Compact Scales & Terminals

Industrial Compact Scales and Terminals: BBA4x2, BBA4x5, BBK4x2 and IND4x5

- Rugged industrial Design
- A Variety of Applications – from Simple Weighing to multi-functional Database Applications
- One single Operating Principle from Milligrams to Tons
- Numerous Connection Options – from Serial Interface to Network Integration

First Class Weighing Instruments
One Philosophy from Milligrams to Tons

METTLER TOLEDO

Perfect Weighing: The "basic" Level

Easy, effective and efficient: BBA422, BBA425, BBK422 and IND425!
The "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

Every item counts: BBA432, BBK432 and IND435!
The "count" level has been designed for real industrial counting.
10 function keys designed specifically for reliable, easy and
fast counting make counting of even small items child's play.
The analogue reference scale interface, which is available as
an option, can be used to connect an analogue weighing platform in
order to create a cost-effective reference scale counting system.

More than just Counting: The "count+" Level

Simple and easy to use: BBA442, BBK442 and IND445!
Counting, totalizing and checking – The "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.

	basic	count	count+	smart+
Areas of application				
Industrial production	•	•	•	•
Incoming/outgoing goods	•	•	•	•
Quality control	•	•	•	•
Rental scale	–	–	•	•
Industries				
Metalworking and electronics industries	•	•	•	•
Post and logistics	•	–	–	•
Plastics industries	•	•	•	•
Banks and casinos	–	–	–	•
Catering	•	–	–	–

Stay flexible with the "smart+" Level

"smart+" for total flexibility: BBA462, BBK462 and IND465

However diverse and complex your everyday tasks might be, you will always have the ideal scale with the "smart+" level.
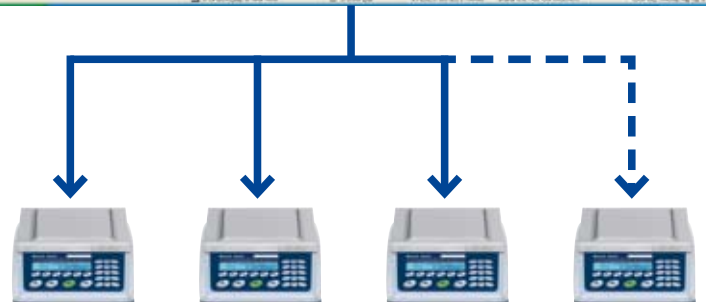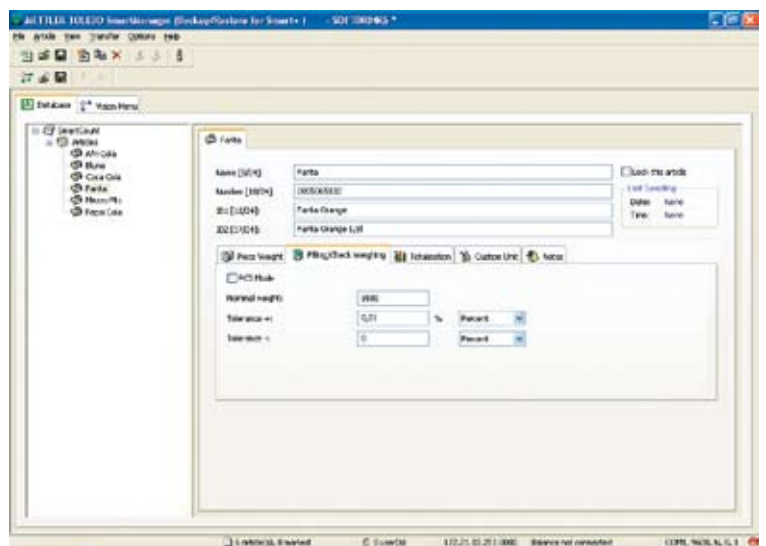
- High-resolution active dot matrix display: BIGWEIGHT® display in plain text to ensure clarity at all times.
- User-definable function keys and operating sequences to make your everyday operations easier and improve the quality of your weighing processes.
- Customer-specific unit: Simply set your own unit (e.g. m, litre, etc.).
- Efficient inventory management: Article database for more than 1500 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.

Everything is under control: The SmartManager

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

- Standard PC 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.

Intelligent Precision
from Milligrams to Tons

- **Rugged industrial quality** – Die-cast aluminium housing (ALSi10Mg) combined with adherence to the most exacting EMC standards (acc. to EN 61000-6-2) and the electrical safety requirements (EN 61010-1) 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 analogue weighing platforms and even the integration of scales into networks.
- **A variety of applications: From simple weighing to multifunctional database applications** – The ideal product for every application, a solution for every weighing problem.
- **MinWeigh® as standard, i.e. reliability for your weighing data** – The minimum weight or a warning that it has been undershot is displayed on the scale screen. A METTLER TOLEDO service engineer will determine the measurement uncertainty of the scale on site in accordance with DKD guidelines and calculate a minimum weight for the scale based on local conditions.
- **Save time and money with ex-works-certified precision: Certified MonoBloc® scale with internal adjustment weights and temperature controlled adjusting functionality or certified scales with strain gauge weighing cells** – Choose rugged strain gauge weighing cells or high-precision MonoBloc® technology. Preassembled certified scales can be used immediately. There is no need for a special visit by a weights and measures official or service engineer for the second stage of official certification.
- **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) working.

