IP67F and UL50E Type 4X (Outdoor use))
- > Wide temperature range (7" and 12" W: -30 °C...+70 °C, 15" W: -20 °C...+60 °C)
- > Resistant against shocks (40G) and vibrations (2G)



Harmony GTUX under extreme temperatures

Environment adaptability

- > Atmospheric resistance with conformal coating (fully coated, corrosive gas class 3C3). This treatment increases the isolation capability of the circuit boards and their resistance to condensation, dusty atmospheres, and chemical corrosion.
- > Environmental standards: UL Haz Loc (Class 1 Div. 2) and ATEX/IECEX Zone 2/22 (1)
- > Low-voltage range of 12 V...24 V ~ (10.8 V...28.8 V ~)



Harsh outdoor environments

Maintainability

Easy connectivity with variety of interfaces

- > COM1 RS-485 with isolation and COM2 RS-232/RS-485
- > 2x Ethernet: Controllers, IT network
- > 2x USB Type A: Accessories, USB memory stick
- > 1x USB Type mini B: Data transfer
- > 2x SD card: System data, log data

Easy maintenance

- > Modular design (Box + Display)
- > Removable system card
- > Batteryless design



Easy installation and maintenance with modular design

(1) Available in Q4 2020.

Harmony GTUX
eXtreme outdoor HMI panels

Applications		Display graphic objects and synoptic views Control and configuration of data	
Type of display module		eXtreme Display	eXtreme Display fully coated
			
Display	Size	7" Wide	
	Resolution (pixels)	800 x 480 (WVGA)	
	Type and display colors	TFT Color LCD (high brightness), 262,144 colors	
Gesture support		Single-touch analog resistive, 1,024 x 1,024 pixels	
Degree of protection		IP66F, IP67F and UL50E Type 4X (Outdoor use)	
Conformal coating		Partially coated	Fully coated IEC/EN 60721-3-3 Class 3C3
Functions	Brightness control	0...100 (Adjusted with touch panel or software)	
	Backlight service life	50,000 h or more	
Dimensions	External W × H × D mm/in.	203.6 x 148.6 x 37/8.02 x 5.85 x 1.45	
	Cut-out W × H mm/in.	190 x 135/7.48 x 5.31	
	Weight (kg/lb)	1.300/2.900	
Supply voltage		12...24 V ---	
Power consumption		29 W	
Environment	Operating temperature	-30...65 °C (-22...149 °F)	
	Storage temperature	-30...70 °C (-22...158 °F)	
	Vibration frequency	2G (IEC 60068-2-6)	
	Shock resistance	40G (IEC 60068-2-27)	
Conformity to certifications		CE, RCM, KC, EAC, UL cUL Class 1 Div2, ATEX/IECEX Zone 2/22 (1)	
Compatible box models		HMIG3X	HMIG3XFH
Display module reference		HMIDT35X	HMIDT35XFH
Pages		12	

(1) Available in Q4 2020.

Display graphic objects and synoptic views Control and configuration of data			
eXtreme Display		eXtreme Display fully coated	
			
12.1" Wide		15.6" Wide	
1,280 x 800 (WXGA)		1,366 x 768 (FWXGA)	
TFT Color LCD (high brightness), 262,144 colors			
Single-touch analog resistive, 1,024 x 1,024 pixels			
-			
Partially coated	Fully coated IEC/EN 60721-3-3 Class 3C3	Partially coated	Fully coated IEC/EN 60721-3-3 Class 3C3
0...100 (Adjusted with touch panel or software)			
50,000 h or more			
308 x 230.5 x 68/12.15 x 9.07 x 2.68		408 x 264 x 68/16.06 x 10.39 x 2.68	
295 x 217/11.61 x 8.54		394 x 250/15.51 x 9.84	
3.200/7.100		4.800/10.600	
12...24 V ---			
37 W		48 W	
-30...70 °C (-22...158 °F)		-20...60 °C (-4...140 °F)	
-30...70 °C (-22...158 °F)		-20...60 °C (-4...140 °F)	
2G (IEC 60068-2-6)		1G (IEC 60068-2-6)	
40G (IEC 60068-2-27)		15G (IEC 60068-2-27)	
CE, RCM, KC, EAC, UL cUL Class 1 Div2, ATEX/IECEx Zone 2/22 (1)			
HMIG3X	HMIG3XFH	HMIG3X	HMIG3XFH
HMIDT65X	HMIDT65XFH	HMIDT75X	HMIDT75XFH

