

ACT100 Weight Transmitter



ACT100 Quick Guide

Intended Use

Your weighing transmitter is used for weighing. Use the scale exclusively for this purpose. Any other type of use and operation beyond the limits of technical specifications without written consent from Mettler-Toledo, LLC will invalidate its warranty.

It is essential for the buyer to closely observe the installation information, product and system manuals, operating instructions and other documentation and specifications. MT's warranty and any liability are expressly excluded for damages caused by non-compliance with the applicable manuals.

Documentation

For further details on system configuration and operation, refer to the documents provided on www.mt.com/ind-act100-downloads.

Safety Warnings

Read the Installation section on ACT100 User Guide before operating or servicing this equipment, follow all instructions carefully, and SAVE all documentation for future reference.



WARNINGS

FOR CONTINUED PROTECTION AGAINST SHOCK HAZARD CONNECT TO PROPERLY GROUNDED OUTLET ONLY. DO NOT REMOVE THE GROUND PRONG.

WHEN THIS EQUIPMENT IS INCLUDED AS A COMPONENT PART OF A SYSTEM, THE RESULTING DESIGN MUST BE REVIEWED BY QUALIFIED PERSONNEL WHO ARE FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF ALL COMPONENTS IN THE SYSTEM AND THE POTENTIAL HAZARDS INVOLVED. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

ALL EQUIPMENT MUST BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION INSTRUCTIONS DETAILED IN THE USER MANUAL. INCORRECT OR SUBSTITUTE COMPONENTS AND/OR DEVIATION FROM THESE INSTRUCTIONS CAN IMPAIR THE SAFETY OF THE TRANSMITTER AND COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

BEFORE CONNECTING/DISCONNECTING ANY INTERNAL OR EXTERNAL ELECTRONIC COMPONENTS, LOAD CELLS, HARNESSSES OR INTERCONNECTING WIRING BETWEEN ELECTRONIC EQUIPMENT ALWAYS REMOVE POWER AND WAIT AT LEAST THIRTY (30) SECONDS BEFORE ANY CONNECTIONS OR DISCONNECTIONS ARE MADE. FAILURE TO OBSERVE THESE PRECAUTIONS COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

DO NOT INSTALL, DISCONNECT OR PERFORM ANY SERVICE ON THIS EQUIPMENT BEFORE POWER HAS BEEN SWITCHED OFF AND THE AREA HAS BEEN SECURED AS NON-HAZARDOUS BY PERSONNEL AUTHORIZED TO DO SO BY THE RESPONSIBLE PERSON ON-SITE.

THE ACT100 IS NOT INTRINSICALLY SAFE! DO NOT USE IN HAZARDOUS AREAS CLASSIFIED AS DIVISION 1 AND DIVISION 2, ZONE 0, ZONE 20, ZONE 1, ZONE 2 OR ZONE 21 BECAUSE OF COMBUSTIBLE OR EXPLOSIVE ATMOSPHERES.

Physical Dimensions



Front Panel and Display Features

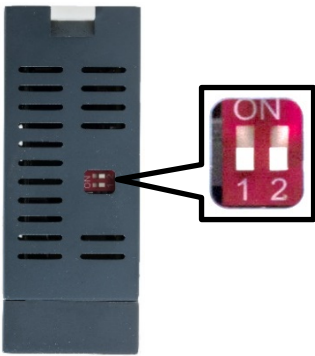


| | |
|--------------------|---|
| Up/Down Arrow Keys | Navigation/Used for data entry |
| Enter | Enter key /Zero scale/Enter Operator menu |
| Left Arrow Key | Switch position/Return |

| | | |
|----------------|--------|--|
| Weight Display | 000000 | Displays weight information |
| ~ | | Motion, weight is currently changing |
| B/G | | Gross Mode |
| KG/G/LB | | Weight Display Unit |
| SCL | | Scales status: On okay, flashing indicates scale error |
| PWR | | Power status: On okay, Off error |
| AO | | Analog Output status: On okay, flashing indicates out-of-range error |
| DEV | | Device status: On okay, flashing contact service |
| NW | | Green: Active , Yellow: Link |

Bottom DIP Switch

| Switch 1 | Switch 2 | Description |
|-----------|----------|--|
| OFF | OFF | Normal state |
| On or OFF | ON | Master Reset of all data during transmitter power-up |
| ON | OFF | Protection mode for important data |



Common Errors Shown on Display

Overcapacity Weight overload. The weight display shows:



Undercapacity Weight underload. The weight display shows:





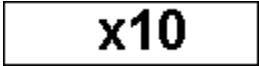
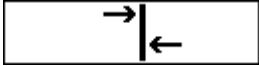




Power-up Zero Fail Out of Power-up Zero range. The weight display shows:

E E E kg or **- E E E** kg
B/G **B/G**

Keypad Operator Menu Structure

The operator setup functionality via keypad is limited. Full configuration is possible via Webserver.

