

Industrial Motors  
Commercial &  
Appliance Motors  
**Automation**  
Digital &  
Systems  
Energy  
Transmission &  
Distribution  
Coatings

# Operator Interfaces (HMIs)

Technology that  
**simplifies**  
**processes**



Driving efficiency and sustainability



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# Outstanding performance and image

How can a Human Machine Interface (HMI) impact industrial automation processes? The HMI can show in real time how an operation is taking place while translating such data to display it remotely, offering more flexibility and agility to automation processes.

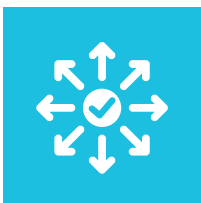
Currently, industrial production increasingly requires technological resources, and that also requires greater connectivity from HMIs (IIoT). In order to meet this demand, we developed WEG cMTx line for communication between equipment and its operators.

Versatile and created to speed up this integration, the cMTx HMI line offers different models with features such as: CANopen and SAE J1939 communication, MQTT protocol, Modbus-TCP/IP and Wi-Fi connection.





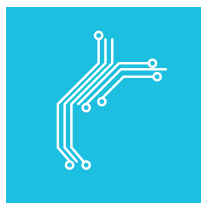
## Characteristics



Flexibility



Speed



Connectivity



Integration



Durability

# cMTx operator interfaces

## High Performance and Excellent Resolution

Through a powerful Quad-Core processor, 1 GB RAM and 4 GB Flash memory, the cMTx line stands out for its high performance, outstanding image and connectivity.

## cMTx SERIES



## Flexibility for Your Business

The cMTx line was developed to provide greater flexibility for your automation with different technology levels, being produced in different sizes: 7", 10", and 15.6".



### IIoT Ready

The entire cMTx line is IIoT Ready, featuring the MQTT (Message Queuing Telemetry Transport) protocol built-in, which allows integrating WEGnology and WEG Smart Machine solutions and extracting maximum productivity and KPIs from your processes.



### Connectivity and Security

Through the EasyAccess 2.0 software, connect to one or more HMIs and monitor your processes remotely. All that in a secure way, in a VPN connection (Virtual Private Network).



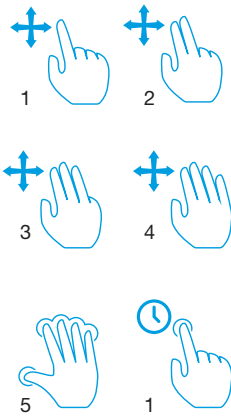


Scan the QR Code and access the product page or [click here](#)

## cMTx operator interfaces

### Multi-touch

Available for:  
cMT3162X



### Display

Images with over  
16 million colors



### Protection

IP66 front panel

### Wi-Fi Connection

Optional for:  
cMT3102X



### Protection

Fuse

### Power Supply

24 Vdc

### Serial Ports

RS232  
RS485

### Ethernet Port

Modbus-TCP/IP  
OPC UA Client/Server  
MQTT protocol  
Ethernet/IP  
EtherCAT

### USB Connection

USB 2.0 x 1





## cMTx operator interfaces

The cMTx line is the generation of WEG's color graphical touchscreen HMIs. With 7, 10, and 15.6-inch high resolution models, it stands out for its robustness, flexibility and bold design. Its design allows communication with a wide variety of equipment, as it has Ethernet and RS232/RS485 communication ports. It also has free programming software.

## Add extra value to your automation

WEG HMIs, through their powerful processing capacity, allow viewing objects with a very high level of detail, brightness and contrast. This allows you to design minimalist or more realistic screens as needed.

## Integrate solutions for better results

To meet the global demand for greater integration and management of machines and processes, WEG developed the WEG SMART MACHINE (WSM) IoT solution.

WEG Smart Machine is an IoT solution based on cloud computing designed to monitor machines in real time from anywhere. Applications are custom built, meeting the specific needs of each application and each type of machine.