Functions	basic				count			count+			smart+		
	BBA442	BBA425	BBK422	IND425	BBA432	BBK432	IND435	BBA442	BBK442	IND445	BBA462	BBK62	IND465
Simple weighing		•				•			•			•	
Dynamic weighing		•				•			•			•	
Zeroing		•				•			•			•	
Taring		•				•			•			•	
Transfer		•				•			•			•	
Counting		–				•			•			•	
Totalizing		–				–			•			•	
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		–				–			•			•	
Internal alibi memory 150 000 weight (opt.)		–				–			–			•	
Interfaces (standard)		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 with 2 definable set points (opt.)		•				•			•			•	
Analogue second scale (opt.)		–				•			•			•	

BBA4..: Reliable Measurement
Accuracy for any Location

Conformity:
Certifiable quality/ex-works-certified model to OIML, Class III with 2× 3000e or 1× 6000e plus other non-certifiable resolutions (15 000d/30 000d) as options

Low voltage: EN 61010-1

EMC Directive: EN 61326-1
EN 61000-6-1/0.5 µV/e (3 V/m)
EN 61000-6-2/1.3 µV/e (10 V/m)

Non automatic weighing instrument directive:
EN 45501
EC Type approval T5508

Design:
Die-cast aluminium housing (ALSi10Mg) with chrome-nickel steel load plate (AISI 304, 1.4301)

Display:
BBA425 BBA432; BBA442:
Backlit 7-digit/7-segment LC display; Height of characters: 16 mm (BBA425) or 21 mm (BBA432, BBA442)

BBA462:
Backlit active dot matrix display (235×64 pixels); Height of characters: max. 21 mm

Keypad:
Large, clearly-structured keypad with tactile feedback
BBA422/BBA425:   6 keys: ON/OFF; Zero; Tare; Transfer; Change unit; Clear tare
BBA432:   10 keys: ON/OFF; Zero; Tare; Transfer; Toggle gross/net; High resolution; Toggle scale 1 and scale 2; Toggle count and weigh mode; Ten's reference, Variable reference
BBA442:   25 keys: ON/OFF; Zero; Tare; Transfer; Info; Toggle scale 1 and scale 2; Toggle count and weigh mode; Display item weight; Ten's reference; Variable reference; Memory; ID; +/-; Delete; Numeric keypad
BBA462:   25 keys: ON/OFF; Zero; Tare; Transfer; 6 freely-definable function keys (soft keys); Call database; Toggle: Upper/lower case; Delete; Alphanumeric keypad

Units: g, kg, t, oz, lb

Power supply:
• Main connections
  – country-specific power supply: 240 V, 50 Hz, 70 mA/230 V, 50 Hz, 70 mA/120 V, 60 Hz, 90 mA/100 V, 50/60 Hz, 90 mA

Battery operation
• universal charger 90–264 V, 47–63 Hz, 300 mA
• NiMH Battery, 2800 mAh charging with max. 24 V = 1,3 A

External power supply
• BBA422, BBA425, BBA432 and BBA442: 12–20 V DC, max. 500 mA
• BBA462: 17–24 V DC, max. 500 mA

Model	BBA422/BBA432/BBA442/BBA462					BBA425				
	-3 SM	-6 SM	-15 LA	-35 LA	-60 LA	-3 SM	-6 SM	-15 LA	-35 LA	-60 LA
Dimensions (mm)	265 × 335 × 100		360 × 370 × 115			265 × 335 × 100		360 × 370 × 115		
Load plate (mm)	200 × 240		240 × 350			200 × 240		240 × 350		
Capacity (kg)	3	6	15	35	60	3	6	15	35	60
Weighing range 1/2 (kg)	1.5/3	3/6	6/15	15/35	30/60	1.5/3	3/6	6/15	15/35	30/60
Readability/Verification scale interval 1/2 (g)	0.5/1	1/2	2/5	5/10	10/20	0.5/1	1/2	2/5	5/10	10/20
Max. readability (not certifiable) (g)	0.05	0.1	0.2	0.5	1	0.05	0.1	0.2	0.5	1
Repeatability (s) (g)	0.05	0.1	0.2	0.5	1	0.15	0.2	0.2	0.5	1
Linearity (s) (g)	0.05	0.1	0.2	0.5	1	0.15	0.2	0.2	0.5	1
Min. permissible item weight (g)*	0.010	0.020	0.050	0.117	0.200	–	–	–	–	–
Type of protection (EN 60529)	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

