



**Safety Information**

Carefully read and observe the following safety precautions when receiving, inspecting, installing, operating, maintaining and troubleshooting. The following words, **WARNING** and **CAUTION**, are used to mark safety precautions when using the Eaton product. Failure to observe these precautions may void the warranty!

**WARNING**

- Comply with instructions for installation. Otherwise it may cause equipment damage.
- Do not install the product in a location that is outside the stated specification for the device. Failure to observe this caution may result in electric shock, fire or personal injury.

**WARNING**

- Connect the ground terminals to a class 3 ground (ground resistance should not exceed 100Ω). Improper grounding may result in electric shock or fire.

**CAUTION**

- HMi users should use HMiLock to perform editing. Using HMi without HMiLock may result in accidental operation.
- Do not modify wiring during operation. Otherwise it may result in electric shock or personal injury.
- Never use a hard or pointed object to hit or strike the screen as doing this may damage the screen, causing HMi to work abnormally.

**CAUTION**

- Do not touch any internal or exposed parts of the device as electrical shock may result.
- Do not remove operation panel while power is on. Otherwise electrical shock may result.
- Wait at least 10 seconds after power has been removed before touching any terminals or performing any wiring and/or inspection as an electrical charge with hazardous voltages may still remain in the unit even after power has been removed.
- Turn the power off before changing backup battery and check system settings after finishing the change (all data will be cleared after changing the battery).
- Be sure the ventilation holes are not obstructed during operation, or malfunction may result.

**Change Method**

- Remove the terminal block from the HMi before wiring.
- Insert only one wire into one terminal on the terminal block.
- If the wiring is in error, perform the wiring again with proper tools. Never use force to remove the terminals or wires, or malfunction or damage may result.

**Communication Wiring**

- Comply with communication wiring specification for wiring.
- Wiring length should comply with the stated specification for HMi.
- Ensure proper grounding to avoid bad communication quality.

**General Description**

Positioned between the ELC graphics panels and the Pro series of operator interfaces, HMi is the work horse of the industry. All units feature a touchscreen and function keys to suit all environments and applications. They range in screen size and color to fit available space and application needs. All units offer RS-232, RS-485 and RS-422 communications.

- True analog touchscreen
- Real time trending
- Alarming and alarm storage
- Event storage (History)
- USB for data storage
- Add I/O
- Multi-language
- Automatic application from 10 - 4"
- Off-line simulation
- Relative internal data storage
- Trend-based data
- USB for screen data transfer
- USB printer
- Alarm programming
- Recipe storage
- On-line simulation
- 8 level password protection

**Accessories (sold Separately)**

The following accessories could help improve your HMi experience.

- ELCCBPCELCCE — 3 meter cable to connect between the HMi and Eaton Logic Controller (ELC)
- ELCCBPCELCCE — 1 meter cable to connect between the HMi and Eaton Logic Controller (ELC)
- HMCEC000 — 8 In DC, 8 Relay Outputs expansion module
- HMCEC1012 — 16 In DC, 12 Relay Outputs expansion module
- HMCEC1012 Ethernet expansion card; Modbus TCP upload and download
- ELCPS01 — 1 amp 24V DC power supply
- ELCPS02 — 2 amp 24V DC power supply

**1 Unpack and Inspect**

Included with the HMi are:

- Panel Mounting clips (number of clips varies depending on the size of the unit).
- COM power charger for easy connection to the Eaton Logic Controller (ELC).
- 3-pin power 24V DC connector.

**2 Available Communication Ports**

**4" HMi**

- 1. RS-232
- 2. RS-485
- 3. RS-422
- 4. COM1
- 5. COM2
- 6. COM3
- 7. COM4
- 8. COM5
- 9. COM6
- 10. COM7
- 11. COM8

**6" HMi**

- 1. RS-232
- 2. RS-485
- 3. RS-422
- 4. COM1
- 5. COM2
- 6. COM3
- 7. COM4
- 8. COM5
- 9. COM6
- 10. COM7
- 11. COM8

**8" HMi**

- 1. RS-232
- 2. RS-485
- 3. RS-422
- 4. COM1
- 5. COM2
- 6. COM3
- 7. COM4
- 8. COM5
- 9. COM6
- 10. COM7
- 11. COM8

**10" HMi**

- 1. RS-232
- 2. RS-485
- 3. RS-422
- 4. COM1
- 5. COM2
- 6. COM3
- 7. COM4
- 8. COM5
- 9. COM6
- 10. COM7
- 11. COM8

**COM1 and COM2**

Pin	RS-232				RS-485			
	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level
1	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level
2	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level
3	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level
4	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level
5	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level
6	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level
7	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level
8	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level
9	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level
10	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level
11	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level
12	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level	COM1 High Level	COM1 Low Level	COM2 High Level	COM2 Low Level

**COM3 and COM4**

Pin	RS-232				RS-485			
	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level
1	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level
2	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level
3	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level
4	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level
5	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level
6	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level
7	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level
8	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level
9	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level
10	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level
11	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level
12	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level	COM3 High Level	COM3 Low Level	COM4 High Level	COM4 Low Level

**COM5 and COM6**

Pin	RS-232				RS-485			
	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level
1	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level
2	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level
3	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level
4	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level
5	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level
6	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level
7	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level
8	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level
9	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level
10	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level
11	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level
12	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level	COM5 High Level	COM5 Low Level	COM6 High Level	COM6 Low Level

**COM7 and COM8**

Pin	RS-232				RS-485			
	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level
1	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level
2	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level
3	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level
4	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level
5	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level
6	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level
7	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level
8	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level
9	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level
10	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level
11	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level
12	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level	COM7 High Level	COM7 Low Level	COM8 High Level	COM8 Low Level

**COM9 and COM10**

Pin	RS-232				RS-485			
	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level
1	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level
2	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level
3	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level
4	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level
5	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level
6	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level
7	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level
8	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level
9	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level
10	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level
11	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level
12	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level	COM9 High Level	COM9 Low Level	COM10 High Level	COM10 Low Level

**COM11 and COM12**

Pin	RS-232				RS-485			
	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level
1	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level
2	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level
3	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level
4	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level
5	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level
6	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level
7	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level
8	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level
9	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level
10	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level
11	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level
12	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level	COM11 High Level	COM11 Low Level	COM12 High Level	COM12 Low Level

**COM13 and COM14**

Pin	RS-232				RS-485			
	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level
1	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level
2	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level
3	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level
4	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level
5	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level
6	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level
7	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level
8	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level
9	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level
10	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level
11	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level
12	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level	COM13 High Level	COM13 Low Level	COM14 High Level	COM14 Low Level

**COM15 and COM16**

Pin	RS-232				RS-485			
	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level
1	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level
2	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level
3	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level
4	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level
5	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level
6	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level
7	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level	COM15 High Level	COM15 Low Level	COM16 High Level	COM16 Low Level
8	COM15 High Level	COM15 Low Level	COM16 High Level					