WSM brings pioneering to OEMs, simplifying technical support and performance improvement of their machines. For end consumers, an impressive tool with information that facilitates production, process and maintenance management and can be integrated into the WEG HMI line.



For more information about WEG Smart Machine, please contact the WEG Automation sales team.

# cMTx operator interfaces

Models	cMT2078X	cMT3102X	cMT3162X
Type	Standard	Advanced	Advanced
Screen size	7" (diagonal)	10.1" (diagonal)	15.6" (diagonal)
Display resolution	800 x 480 pixels	1,024 x 600 pixels	1,920 x 1,080 pixels
Brightness	400 cd/m <sup>2</sup>	350 cd/m <sup>2</sup>	300 cd/m <sup>2</sup>
LCD type	TFT LCD color	TFT LCD color	IPS color
Contrast Ratio	800:1	500:1	800:1
Backlight type	LED	LED	
Screen life	>30,000 hours	>50,000 hours	>30,000 hours
Number of display colors	16.7 million	16.7 million	16.2 million
Touchscreen type	Resistive	Resistive	Capacitive
Flash memory	4 GB	4 GB	
RAM memory	1 GB	1 GB	
CPU	Quad-core 64-bit RISC 1.5 GHz	Quad-core 32-bit RISC 1.6 GHz	Quad-core 64-bit RISC 2 GHz
COM1	Con.B: RS232 (4 wires)	Con.B: RS232 (4 wires)	Con.A: RS485 (2 wires / 4 wires) / Con.B: RS232 (4 wires)
COM2	Con.A: RS485 (2 wires / 4 wires)	Con.A: RS485 (2 wires / 4 wires)	N/A
COM3	Con.A: RS485 (2 wires) / Con.B: RS232 (2 wires)	Con.A: RS485 (2 wires) / Con.B: RS232 (2 wires)	
Ethernet	10/100 Base-T x 2	10/100/1000 Base-T x 1 10/100 Base-T x 1	10/100/1000 Base-T x 1 / 10/100 Base-T x
USB (main)	USB 2.0 x 1	USB 2.0 x 1	
USB client	N/A	N/A	
CAN Bus	N/A	Yes (CANopen and J1939) - Master	Yes (CANopen and J1939) - Master
Wi-Fi connection	N/A	Yes (via M02 accessory)	No
RTC (real time clock)	Yes	Yes	
Power supply	24 Vdc ±20%	24 Vdc ±20%	
Consumption	820 mA @24 Vdc	1 A @24 Vdc	1.3 A@24 Vdc
Power supply isolation	Built-in	Built-in	
Insulation resistance	Above 50 MΩ at 500 Vdc	Above 50 MΩ at 500 Vdc	
Vibration resistance	10~25 Hz (X, Y, Z dir. 2G 30min)	10~25 Hz (X, Y, Z dir. 2G 30min)	
Ambient temperature	0 ~ 50 °C	0 ~ 50 °C	
Storage temperature	-20 ~ 60 °C	-20 ~ 60 °C	
Relative humidity	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	
External dimensions	200.3 x 146.3 x 35 mm 7.89 x 5.76 x 1.38 in	271 x 213 x 38 mm 10.67 x 8.39 x 1.50 in	400 x 263 x 27.6 mm 15.75 x 10.35 x 1.09 in
Installation cutout	192 x 138 mm 7.56 x 5.43 in	260 x 202 mm 10.24 x 7.95 in	384 x 247 mm 15.12 x 9.72 in
Weight	0.6 kg / 1.3 lbs	1.2 kg / 2.65 lbs	1.6 kg / 3.53 lbs
Protection rating (rear / front)	NEMA4 / IP66	NEMA4 / IP66	
Certifications	UL / CE	UL / CE	
Editor software	EasyBuilder Pro (free)	EasyBuilder Pro (free)	
Remote access	EasyAccess 2.0 (optional)	EasyAccess 2.0 (optional)	EasyAccess 2.0 (optional)
PLC function	CODESYS® (optional)	CODESYS® (optional)	CODESYS(R) (optional)

Note: all HMIs have Modbus-RTU communication, so they can communicate with VSDs, servo drives, PLCs, overload relays etc. For further information, contact our sales team.