12

Harmony GTUX
eXtreme outdoor HMI panels

Applications		Display graphic objects and synoptic views Control and configuration of data	
Type of box module		eXtreme Box	
			
CPU		RISC, 600 MHz	
Operating system		Real Time	
Memory	RAM	256 MB	
	System memory	1 GB SD card	
	Backup memory	512 KB NVRAM	
Sound output interface	Speaker output	70 mW (Rated load: 8 Ω, Frequency: 1 kHz)	
	LINE output	Rated load: 10 kΩ or more	
Conformal coating		Partially coated	
Alarm output/Buzzer output		Yes (24 V ---/50 mA)	
Communication	Asynchronous serial link	RS-485 (isolated, COM1), RS-232C/422/485 (COM2)	
	USB ports	2x USB 2.0 (Type A), 1x USB 2.0 (Type Mini-B)	
	Buses and networks	2x Ethernet TCP/IP (10BASE-T/100BASE-TX/1000BASE-T)	
Weight (kg/lb)		0.9/1.98	
Supply voltage		12...24 V ---	
Power consumption		20 W	
Environment	Operating temperature	-30...70 °C (-22...158 °F)	
	Storage temperature	-30...70 °C (-22...158 °F)	
	Vibration frequency	2G (IEC 60068-2-6)	
	Shock resistance	40G (IEC 60068-2-27)	
Conformity to certifications		CE, RCM, KC, EAC, UL cUL Class 1 Div2, ATEX/IECEx Zone 2/22 (1)	
Compatible display		HMIDT35X, HMIDT65X, HMIDT75X	
Box reference		HMIG3X	
Pages		12	

(1) Available in Q4 2020.

Display graphic objects and synoptic views Control and configuration of data	
eXtreme Box fully coated	
	
RISC, 600 MHz	
Real Time	
256 MB	
1 GB SD card	
512 KB NVRAM	
70 mW (Rated load: 8 Ω, Frequency: 1 kHz)	
Rated load: 10 kΩ or more	
Fully coated IEC/EN 60721-3-3 Class 3C3	
Yes (24 V ---/50 mA)	
RS-485 (isolated, COM1), RS-232C/422/485 (COM2)	
2x USB 2.0 (Type A), 1x USB 2.0 (Type Mini-B)	
2x Ethernet TCP/IP (10BASE-T/100BASE-TX/1000BASE-T)	
0.9/1.98	
12...24 V ---	
20 W	
-30...70 °C (-22...158 °F)	
-30...70 °C (-22...158 °F)	
2G (IEC 60068-2-6)	
40G (IEC 60068-2-27)	
CE, RCM, KC, EAC, UL cUL Class 1 Div2, ATEX/IECEx Zone 2/22 (1)	
HMIDT35XFH, HMIDT65XFH, HMIDT75XFH	
HMIG3XFH	
12	



Harmony GTUX

eXtreme outdoor HMI panels



Harmony GTUX eXtreme display



Harmony GTUX eXtreme Box

Presentation

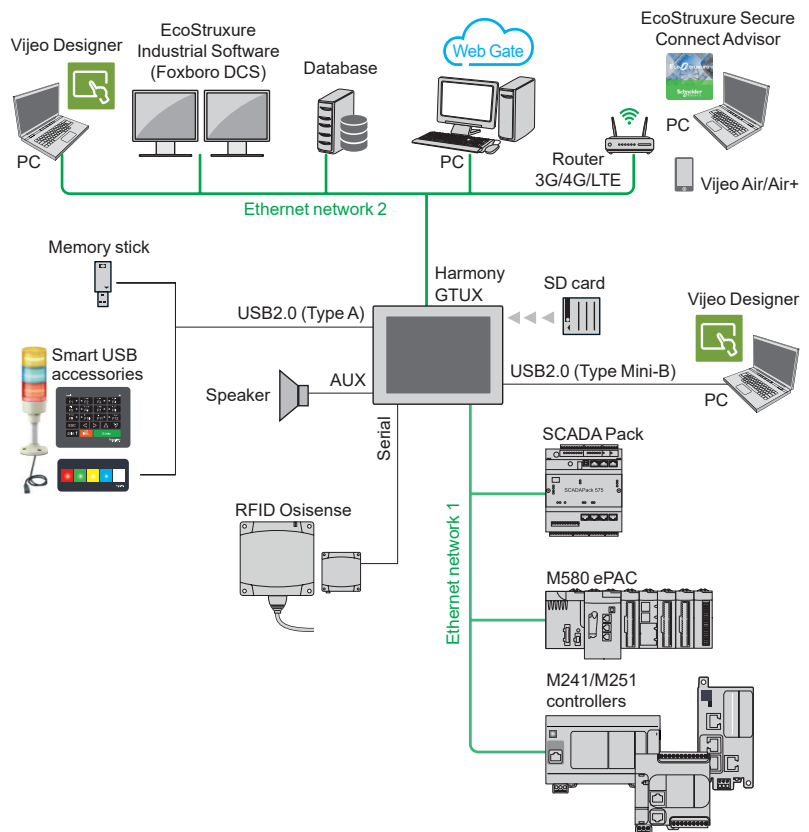
eXtreme outdoor HMI panels are a high-performance range of HMIs that are ideal for harsh outdoor environments. They are modular units comprising a front panel display and a processing box module. The wide format displays are available in 7", 12", and 15" W screen sizes and are all compatible with the HMIG3X/HMIG3XFH box module.