Enter operator menu: Long Press ENTER . Use UP and DOWN keys to switch between menu icons. Use ENTER key to enter the next level menu and LEFT key to return to previous level.

| | | |
|---|--|--|
| Information  | Model ACT100 | |
| | Terminal SN ##### | |
| | S/W Version #.##.#####.## | |
| | IP Address ###.###.###.### | |
| | MAC Address ##.##.##.##.##.## | |
| | www.mt.com/ind-act100-downloads | |
| On/Off X10 resolution  | Switch ON/OFF X10 resolution, leave menu | |
| Set Comparators  | Limit 1..5 | Input value with keypad |
| Test & Adjustment  | Geo | Input Geo Code |
| | Linearity | Input - None, 3 point, 4 point, 5 point |
| | Set Zero | Empty Scale, then Press Enter |
| | Set Span | Add test weight to scale Input test weight value, then press Enter Continue if linearization selected |
| | Step Calibration | Input test weight Add test weight to scale, press Enter Remove test weight Fill load to former level Add test weight to scale, press Enter Finish with Left-Arrow key |
| | CalFree | Perform calibration without test weights |
| Display Error Messages  | List of current error messages | |
| Language  | Select language for HMI display | Input-English, Chinese |
| Setup  | Capacity & Incr. | Input scale unit Input scale capacity Input scale increment |
| | Calibration | Refer to above "Test & Adjustment" |
| | Filter | Limit Frequency – 1-20 Hz |
| | | Weighing mode |
| | Environment | |
| Analog Output | Input source – Display Wt. or Gross Wt. | |

| | | |
|--|-----------|---|
| | | Output Range – current output or voltage output (None, 0~5V, 0~10V, 4~20mA, 0~20mA or 0~24mA) |
| | | Analog Zero Value – ##### kg |
| | | Analog Span Value – ##### kg |
| | | Calibrate Output – Adjust analog signal value for Analog Zero and Span output |
| | Webserver | Webserver: Enable or Disable |
| | | IP Address: ###.###.###.### |
| | | Subnet Mask: ###.###.###.### |

Webserver

The webserver is an easy-to-use tool that is the primary configuration/maintenance tool for ACT100. There is no need to install additional software. It is only necessary to have a web browser (IE, Chrome, Firefox or Safari) on your PC or Laptop. If the ACT100 and your PC are in the same network, the ACT100 webserver can be accessed by inputting the ACT100 IP address (default **192.168.0.2**) in the address bar of web browser.

A Webserver example is shown below. For more details, please refer to the ACT100 User Guide.

The screenshot shows a web browser window with the address bar containing `http://192.168.0.2/`. The browser tab is labeled "ACT100". The page header includes the METTLER TOLEDO logo, the text "ACT100", and a language dropdown menu set to "English".

The main content area is titled "Device Information" and is divided into two sections:

- Transmitter Information**

| | |
|------------------|------------|
| Serial Number | 69961486CW |
| Software Version | 1.00.0000 |
- Service Ethernet Configuration**

| | |
|-----------------|-------------------|
| IP Address | 192.168.000.002 |
| Subnet Mask | 255.255.255.000 |
| MAC Address | 00:10:52:C2:17:DC |
| Default Gateway | 192.168.000.001 |

On the left side, there is a navigation menu with the following items:

- Device Information
- ACT100 Basic Settings
- Analog Output +
- Calibration +
- Scale +
- Application +
- Communication +
- Maintenance +
- Login +

At the bottom of the left sidebar, there is a display area showing:

- 3.22 kg
- B/G
- Zero

The footer of the page contains the copyright notice: "© Mettler Toledo GmbH, 8606 Naenikon, Switzerland All Rights Reserved".

Analog Output

ACT100 provides two types of analog output signals: a current output signal or a voltage output signal. This can be selected via the "Output Type" submenu in the Webserver or local menu. Below is an example of the selection "4~20mA". Please note ACT100 has separate pins for current output (IOUT and IGND) and voltage output (VOUT and VGND).

METTLER TOLEDO ACT100 Language English

| | | |
|--------------------------|-------------------------------|--|
| Device Information | Analog Output Settings | |
| ACT100 Basic Settings | | |
| Analog Output | - | |
| Analog Output Settings | | |
| Analog Output Adjustment | | |
| Calibration | + | |
| Scale | + | |
| Application | + | |
| Communication | + | |
| Maintenance | + | |
| Login | + | |

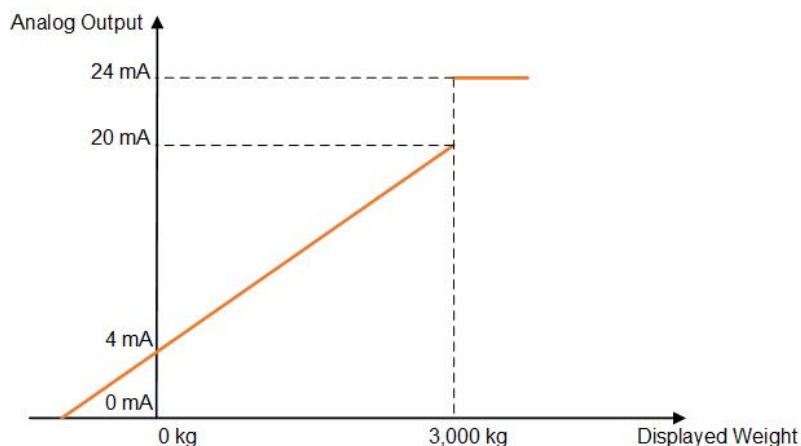
Analog Source:

Output Type:

Analog Zero Value: kg

Analog Span Value: kg

For example, if the Output Type is set as 4~20 mA, Analog Zero Value as 0 kg and Analog Span Value as 3,000 kg, ACT100 will output 4 mA when the scale is empty (0 kg) and 20 mA when 3,000 kg load is on the scale. In this case, when live weight exceeds 3,000 kg, the analog output signal will jump from 20 mA to 24 mA as a warning to the DCS/PLC.



The analog output signal can be calibrated via the Analog Output Adjustment submenu. ACT100 can increase or decrease the analog signal via two levels of adjustment (Coarse and Fine adjustment).

METTLER TOLEDO ACT100 Language English

| | | |
|--------------------------|---------------------------------|--|
| Device Information | Analog Output Adjustment | |
| ACT100 Basic Settings | | |
| Analog Output | - | |
| Analog Output Settings | | |
| Analog Output Adjustment | | |
| Calibration | + | |
| Scale | + | |
| Application | + | |
| Communication | + | |
| Maintenance | + | |
| Login | + | |

Adjust Zero Output

Press "+ +" or "+" to increase Zero Output

Press "- -" or "-" to decrease Zero Output

Press Continue to save and adjust Span Output

Press ESC to Abort

Errors Messages Shown on Display

| Error value | ACT100 Display | Description | Action |
|-------------|---------------------------------|--|---|
| 009 | "Board info. Err" | Hardware production information error | Cycle power; call MT Service if issue persists |
| 010 | "Calib. Block err" | Calibration block data error; block data is lost | Perform master reset Re-calibrate |
| 011 | "Scale block err" | Scale block data error | Perform master reset Perform setup for scale block |
| 012 | "Term. Block err" | Transmitter block data error | Perform master reset Perform setup for transmitter block |
| 013 | "APP. Block err" | Application block data error | Perform master reset Perform setup for application block |
| 014 | "COM. Block err" | Communication block data error | Perform master reset Perform setup for communication block |
| 015 | "Maint. Block err" | Statistics block data error | Perform master reset Perform setup for maintenance block |
| 016 | "Analog system A/D fail" | Lost analog signal; abnormal functioning of scale | Call MT Service |
| 018 | "Zero failed Motion" | Zero failed due to scale is in motion | Wait scale to be stable |
| 019 | "Zero failed Net mode" | Zero failed due to scale is in Net mode | Attempt to Zero after Clear operation is performed |
| 020 | "Zero failed/Out of range" | Weight out of zero range | Unload scale and perform Zero again |
| 021 | "Zero failed Zero disabled" | Zero attempted when function disabled in Setup menu | Enable Zero function in Setup menu |
| 022 | "Tare failed Motion" | Tare failed due to scale is in motion | Wait scale to be stable |
| 029 | "Tare failed Zero not captured" | Tare failed due to Power-up Zero is not captured | Capture the Power-up Zero or disable Power-up Zero before Tare |
| 030 | "Tare Failed, over capacity" | Tare failed due to scale being over capacity | Unload weight on scale until overcapacity is cleared and perform Tare again |
| 031 | "Tare failed Negative value" | Tare failed due to current gross weight is negative | Adjust the weight on scale to make gross weight positive |
| 035 | "Analog saturation" | A/D converter in overload | Check the input signal(should be between 0mV and 20mV)or call MT Service |
| 036 | "Factory zero not done" | Factory Zero calibration not performed | Call MT Service |
| 037 | "Factory span not done" | Factory Span calibration not performed | Call MT Service |
| 050 | "LC Connection Error" | Lost connection between ACT100 and LC | Check the LC and connection cables |

Cleaning the Transmitter

Use a soft, clean cloth and mild glass cleaner. Do not spray cleaner directly onto transmitter. **Do not use** industrial solvents such as acetone.

Disposal of Transmitter / WEEE Information



In conformance with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) this device may not be disposed of in domestic waste. This also applies to countries outside the EU, per their specific requirements.

Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment.

If you have any questions, please contact the responsible authority or the distributor from which you purchased this device.

Should this device be passed on to other parties (for private or professional use), the content of this regulation must also be related.

Thank you for your contribution to environmental protection.

METTLER TOLEDO Service

To protect your METTLER TOLEDO product's future:

Congratulations on choosing the quality and precision of METTLER TOLEDO. Proper use according to these instructions and regular calibration and maintenance by our factory-trained service team ensure dependable and accurate operation, protecting your investment. Contact us about a METTLER TOLEDO service agreement tailored to your needs and budget.

We invite you to register your product at www.mt.com/productregistration so we can contact you about enhancements, updates and important notifications concerning your product.

www.mt.com

For more information

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