# EasyBuilder Pro programming software

EasyBuilder Pro is a user-friendly, free-of-charge screen development platform for all WEG HMIs, with no license required.

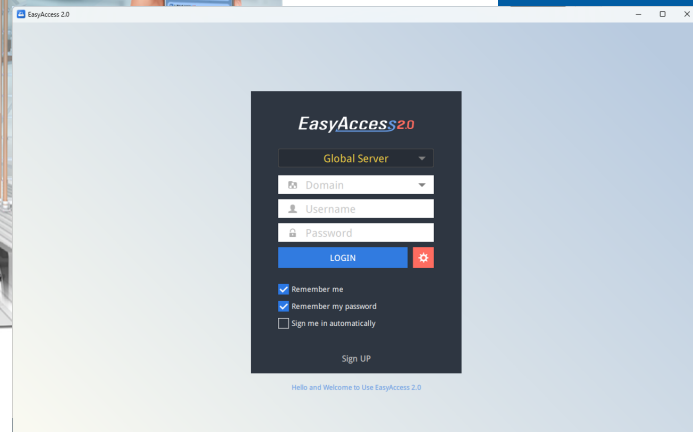
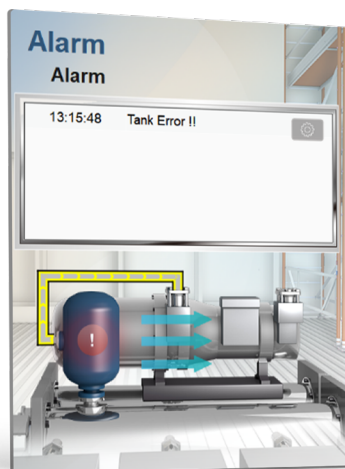
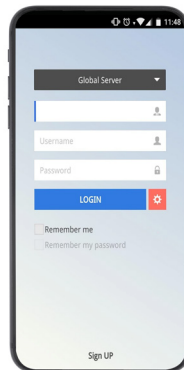


## Optimize your process and gain productivity

Create objective, intuitive and dynamic screens. Speed up your development process and present complex automation in a simple and concise way, displaying all important information obtained through PLCs (Programmable Logic Controllers) and sensors.

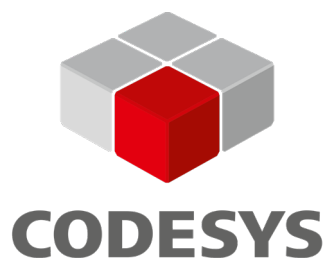
## Get notifications wherever you are

Purchase the EasyAccess 2.0 access card and connect to your HMIs remotely. Download the EasyAccess 2.0 app and enable alarm and fault notifications to receive them in real-time on your mobile device.



## Accessories

The accessories of the HMI line were developed focusing on how to obtain the best user experience and increase productivity by digitizing your processes, extending the conventional use of Human-Machine Interface resources, adding more connectivity and bringing greater virtualization to your factory.



### Turn your HMI into a PLC

Transform your Human Machine Interface (HMI) into a Programmable Logic Controller (PLC) and get the best of both devices.

By purchasing the CODESYS® Card (RZ0DS000), you can activate the SoftPLC function and develop your solutions in a CODESYS® environment.

All that without losing the Human-Machine Interface functionality and without compromising its performance.

This accessory can also be used along with the EasyAccess 2.0 Access Card and the Wi-Fi Connection Module.

To harness the maximum processing power and ensure smooth operation on the HMI, the operating interfaces of the cMTx line were developed so that both functionalities operate with different processing cores. In addition, different memories are accessed for each of the functionalities.