Operation

eXtreme outdoor HMI panels feature powerful information and communication technologies with maximum operator efficiency in terms of viewing, which, depending on the model, include:

- Clear display with wide-format, single-touch technology
- High level of communication with all embedded dual interfaces: 2x serial ports, 2x USB host ports, and 2x Gigabit Ethernet ports (Multilink, Webserver and FTP, E-mail, Remote Services)
- Removable storage units for easy save/restore of operating system, HMI application, and user data (SD memory cards, USB memory stick management)
- Management of peripherals: printers, external keyboard/mouse, and Schneider Electric smart USB accessories (tower light, illuminated switch, USB keyboard)

Architecture



Connected product for Remote Services

Presentation (continued)

Environment

The high-end eXtreme outdoor HMI panels have been designed in accordance with numerous standards, certifications, and requirements:

- Standards: IEC/EN 61131-2, IEC 61000-6-2, and IEC 61000-6-4
- Certifications:
 - RCM (Australia), EAC (Eurasia), KC (Korea)
 - cULus Industrial Control Equipment (UL508 and CSA 22.2 No.142)
 - cULus Hazardous Locations (ANSI/ISA 12.12.01 and CSA 22.2 No. 213)
 - ATEX/IECEx Zone2/22 (1)
- Operating temperature: -30 °C up to 70 °C
- Degree of protection on front face IP66F/IP67F (according to IEC 60529) and Type 4X UL50E (indoor and outdoor use)
- Extended power supply voltage 12...24 V $\overline{\text{---}}$
- For coating model IEC/EN 60721-3-3 Class 3C3. This treatment increases the isolation capability of the circuit boards and their resistance to:
 - Condensation
 - Dusty atmospheres (conducting foreign particles)
 - Chemical corrosion, in particular during use in sulfurous atmospheres (oil refinery, purification plant, etc.) or atmospheres containing halogens (chlorine, etc.)
 - Harsh chemical environments IEC/EN 60721-3-3 class 3C3: 7 days; 25 °C/relative humidity 75%, concentrations (mm³/m³): H₂S: 2500/SO₂: 2000/Cl₂: 100 (2)

Configuration

eXtreme outdoor HMI panels can be configured using Vijeo Designer software in a Windows environment. This software has an advanced user interface with many configurable windows enabling projects to be developed quickly and easily.

For more information, please refer to [DIA5ED2130614EN](#) catalog.

Functions

Companion products

With EcoStruxure Secure Connect Advisor, all Harmony GTUXs serve as a service enabler and access point for remote maintenance to your machine. EcoStruxure Secure Connect Advisor provides a more secure way to access existing Schneider Electric tools (for example: Vijeo Designer, Unity, SoMachine) to program or monitor machines remotely. Maintenance personnel can also access Schneider Electric software and update it remotely and securely via the HMI, PLC, and other connected devices as if they are on site. Troubleshooting and repair can also be performed remotely upon request.

For more information, please refer to [DIA5ED2190101EN](#) catalog.

Automation solution

The Harmony GTUX integrated (3) in EcoStruxure Machine™ (4) automation solutions offer will help machine manufacturers (OEMs) to quickly design optimized machines (in terms of cost and energy efficiency).

