The METTLER TOLEDO 4 Series

Certifiable and GMP-compliant

Quality from milligrams to tons

Intelligent precision
from milligrams to tons

- **A single operating principle**
  from milligrams to tons
- **A variety of connection options**
  from serial interface to network integration
- **A variety of applications**
  from simple weighing to multi-functional database applications
- **Rugged industrial quality**

METTLER TOLEDO

Perfect weighing: The basic level

Areas of application

- **Incoming and outgoing goods**
- **Quality control**
- **Industrial production**
- **Post and logistics**
- **Pharmaceutical and cosmetics industries**
- **Food industry**

Easy, effective and efficient!
The 4 Series basic level is the ideal solution for applications in which simple weighing is key. Optimized for quick and easy weighing applications, six clearly structured large-format keys with tactile feedback combine with the easy-to-read 7-segment backlit LC display for clear and fast results on a device which couldn't be easier to use.

You can count on it: The count level

Areas of application

- **Incoming and outgoing goods**
- **Quality control**
- **Industrial production**
- **Metalworking and electronics industries**
- **Pharmaceutical and cosmetics industries**

Every item counts!
METTLER TOLEDO 4 Series count level has been designed for real industrial counting. 10 function keys designed specifically for reliable, easy and fast counting make counting even small items child's play. The analog reference scale interface, which is available as an option, can be used to connect an analog weighing platform in order to create a cost-effective reference scale counting system.

More than just counting: The count+ level

Areas of application

- **Incoming and outgoing goods**
- **Quality control**
- **Industrial production**
- **Logistics**
- **Metalworking and electronics industries**
- **Pharmaceutical and cosmetics industries**
- **Rental scales**

Simple and easy to use
Counting, totalizing and checking – METTLER TOLEDO 4 Series count+ level has it all in one device. The numeric keypad supports the simple direct input and storage of tare values, item weights, IDs and target values. Simple and easy to use, the 4 Series count+ level has a solution for every requirement.

Stay flexible with the smart+ level

- **Incoming/outgoing goods**
- **Quality control**
- **Industrial production**
- **Metalworking and electronics industries**
- **Pharmaceutical and cosmetics industries**
- **Post and logistics**
- **Casinos/banks**
- **Rental scales**

smart+ for total flexibility

However diverse and complex your everyday tasks might be, you will always have the ideal scale with the 4 Series smart+ level.

- High-resolution active dot matrix display: Bigweight® display in plain text to ensure clarity at all times.
- User-definable function keys and operating sequences to make your everyday operations easier and improve the quality of your weighing processes.
- Customer-specific unit: Simply set your own unit (e.g. m^3, liter, etc.).
- Efficient inventory management: Article database for more than 1,500 data records, which can be individually defined and entered or called up via a barcode or using the keyboard.
- Create your own labels. Five user-definable templates are provided to meet every requirement and are compatible for use on any type of printer.
- The key to high quality: Good parts can be calculated easily using the upstream check function linked to the totalization function.
- Maintain an overview: The host function means that you still access just one central database, regardless of whether this is stored on your PC or in another smart+ level.

It's all under control: The SmartManager*

Maintain an overview at all times with the SmartManager application and configuration software for the smart+ level

- Standard PC (Windows 2000 and Windows XP compatible) interface for **user-friendly and efficient data entry.**
- Online interaction with your smart+ level(s): SmartManager is your central database.
- More than 10,000 data records – enough for virtually all applications – can be **administered and processed easily.**
- **Import and export functions** from/to MS Excel for post-processing or integration into existing databases.
- It's easy to configure and set up your smart+ level at home or in the office. All settings that can be made on the scale can also be made in comfort on a PC via a simple selection menu.
- Simply make the settings once then transfer them to all your smart+ levels – saving you time and increasing reliability.
- **Define the optimum scale configuration for your individual requirements.** Optimize your smart+ for your specific application.