Protocols	Modbus-TCP/IP (Master)
	EtherCAT (Master)
	CANopen (Master)
Maximum number of Modbus-TCP/IP slaves	32
Maximum number of EtherCAT slaves	65535
Maximum number of CANopen slaves	126
CODESYS SoftMotion	N/A (own library with motion control capabilities)
CODESYS WebVisu/TargetVisu/HMI	N/A (it has more features)
Runtime login/monitor/download	Utility Manager (for download only)
	Login with PLC via LAN1
	Login with PLC via LAN2 (TCP only)

*Note: once the PLC function has been activated, it can no longer be deactivated and the activation code available on the RZ0DS000 card cannot be used in other HMIs. When the PLC function is activated, through the CODESYS® activation card, the CAN port is no longer configured via EasyBuilder Pro and is only configured via CODESYS®.*

### Make your production processes virtual

With the reputable visualization and interaction digital platform EasyAccess 2.0, you are just a click away from accessing all your HMI screens and viewing your production process remotely. Purchase the EasyAccess Activation Card 2.0 (RZACEA020) and enjoy the modernization of your production.

The connection established between your access point and the HMI is made through a VPN (Virtual Private Network), which provides very high security for your data. Also access your PLC via the *Pass-Through* function and change its parameters.



### Connection flexibility

Installing the Wi-Fi connection module (M02) allows you to connect your HMI to any network wirelessly.

Expansion module with standard IEEE 802.11b/g/n connection technology. Its design is extremely compact, not affecting your panel assembly. The signal antenna is included in the package.

The M02 module can also transform your HMI into a Wi-Fi connection access point (Hotspot), facilitating field maintenance service. Ideal accessory for mobile applications (Skid), and wireless monitoring services.







## Accessories

Reference	Code	Description	cMT2078X	cMT3102X	cMT3162X
IHM MT8100/COM3	13018566	MT8100/COM3 HMI communic cable RS485 / terminals - 2.5 m	✓	✓	✓
RZACEA020	13753693	EasyAccess 2.0 activation card	✓	✓	✓
RZOCDS000	16554149	CODESYS® activation card	✓	✓	✓
M02	16280732	Wi-Fi connection module		✓	

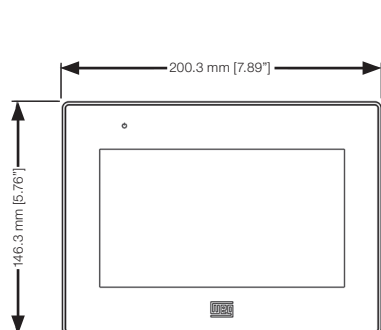
## Quick specification guide

Reference	cMT2078X	cMT3102X	cMT3162X
Screen size	7" (diagonal)	10.1" (diagonal)	15" (diagonal)
Audio output			✓
Wi-Fi		✓ (optional)	
CAN bus <sup>1)</sup>		✓	✓
MPI Siemens		✓	✓
Multi-touch screen			✓
3G/4G dongle	✓	✓	✓
cMT viewer	✓	✓	✓
VNC server	✓	✓	✓
Barcode scanner (Android)		✓	✓
Bar graph		✓	✓
IP camera/Media player	✓	✓	✓
Image viewer	✓	✓	✓
File browser	✓	✓	✓
PDF reader	✓	✓	✓
PLC web browser		✓	✓
Energy consumption viewer		✓	✓
MQTT	✓	✓	✓
OPC UA Client	✓		
OPC UA Server		✓	✓
BACnet schedule	✓	✓	✓
Data server		✓	✓
SQL Query		✓	✓
CODESYS®	✓ (optional)	✓ (optional)	✓ (optional)
EasyAccess 2.0	✓ (optional)	✓ (optional)	✓ (optional)

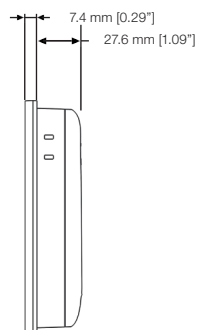
Notes: 1) When the PLC function is activated, through the CODESYS® activation card, the CAN port is no longer configured via EasyBuilder Pro and is only configured via CODESYS®.