EcoStruxure Machine solutions are based on high-performance control platforms and the single SoMachine software package. SoMachine allows the development, commissioning, and programming of machines. With Vijeo Designer software, SoMachine allows programming of panels in the Harmony range.

Harmony GTUXs have been designed for EcoStruxure Plant™ (4) architecture, EcoStruxure Machine (4) architecture, based on Web and Ethernet TCP/IP technologies. Therefore, all panels with an Ethernet port have a built-in FTP server for data file transfer and a Web Gate function for remote access to the panel application from a PC with a web browser.

(1) Available in Q4 2020.

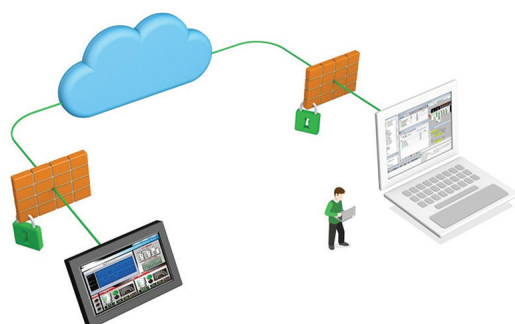
(2) Apply grease (Nyogel 760G) to the following interfaces to prevent corrosion.

- Box module: Display module interface, Expansion unit interface, Ethernet interface x2, USB (Type A) interface x2, USB (Mini-B) interface, System card interface, Storage card interface
- Display module: Box module interface

A grease tube of Nyogel BMXGEL0025 can be ordered separately.

(3) Harmony GTUX is integrated into EcoStruxure Machine with Vijeo Designer.

(4) For more information on the EcoStruxure Machine and EcoStruxure Plant concept, please refer to our website www.schneider-electric.com.



EcoStruxure Secure Connect Advisor remote maintenance



Front view HMIDT35X

Description

Harmony HMIDT 35X/35XFH

Front view

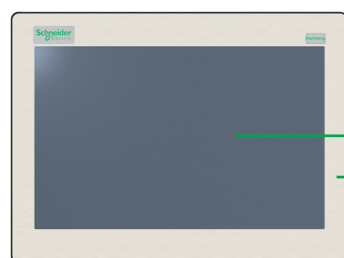
- 1 Single-touch resistive screen for displaying synoptic views (262 K colors LCD TFT LED with brightness adjustable to 100 levels) in sizes 7", 12", and 15" wide
- 2 Stainless cover front panel providing IP66F, IP67F and UL50E Type 4X (Outdoor use) protection when mounted on panel or enclosure door



Rear view HMIDT35X

Rear view

- 3 Power plug connector
- 4 Box module interface
- 5 Aluminum alloy housing

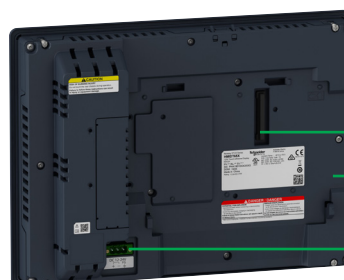


Front view HMIDT65X

Harmony HMIDT 65X/65XFH/75X/75XFH

Front view

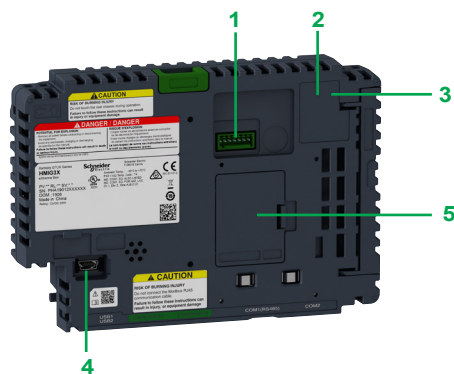
- 1 Single-touch resistive screen for displaying synoptic views (262 K colors LCD TFT LED with brightness adjustable to 100 levels) in sizes 7", 12", and 15" wide
- 2 Stainless cover front panel providing IP66F, IP67F and UL50E Type 4X (Outdoor use) protection when mounted on panel or enclosure door



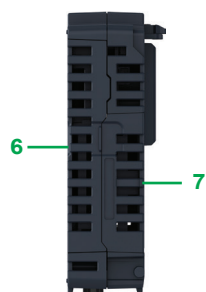
Rear view HMIDT65X

Rear view

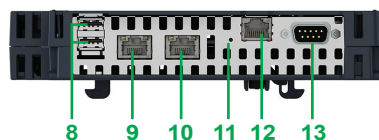
- 3 Power plug connector
- 4 Box module interface
- 5 Aluminum alloy housing