*Available optional software for smart+ level
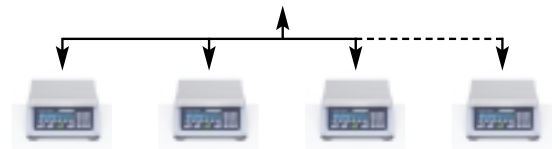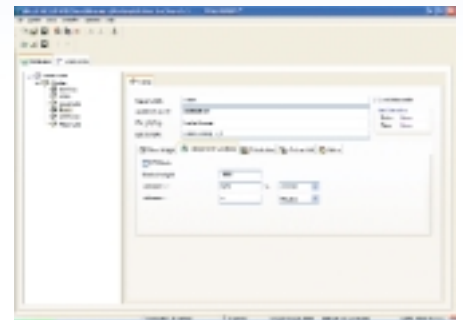
METTLER TOLEDO 4 Series: Intelligent precision from milligrams to tons

Product features and benefits

- **Rugged industrial quality –** Die-cast aluminium housing combined with adherence to the most exacting EMC standards (acc. to EN61326-1 Class B, EN61000-3-2, EB61326-1 and the electrical safety requirements of EN61010-1) ensure long service life and fail safety during day-to-day production, thereby safeguarding investments.
- **A single operating principle from milligrams to tons –** Reduced training time, fewer application errors and therefore reduced costs.
- **A variety of connection options: From serial interface to network –** The numerous connection options (serial, network, USB, digital I/O, etc.) support the setting up of weighing systems, with the connection of analog weighing platforms and even the integration of scales into networks.

- **A variety of applications: From simple weighing to multi-functional database applications –** The ideal product for every application, a solution for every weighing problem.
- **Save time and money with certifiable precision:** Choose rugged strain gauge weighing cells or high-precision MonoBloc® technology.
- **Available for mains or battery operation –** You can choose to power the scale via the mains, a built-in battery or an external power supply.
- **GMP-certified scale series –** The scales are suitable for GMP (Good Manufacturing Practice) compliance.

Overview of functions

Functions	basic				count			count+			smart+		
	BBA422	BBA425	BBK422	IND425	BBA432	BBK432	IND435	BBA442	BBK442	IND445	BBA462	BBK462	IND465
Simple weighing		●				●			●			●	
Dynamic weighing		●				●			●			●	
Zeroing		●				●			●			●	
Taring		●				●			●			●	
Transfer		●				●			●			●	
User prompting		–				●			●			●	
Counting		–				●			●			●	
Accumulating		–				–			●			●	
Checking		–				–			●			●	
Dosing and counting to target value		–				–			●			●	
Freely configurable operating sequences		–				–			–			●	
Freely definable units		–				–			–			●	
Label printing		–				–			–			●	
Memory space for tare/APW/target values		–				–			●			●	
Internal article database		–				–			–			●	
Date/time		–				–			●			●	
Numeric keypad		–				–			●			–	
Alphanumeric keypad		–				–			–			●	
Interfaces	1 RS232				1 RS232			1 RS232			3 RS232 + 1 PS/2		
RS232 (add-on) (optional)		○				○			○			–	
RS485 (optional)		○				○			○			○	
Ethernet (optional)	○	–	○	○		○			○			○	
USB (slave) (optional)		○				○			○			○	
Digital I/O (optional)		○				○			○			○	
Analog reference scale (optional)		–				○			○			○	

BBA4…: Reliable measurement accuracy for any location

Specifications

Conformance:
Certifiable quality/ex works-certfied models to NTEP, Class III 1 x 6,000 d

Type of protection:
- BBA422/BBA432/BBA442/BBA462 tested and approved to IP43 (EN60529)
- BBA425 protected against dust and water jets to IP65 (EN60529)

Design:
Die-cast aluminum housing with chrome-nickel steel load plate

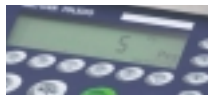**Operating temperature:**
14°F to 104°F (–10°C to 40°C) / 15 – 85% humidity
Maximum operating altitude 13,120ft (4,000m) above sea level

Display:
BBA422; BBA425:	Backlit 7-digit/7-segment LC display
BBA432; BBA442:	Height: 0.87in (20mm) (BBA422, BBA425) or 1.38in (35mm) (BBA432, BBA442)
BBA462:	Backlit active dot matrix display (235 x 64 pixels); Height: 1.38in (35mm)

Keypad:
Large, clearly structured keypad with tactile feedback

BBA422/BBA425:	6 keys: ON/OFF; Zero; Tare; Transfer; Change unit; Clear
BBA432:	10 keys: ON/OFF; Zero; Tare; Transfer; Clear; Info key; Change unit; Toggle scale 1 and scale 2; Choose reference size; Display number of pieces
BBA442:	25 keys: ON/OFF; Zero; Tare; Transfer; Info; Toggle scale 1 and scale 2; Change unit; Average piece weight; Choose reference size; Display number of pieces; Memory; ID; +/–; Clear; Numeric keypad

BBA462:	25 keys: ON/OFF; Zero; Tare; Transfer; 6 freely-definable function keys (soft keys); Call database; Toggle: Upper/lower case; Clear; Alphanumeric keypad
Units:	g, kg, t, oz, lb