## Dimensional drawings

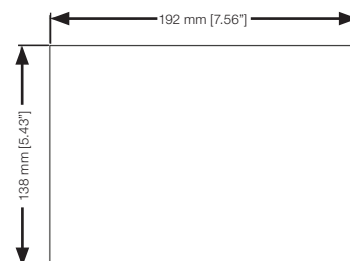
### IHM cMT2078x – 7”



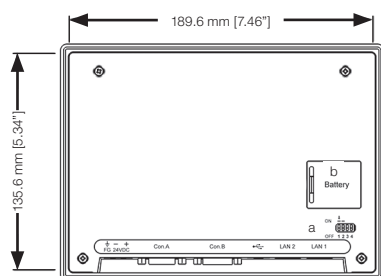
Front view



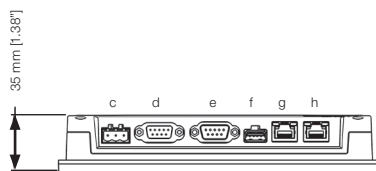
Side view



Panel cutout dimensions



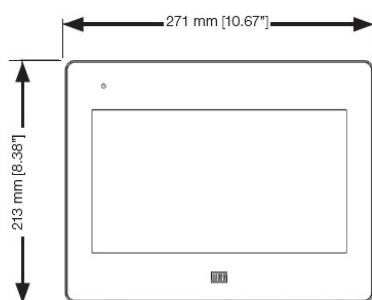
Rear view



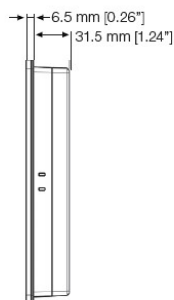
Bottom view

a	DIP switch
b	Battery
c	Power supply
d	Con. A: COM2 RS485 2 wires / 4 wires, COM3 RS485 2 wires
e	Con. B: COM1 RS232 4 wires, COM3 RS232 2 wires
f	USB Host
g	LAN 2
h	LAN 1

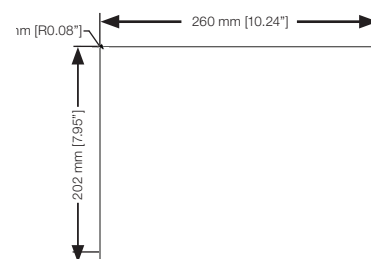
### IHM cMT3102x – 10”



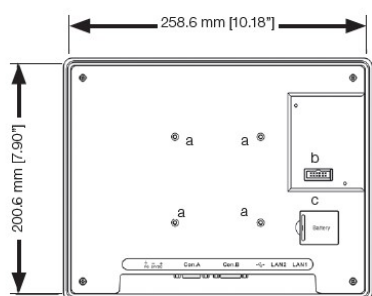
Front view



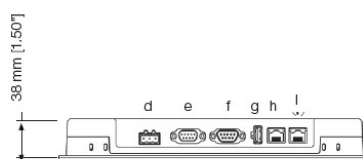
Side view



Panel cutout dimensions



Rear view

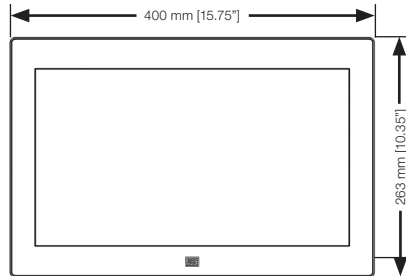


Bottom view

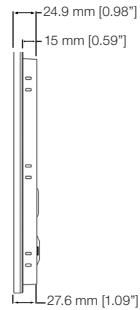
a	VESA 75 standard holes (M4)
b	Wi-Fi module connection
c	Battery
d	Power supply
e	Con. A: COM2 RS485 2 wires / 4 wires, COM3 RS485 2 wires, CAN Bus
f	Con. B: COM1 RS232 4 wires, COM3 RS232 2 wires
g	USB Host
h	LAN 2
i	LAN 1