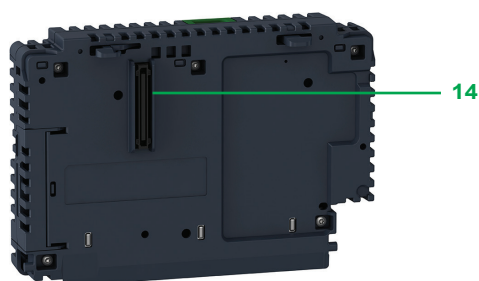
Front view HMIG3X



Right view HMIG3X



Underside view HMIG3X



Rear view HMIG3X

Description (continued)

Harmony HMIG 3X/3XFH

Front view

- 1 Auxiliary output/Speaker output interface (AUX) for alarm, buzzer, and speaker outputs
- 2 Status LED indicating the operating mode of the panel
- 3 Card access LED indicating access to the SD memory card
- 4 1x Type Mini-B USB connector for application transfer
- 5 Expansion unit interface cover (EXT) for optional battery

Right view

- 6 Storage unit cover for SD slot memory card dedicated to user data
- 7 System card cover (1)

Underside view

- 8 2x Type A USB host connectors for connecting peripherals, transferring applications, and Modicon M340 panel port communication
- 9 RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX/1000BASE-T with an activity LED
- 10 RJ45 connector for Ethernet TCP/IP link, 10BASE-T/100BASE-TX/1000BASE-T with an activity LED
- 11 COM1 LED indicating data transmission
- 12 RJ45 connector for RS-485 serial link with isolation (COM1)
- 13 9-way male SUB-D connector for RS-232C or RS-422/RS-485 serial link to PLCs (COM2)

Rear view

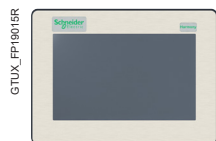
- 14 Display module interface

(1) You cannot open this cover when the Box module is in operation.

Harmony GTUX

eXtreme outdoor HMI panels

Displays and Box modules



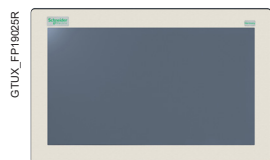
GTUX_FPI901BR

HMIDT 35X/35XFH



GTUX_FPI902BR

HMIDT 65X/65XFH



GTUX_FPI902BR

HMIDT 75X/75XFH



GTUX_CP19004A

HMIG 3X/3XFH

Harmony GTUX eXtreme Display modules

Data entry method	Display size	Resolution (pixels)	Colors	Touch type	Conformal coating Class 3C3	Reference	Weight kg/lb
Via touch screen	7"	800 x 480 (WVGA)	262 K	Single-touch analog resistive	No	HMIDT35X	1.300/ 2.900
					Yes	HMIDT35XFH	1.300/ 2.900
	12.1"	1,280 x 800 (WXGA)	262 K	Single-touch analog resistive	No	HMIDT65X	3.200/ 7.100
					Yes	HMIDT65XFH	3.200/ 7.100
	15.6"	1,366 x 768 (FWXGA)	262 K	Single-touch analog resistive	No	HMIDT75X	4.800/ 10.600
					Yes	HMIDT75XFH	4.800/ 10.600

Harmony GTUX eXtreme Box modules

Operating system	Number of ports	Application memory capacity (or system card)	Backup memory	Number of Ethernet ports	Conformal coating Class 3C3	Reference	Weight kg/lb
Harmony operating system	2x USB 2.0 (Type A) 1x USB 2.0 (Mini-B) 2x Serial	1x GB SD card	512 KB (NVRAM)	2	No	HMIG3X	0.900/ 1.980
					Yes	HMIG3XFH	0.900/ 1.980