Power supply:
- Country-specific power supply: 240V, 50Hz, 70mA / 230V, 50Hz, 70mA / 120V, 60Hz, 90mA / 100V, 50/60Hz, 90mA
- Battery operation (nickel-metal hybrid battery): Connection via AC adapter: 90 – 264V, 47 – 63Hz, 300mA; Incoming power supply on scale: 24V, 1.3A

Interfaces:
BBA422:	1 RS232 (standard), additional RS232, RS485, USB, Ethernet, digital I/O interface options
BBA425:	1 RS232 (standard), additional RS232, RS485, USB, digital I/O interface options
BBA432/BBA442:	As BBA422, plus optional analog reference scale interface
BBA462:	3 RS232, 1 PS/2 (standard), optional: 2 RS232 + RS485/Ethernet/USB/analog/digital I/O + PS/2, 1 RS232 + RS485/Ethernet/USB/digital I/O + analog + PS/2

Technical data

Model	BBA422/BBA432/BBA442/BBA462					BBA425				
	–3P..	–6P..	–15S..	–35S..	–60S..	–3PM	–6PM	–15SM	–35SM	–60SM
Dimensions	10.43" x 13.19" x 3.94" (265mm x 335mm x 100mm)		14.17" x 14.56" x 4.53" (360mm x 370mm x 115mm)			10.43" x 13.19" x 3.94" (256mm x 335mm x 100mm)		14.17" x 14.56" x 4.53" (360mm x 370mm x 115mm)		
Load plate	7.87" x 9.45" (200mm x 240mm)		9.45" x 13.78" (240mm x 350mm)			7.87" x 9.45" (200mm x 240mm)		9.45" x 13.78" (240mm x 350mm)		
Capacity	6lb (3kg)	12lb (6kg)	30lb (15kg)	70lb (35kg)	120lb (60kg)	6lb (3kg)	12lb (6kg)	30lb (15kg)	70lb (35kg)	120lb (60kg)
Readability (standard)	0.0005lb (0.0002kg)	0.001lb (0.0005kg)	0.002lb (0.001kg)	0.005lb (0.002kg)	0.01lb (0.005kg)	0.0005lb (0.0002kg)	0.001lb (0.0005kg)	0.002lb (0.001kg)	0.005lb 0.002kg	0.01lb 0.005kg
Verification scale value	0.001lb (0.0005kg)	0.002lb (0.001kg)	0.005lb (0.002kg)	0.01lb (0.005kg)	0.02lb (0.01kg)	0.001lb (0.0005kg)	0.002lb (0.001kg)	0.005lb (0.002kg)	0.01lb (0.005kg)	0.02lb (0.01kg)
Max. readability (not certifiable)	0.0001lb (0.00005kg)	0.0002lb (0.0001kg)	0.0005lb (0.0002kg)	0.001lb (0.0005kg)	0.002lb (0.001kg)	0.0001lb (0.00005kg)	0.0002lb (0.0001kg)	0.0005lb (0.0002kg)	0.001lb (0.0005kg)	0.002lb (0.001kg)
Typical Repeatability (s)	0.0002lb (0.0001kg)	0.001lb (0.0005kg)	0.002lb (0.001kg)	0.002lb (0.001kg)	0.002lb (0.001kg)	0.0005lb (0.0002kg)	0.001lb (0.0005kg)	0.002lb (0.001kg)	0.002lb (0.001kg)	0.005lb (0.002kg)
Min. permissible item weight*	0.00002lb (0.00001kg)	0.00004lb (0.00002kg)	0.0001lb (0.00005kg)	0.0002lb (0.0001kg)	0.0004lb (0.0002kg)	–	–	–	–	–
Type of protection	IP43**					IP65				
Stabilization time (s) (seconds)***	~ 1.0									

* The values indicated represent the minimum permissible item weights. In order to count with maximum possible accuracy, we recommend that the item weight is set no lower than 1d of the scale (standard) and/or that the optimization function integrated as standard or a reference scale is used (not for the BBA422/ BBA425).