## Dimensional drawings

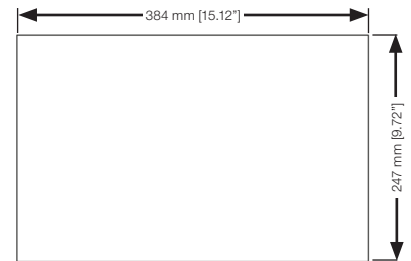
### IHM cMT3162x – 15.6”



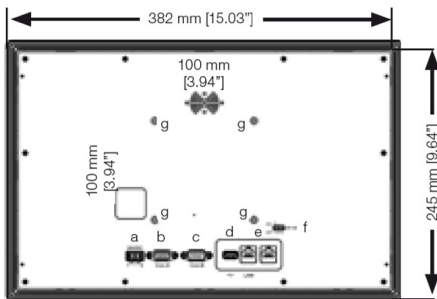
Front view



Side view



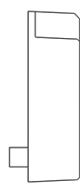
Panel cutout dimensions



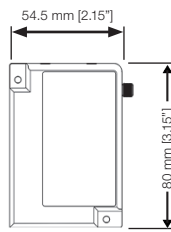
Rear view

a	Power supply
b	Con. A: COM1 RS485, COM3 RS485
c	Con. B: COM1 RS232, COM3 RS232
d	USB Host
e	LAN 1 / LAN 2
f	DIP switch
g	VESA 100 standard holes (M4)

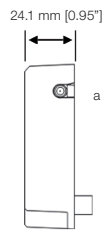
### M02 Accessory - Wi-Fi module



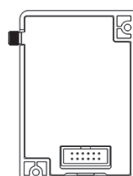
Side view



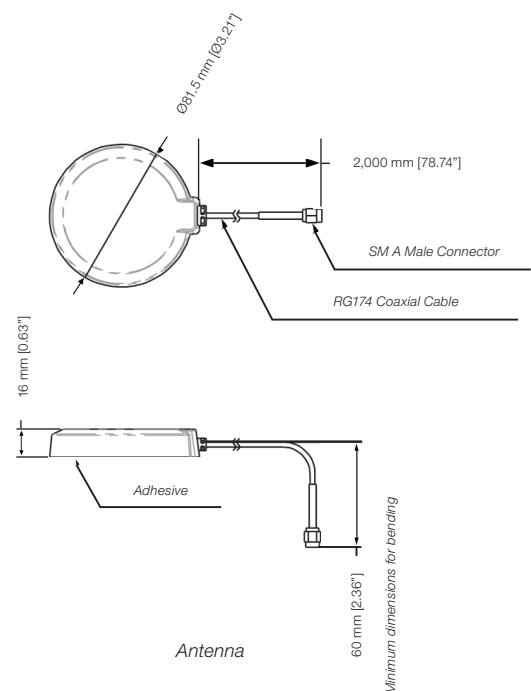
Front view



Side view



Rear view





# Global presence

is essential, as much as understanding your needs.

## Global Presence

With more than 40,000 employees worldwide, WEG is one of the largest electric motors, electronic equipments and systems manufacturers. We are constantly expanding our portfolio of products and services with expertise and market knowledge. We create integrated and customized solutions ranging from innovative products to complete after-sales service.

WEG's know-how guarantees the **Operator Interfaces (HMIs)** are the right choice for your application and business, assuring safety, efficiency and reliability.



**Availability** is having a global support network



**Partnership** is creating solutions that suits your needs



**Competitive edge** is combining technology and innovation



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High performance and reliable products to improve your production process.



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 **1-800-ASK-4WEG**

 **wec-automationsales@weg.net**

 **Duluth, GA - USA**

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The information contained is reference values.