Harmony GTUX

eXtreme outdoor HMI panels

Separate parts



Separate parts				
Description	Characteristics	Compatible with panels	Reference	Weight kg/lb
Box module Fixing Bracket	Bracket for fixing Box module to 7" W Display module	HMIDT35X	HMIZXFIX1	—
	Bracket for fixing Box module to 12"/15" W display module	HMIDT65X HMIDT75X	HMIZXFIX2	—
SD memory card system	1 GB, blank	HMIG3X	HMIZSD1GS	—
SD card	4 GB, blank	HMIG3X	HMIZSD4G	—
Power supply connector Sold in lots of 5	Connector to connect DC power supply cables to 12"/15" W display modules	HMIDT65X HMIDT75X (right-angle connection)	HMIZGPWS2	0.030/ 0.066
Description	Characteristics	Length m/ft	Reference	Weight kg/lb
Remote USB port for HMI panels	Enables the USB Type A port to be located remotely on the rear of the XBT or HMIGTU panel, on a panel, or an enclosure door (Ø 21 mm fixing device)	1/3.28	XBTZGUSB	—
Remote USB port for HMI panel	Enables the USB Mini-B port to be located remotely on the rear of the HMIGTU panel, on a panel, or an enclosure door (Ø 21 mm fixing device)	1/3.28	HMIZSUSBB	—
Battery	HMIGTUX	—	HMIZGBAT	—
Auxiliary connector Sold in sets of 5 units	HMIGTUX	—	HMIZGAUX	—
Stylus Sold in lots of 5	—	—	XBTZGPEN	—
Grease tube Nyogel 760G	Corrosion prevention on the interface connectors HMIGTUX	—	BMXGEL0025	—

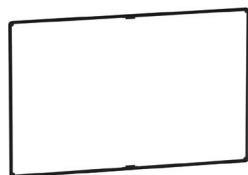


Harmony GTUX

eXtreme outdoor HMI panels

Replacement parts

GTUX_CPI9011



HMIZX57W

Spare parts

Description	For use with panel	Reference	Weight kg/lb
Seals	HMIDT35X	HMIZD53W	—
	HMIDT65X	HMIZD56W	—
	HMIDT75X	HMIZX57W	—
USB fastenings Sold in lots of 5	HMIGTUX (USB Type A)	HMIZGCLP1	—
	HMIGTUX (USB Type Mini-B)	HMIZSCLP3	—
Power supply connector Sold in lots of 5	HMIDT35X (direct connection)	HMIZGPWS	0.030/ 0.066
	HMIDT65X/HMIDT75X (right-angle connection and fixable with screws)	HMIZXPWS	0.030/ 0.066

Cables for application transfer - Panels to PC

Type of panel (panel end connector)	Connector (PC end)	Type	Length m/ft	Reference (1)	Weight kg/lb
HMIGTUX	USB	USB Type Mini-B	1.80/ 5.91	BMXXCAUSBH018	—
		USB Type A	1.80/ 5.91	XBTZG935	—

Printer connection cables

Type of printer	Connector (printer end)	Type	Length m/ft	Reference	Weight kg/lb
HMIGTUX	25-way female SUB-D	RS-232C (COM2)	2.5/ 8.20	XBTZ915	0.200/ 0.441
Serial printer for HMIGTUX	9-way female SUB-D	USB Type A/RS-232C	1.80/ 5.91	HMIZURS	—

Adapters and isolation boxes for HMIGTU panels

Description	Type of connector (automation product end)	Physical link (HMIGTU panel end)	Length m/ft	Reference	Weight kg/lb
Adapter for HMIGTUX	25-way SUB-D connector	RJ45 connector	0.2/ 0.66	XBTZG939	—
Adapter for HMIGTUX (COM2 port)	25-way SUB-D connector	9-way SUB-D connector, RS-232C	0.2/ 0.66	XBTZG919	—
Description	For use with	Link to isolate		Reference	Weight kg/lb
Serial link isolation units for HMIGTUX	- Isolated link on 9-way SUB-D connector (2) - Box power supply via panel USB port Incorporates a USB port expander	RS-232C/RS-422		XBTZGI232	—

(1) Cable included (depending on the model) with Vijeo Designer software packages. For more information on Vijeo Designer, please refer to [DIA5ED2130614EN](#) catalog.

(2) Male connector with XBTZGI232.