** Not with built-in Ethernet interface.

*** Depends on selected filter setting.

BBK4…: MonoBloc® technology – Maximum precision for more complex requirements

Conformance:
Certifiable to NTEP, Class II with up to 35,000 d

Type of protection:
BBK422/BBK432/BBK442/BBK462 tested and approved to IP43 (EN60529)

Design:
Die-cast aluminum housing with chrome-nickel steel load plate

Operating temperature:
50°F to 86°F (+10°C to +30°C) /15 to 85% humidity

Display:

BBK422; BBK432;	Backlit 7-digit/7-segment LC display
BBK442:	Height: 0.87 in (20 mm) (BBK422) or 1.38 in (35 mm) (BBK432, BBK442)
BBK462:	Backlit active dot matrix display (235 x 64 pixels); Height: 1.38 in (35 mm)
Keypad:	Large, clearly structured keypad with tactile feedback
BBK422:	6 keys: ON/OFF; Zero; Tare; Transfer; Change unit; Clear
BBK432:	10 keys: ON/OFF; Zero; Tare; Transfer; Clear; Info key; Change unit; Toggle scale 1 and scale 2; Choose reference size; Display number of pieces
BBK442:	25 keys: ON/OFF; Zero; Tare; Transfer; Info; Toggle scale 1 and scale 2; Change unit; Average piece weight; Choose reference size; Display number of pieces; Memory; ID; +/−; Clear; Numeric keypad
BBK462:	25 keys: ON/OFF; Zero; Tare; Transfer; 6 freely-definable function keys (soft keys); Call database; Toggle: Upper/lower case; Clear; Alphanumeric keypad
Units:	g, kg, t, oz, lb

Power supply:
- Country-specific power supply:
  240 V, 50 Hz, 70 mA / 230V, 50 Hz, 70 mA /
  120 V, 60 Hz, 90 mA / 100V, 50/60 Hz, 90 mA
- Battery operation (nickel-metal hybrid battery):
  Connection via AC adapter: 90 – 264 V, 47 – 63 Hz, 300 mA;
  Incoming power supply on scale: 24 V, 1.3 A

Interfaces:

BBK422:	1 RS232 (standard), additional RS232, RS485, USB, Ethernet, digital I/O interface options
BBK432/BBK442:	As BBK422, additional optional analog reference scale interface
BBK462:	3 RS232, 1 PS/2 (standard), optional: 2 RS232 + RS485/ Ethernet/USB/analog/digital I/O + PS/2, 1 RS232 + RS485/ Ethernet/USB/digital I/O + analog + PS/2

	BBK422/BBK432/BBK442/BBK462			
Model	– 3P..	– 6P..	– 15S..	– 35S..
Dimensions	10.43" x 13.19" x 3.94" (265 mm x 335 mm x 100mm)		14.17" x 14.56" x 4.53" (360 mm x 370 mm x 115 mm)	
Load plate	6.50" x 6.50" (165 mm x 165 mm)	7.87" x 9.45" (200 mm x 240 mm)	9.45" x 13.78" (240 mm x 350 mm)	
Capacity	6 lb (3 kg)	12 lb (6 kg)	30 lb (15 kg)	70 lb (35 kg)
Readability (standard)	0.00002 lb (0.00001 kg)	0.00005 lb (0.00002kg)	0.0001 lb (0.00005 kg)	0.0002 lb (0.0001 kg)
Verification scale value	0.0002 lb (0.0001 kg)	0.0005 lb (0.0002kg)	0.001 lb (0.0005 kg)	0.002 lb (0.001 kg)
Max. readability (not certifiable)	0.000002 lb (0.000001 kg)	0.000005 lb (0.000002kg)	0.00001 lb (0.000005kg)	0.00002 lb (0.00001 kg)
Typical repeatability (s)	0.0000 16 lb (0.000008kg)	0.00016 lb (0.00008kg)	0.00016 lb (0.00008kg)	0.00016 lb (0.00008kg)
Min. permissible item weight (g)*	0.000004 lb (0.000002 kg)	0.000008 lb (0.000004 kg)	0.00002 lb (0.00001 kg)	0.00004 lb (0.00002 kg)
Type of protection**	IP43			
Stabilization time (s) (seconds) ***	~ 1.0			

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* The values indicated represent the minimum permissible item weights. In order to count with maximum possible accuracy, we recommend that the item weight is set no lower than 1d of the scale (standard) and/or that the optimization function integrated as standard or a reference scale is used (not for the BBK422).