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TSXPCX1031

Cables for connecting Harmony panels to other Schneider Electric products								
Automation product type	Type of connector (automation product end)	Protocol	Type of panel	Link	On port	Length m/ft	Reference	Weight kg/lb
Nano, Modicon TSX Micro, Modicon Premium	Panel port, 8-way female mini-DIN	Uni-TE (V1/V2), Modbus	HMITGTUX	RS-485	COM1	2.5/8.20	XBTZ9780	0.180/ 0.397
						10/32.80	XBTZ9782	—
			HMITGTUX	RS-232	COM2	2.5/8.20	TSXPCX1031	—
Modicon M340 Modicon M262 Modicon M258 Modicon M2●1	RJ45	Modbus	HMITGTUX	RS-485	COM1	2.5/8.20	XBTZ9980	0.230/ 0.507
						10/32.80	XBTZ9982	—
					COM2	2.5/8.20	XBTZ9008	—
Modicon M340	USB Type Mini-B	Panel port	HMITGTUX	USB	USB Type A	1.8/5.91	BMXXCAUSBH018	0.230/ 0.507
						4.5/ 14.76	BMXXCAUSBH045	—
Modicon Quantum	9-way male SUB-D	Modbus	HMITGTUX	RS-232C	COM2	2.5/8.20	XBTZ9710 + (1)	0.210/ 0.463
						3.7/ 12.14	990NAA26320	0.290/ 0.639
Modicon STB	HE13 (NIM, network interface module)	Modbus	HMITGTUX	RS-232C	COM2	2/6.56	STBXCA4002	0.210/ 0.463
						2.5/8.20	XBTZ988 + (1)	0.220/ 0.485
Modicon Momentum M1	RJ45 (port 1 on Momentum M1)	Modbus	HMITGTUX	RS-232C	COM2	2.5/8.20	XBTZ9711 + (1)	0.210/ 0.463
TeSys U T starters ATV 312/61/71 variable speed drives ATS 48 starters Lexium 05 Preventa XPSMC	RJ45	Modbus	HMITGTUX	RS-485	COM1	3/9.84	VW3A8306R30	0.060/ 0.132
						1/3.28	VW3A8306R10	—
						2.5/8.20	XBTZ9980	—
						10/32.80	XBTZ9982	—
					COM2	2.5/8.20	XBTZ9008	—

(1) XBTZG919 adapter should be used with cables with “+ (1)” after the reference.



XBTZG9772



XBTZG9731

Cables and adapters for connecting Harmony panels to third-party PLCs

Mitsubishi, Melsec PLCs

Description Driver used	Type of panel	Type of connector (fitted to cable, excluding adapter)	Physical link (COM2)	Length m/ft	Reference	Weight kg/lb
Connection cable, <i>Q Link (SIO)</i>	HMIGTUX	9-way SUB-D 9-way SUB-D	RS-232C	5/16.40	XBTZG9772	—
Connection cable, <i>Q CPU (SIO)</i>	HMIGTUX	9-way SUB-D mini-DIN	RS-232C	5/16.40	XBTZG9774	—
Connection cable, <i>A Link (SIO)</i>	HMIGTUX	9-way SUB-D 25-way SUB-D	RS-232C	5/16.40	XBTZG9731	—
Connection cable, <i>FX (CPU)</i>	HMIGTUX	9-way SUB-D mini-DIN	RS-232/ RS-422	5/16.40	XBTZG919 + XBTZ980	—

Omron, Sysmac PLCs

Description Driver used	Type of panel	Type of connector (fitted to cable, excluding adapter)	Physical link (COM2)	Length m/ft	Reference	Weight kg/lb
Connection cables, <i>Link (SIO)</i>	HMIGTUX	9-way SUB-D 9-way SUB-D	RS-232C	5/16.40	XBTZG9740	—
		9-way SUB-D 25-way SUB-D	RS-232C	5/16.40	XBTZG9731	—
Connection cables, <i>FINS (SIO)</i>	HMIGTUX	9-way SUB-D/ 9-way SUB-D	RS-232C	5/16.40	XBTZG9740	—

Rockwell Automation, Allen-Bradley PLCs

Description Driver used	Type of panel	Type of connector (fitted to cable, excluding adapter)	Physical link (COM2)	Length m/ft	Reference	Weight kg/lb
Connection cables, <i>DF1 Full Duplex</i>	HMIGTUX	9-way SUB-D/ 25-way SUB-D	RS-232C	5/16.40	XBTZG9731	—
Connection cables, <i>DH485</i>	HMIGTUX	9-way SUB-D	RS-485	5/16.40	XBTZ9732 + (1)	—

Siemens, Simatic PLCs

Description Driver used	Type of panel	Type of connector (fitted to cable, excluding adapter)	Physical link	Length m/ft	Reference	Weight kg/lb
Connection cable, <i>PPI, S7 200</i>	HMIGTUX	RJ45/9-way SUB-D	RS-485 (COM1)	2.5/ 8.20	XBTZG9721	—
Connection cables, <i>MPI port, S7 300/400</i>	HMIGTUX	9-way SUB-D/ 9-way SUB-D	RS-232C (COM2)	3/ 9.84	XBTZG9292	—
	HMIGTUX	RJ45/flying leads at other end	RS-485 (2) (COM1)	3/ 9.84	VW3A8306D30	0.150/ 0.331
		RJ45/9-way SUB-D	RS-485 (2) (COM1)	2.5/ 8.20	XBTZG9721	—

(1) XBTZG939 adapter should be used with cables with "+" (1)" after the reference.

(2) Non-isolated RS-485 serial link, 12 Mbps.

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TSXSACA62

822607C_1



TSXPACC01

822602C_1



TSXSACA64

DA577123



VW3A8306TF10

Connection of Harmony panels via serial links and Ethernet network

Type of bus/ network	Tap-off units	Connector (tap-off unit end)	Panel type	Length m/ft	Reference	Weight kg/lb
Uni-Telway serial link	Subscriber socket TSXSACA62	15-way female SUB-D	HMIGTUX	3/9.84	VW3A8306	0.150/ 0.331
	Connection box TSXPACC01	8-way female mini-DIN	HMIGTUX	2.5/8.20	XBTZ9780	0.180/ 0.396
Modbus serial link	Subscriber socket TSXSACA64	15-way female SUB-D	HMIGTUX	3/9.84	VW3A8306	0.150/ 0.331
	T-junction box	With integrated cable, RJ45 fitted	HMIGTUX	1/6.56	VW3A8306TF10	—
Ethernet TCP/IP network	Hubs: 499 NEH/NOH Switches: 499 NES, 499 NMS, 499 NSS and 499 NOS	RJ45	HMIGTUX	2/6.56	490NTW00002	—
				5/16.40	490NTW00005	—
				12/39.37	490NTW00012	—
				40/131.23	490NTW00040	—
				80/262.47	490NTW00080	—

Connection of Harmony panels to fieldbuses

Type of bus/ network	Connection components	Type of panel	Reference	Weight kg/lb
FIPWAY, FIPIO	USB gateway	HMIGTUX	TSXCUSBFIP	—
Modbus Plus	USB gateway	HMIGTUX	XBTZGUMP	—

#		XBTZG919	14
490NTW00002	17		16
490NTW00005	17	XBTZG935	14
490NTW00012	17	XBTZG939	14
490NTW00040	17	XBTZG9292	16
490NTW00080	17	XBTZG9721	16
990NAA26320	15	XBTZG9731	16
		XBTZG9740	16
B		XBTZG9772	16
BMXGEL0025	13	XBTZG9774	16
BMXXCAUSBH018	14	XBTZGI232	14
	15	XBTZGPEN	13
BMXXCAUSBH045	15	XBTZGUMP	17
		XBTZGUSB	13
H			
HMIDT35X	12		
HMIDT35XFH	12		
HMIDT65X	12		
HMIDT65XFH	12		
HMIDT75X	12		
HMIDT75XFH	12		
HMIG3X	12		
HMIG3XFH	12		
HMIZD53W	14		
HMIZD56W	14		
HMIZGAUX	13		
HMIZGBAT	13		
HMIZGCLP1	14		
HMIZGPWS	14		
HMIZGPWS2	13		
HMIZSCLP3	14		
HMIZSD1GS	13		
HMIZSD4G	13		
HMIZSUSBB	13		
HMIZURS	14		
HMIZX57W	14		
HMIZXFIX1	13		
HMIZXFIX2	13		
HMIZXPWS	14		
S			
STBXCA4002	15		
T			
TSXCUSBFIP	17		
TSXPCX1031	15		
V			
VW3A8306	17		
VW3A8306D30	16		
VW3A8306R10	15		
VW3A8306R30	15		
VW3A8306TF10	17		
X			
XBTZ915	14		
XBTZ980	16		
XBTZ988	15		
XBTZ9008	15		
XBTZ9710	15		
XBTZ9711	15		
XBTZ9732	16		
XBTZ9780	15		
	17		
XBTZ9782	15		
XBTZ9980	15		
XBTZ9982	15		

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