** Not with built-in Ethernet interface.
*** Depends on selected filter setting.

IND4..: Flexibility is king

Conformance:
Certifiable to NTEP, Class III: max. 1x10,000d

Type of protection:
IND425/IND435/IND445/IND465 tested and approved to IP65 (EN60529)

Design:
Die-cast aluminum housing with 9 Pin-D-Sub plug for connection to any analog weighing platform

Operating temperature:
14°F to 104°F (−10°C to 40°C)/15−85% humidity
Maximum operating altitude 13,120ft (4,000 m) above sea level

Display:
IND425; IND435; IND445: Backlit 7-digit/7-segment LC display; Height: 0.87 in (20 mm) (IND425); 1.38 in (35 mm) (IND435; IND445)
IND465: Backlit active dot matrix display (235 x 64 pixels); Height: 1.38 in (35 mm)

Keypad:
Large, clearly structured keypad with tactile feedback
IND425: 6 keys: ON/OFF; Zero; Tare; Transfer; Change unit; Clear
IND435: 10 keys: ON/OFF; Zero; Tare; Transfer; Clear; Info key; Change unit; Toggle scale 1 and scale 2; Choose reference size; Display number of pieces
IND445: 25 keys: ON/OFF; Zero; Tare; Transfer; Info; Toggle scale 1 and scale 2; Change unit; Average piece weight; Choose reference size; Display number of pieces; Memory; ID; +/−; Clear; Numeric keypad

IND465: 25 keys: ON/OFF; Zero; Tare; Transfer; 6 freely-definable function keys (soft keys); Call database; Toggle: Upper/lower case; Clear; Alphanumeric keypad

Units: g, kg, t, oz, lb

Power supply:
• Country-specific power supply:
240V, 50Hz, 70mA /230V, 50Hz, 70mA / 120V, 60Hz, 90mA /100V, 50/60Hz, 90mA
• Battery operation (nickel-metal hybrid battery):
Connection via AC adapter: 90 − 264V, 47− 63Hz, 300mA; Incoming power supply on scale: 24V, 1.3A

Interfaces:
IND425: (standard), additional RS232, RS485, USB, Ethernet, digital I/O interface options
IND435/IND445: As IND425, additional optional analog reference scale interface
IND465: 3 RS232, 1PS/2 (standard), optional: 2 RS232 + RS485/ Ethernet/USB/analog/digital I/O + PS/2, 1 RS232 + RS485/ Ethernet/USB/digital I/O + analog + PS/2

Can be connected to any METTLER TOLEDO analog scale base or analog floor scale!

Model	IND425/IND435/IND445/IND465
Dimensions	10.9" x 7.9" x 2.8" (277mm x 200mm x 71mm)
Dimensions of option box	10.9" x 7.9" x 1.4" (277mm x 200mm x 36mm)
Resolution (not certifiable)	300,000d
Resolution (certifiable)	1 x 10,000 d, NTEP
Linearization	Can be set to 3-point or 5-point
Linearity (s)	+/−0.01% of def. max. capacity
A/D converter for input signal (certifiable)	1.3µV/e
Output signal	2mV/V
Power supply, connected weighing cell	8.2V
Impedance	80−1,000 Ohm
Type of protection*	IP65

* Not with built-in Ethernet interface

Dimensions

BBA4../BBK4..
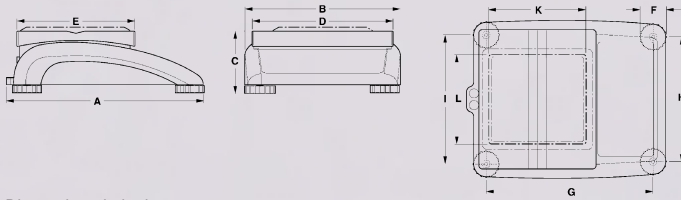
Dimensions in inches

	A	B	C	D	E	F	G	H	I	K	L
P	13.19'' (335mm)	10.43'' (265mm)	3.94'' (100mm)	9.45'' (240mm)	7.87'' (200mm)	1.81'' (46mm)	10.87'' (276mm)	8.19'' (208mm)	8.50' (216mm)	6.5'' (165mm)	6.5'' (165mm)
S	14.56'' (370mm)	14.17'' (360mm)	4.53' (115mm)	13.78'' (350mm)	9.45'' (240mm)	2.05'' (52mm)	12.20'' (311mm)	11.97'' (305mm)	12.20'' (311mm)	-	-

IND4..

Dimensions in inches

A	B	C	D	E
2.80" (71 mm)	1.42" (36 mm)	7.87" (200 mm)	10.91" (277 mm)	1.93" (49 mm)

Accessories:

Wall mount for IND4..
PVC protective cover (for BBA4. ./BBK4. .)
PVC protective cover (for IND4. .)
Mettler Toledo 8857 Printer

Mettler Toledo 8863 printer
Mettler Toledo 8867 printer
Auxiliary display
Barcode reader (PS/2)

Miniature keyboard (PS/2)
Various connecting cables

Would you like to find out more about the 4 Series?

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