Conformity:
Certifiable quality/ex-works-certified model with internal adjustment weight to OIML, Class II with up to 61 000e or 610 000d

Low voltage: EN 61010-1

EMC Directive: EN 61326-1
EN 61000-6-1/0.5 µV/e (3 V/m)
EN 61000-6-2/1.3 µV/e (10 V/m)

Non automatic weighing instrument directive:
EN 45501
EC Type approval T5627

Design:
Die-cast aluminium housing (ALSi10Mg) with chrome-nickel steel load plate (AISI 304, 1.4301)

Display:
BBK422; BBK432; BBK442:
Backlit 7-digit/7-segment LC display; Height of characters: 16 mm (BBK422) or 21 mm (BBK432, BBK442)

BBK462:
Backlit active dot matrix display (235×64 pixels); Height of characters: max. 21 mm

Keypad:
Large, clearly-structured keypad with tactile feedback
BBK422: 6 keys: ON/OFF; Zero; Tare; Transfer; Change unit; Clear tare
BBK432: 10 keys: ON/OFF; Zero; Tare; Transfer; Toggle gross/net; High resolution; Toggle scale 1 and scale 2; Toggle count and weigh mode; Ten's reference, Variable reference
BBK442: 25 keys: ON/OFF; Zero; Tare; Transfer; Info; Toggle scale 1 and scale 2; Toggle count and weigh mode; Display item weight; Ten's reference; Variable reference; Memory; ID; +/–; Delete; Numeric keypad
BBK462: 25 keys: ON/OFF; Zero; Tare; Transfer; 6 freely-definable function keys (soft keys); Call database; Toggle: Upper/lower case; Delete; Alphanumeric keypad

Units: g, kg, t, oz, lb

Power supply:
• Main connections
  – country-specific power supply:240 V, 50 Hz, 70 mA/230 V, 50 Hz, 70 mA/120 V, 60 Hz, 90 mA/100 V, 50/60 Hz, 90 mA

Battery operation
• universal charger 90–264 V, 47–63 Hz, 300 mA
• NiMH Battery, 2800 mAh charging with max. 24 V = 1,3 A

External power supply
• BBK422, BBK432 and BBK442: 12–20 V DC, max. 500 mA
• BBK462: 17–24 V DC, max. 500 mA

Model		BBK422/BBK432/BBK442/BBK462									
	-0.6DXXS1	-3 DXS	-3 DXS	-6 DXS	-6 XS	-6 DSM	-6 SM	-15 DLA	-15 LA	-35 DLA	-35 LA
Dimensions (mm)	265 × 335 × 100							360 × 370 × 115			
Load plate (mm)	Ø 100	165 × 165				200 × 240		240 × 350			
Capacity (kg)	120/610	600/3100	3100	1200/6100	6100	1200/6100	6100	3500/15100	15100	7000/35100	35100
Readability (standard) (g)	0.001/0.01	0.01/0.1	0.01	0.01/0.1	0.01	0.1/1	0.2	0.1/1	0.5	0.1/1	0.1
Verification scale value (g)	0.01	0.1	0.1	0.1	0.1	1	0.2	1	0.5	1	1
Max. readability (not certifiable) (g)	0.001	0.001	0.001	0.001	0.001	0.01	0.01	0.01	0.01	0.01	0.01
Repeatability (s) (g)	0.0009	0.008	0.008	0.008	0.008	0.08	0.08	0.08	0.08	0.08	0.08
Linearity (s) (g)	0.002	0.005	0.005	0.01	0.01	0.02	0.02	0.03	0.03	0.05	0.05
Min. permissible item weight (g)*	0.00041	0.0020	0.0020	0.0040	0.0040	0.0040	0.0040	0.010	0.010	0.023	0.023
Type of protection	IP43**										
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 BBK422).

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

IND4..: For quick and easy Applications –
Flexibility is King

Conformity:
Certifiable to OIML, Class III: max. 1× 7500e, 2× 5000e

Low voltage: EN 61010-1

EMC Directive: EN 61326-1
EN 61000-3-2
EN 61000-6-1/0.5 µV/e (3 V/m)
EN 61000-6-2/1.3 µV/e (10 V/m)

Non automatic weighing instrument directive:
EN 45501
EC Type approval T5819

Design:
Die-cast aluminium housing (ALSi10Mg) with cable gland for connection to any weighing platform via heavy gauge screw fitting

Display:
IND425; IND435; IND445:
Backlit 7-digit/7-segment LC display; Height of characters:
16 mm (IND425); 21 mm (IND435; IND445)

IND465:
Backlit active dot matrix display (235×64 pixels);
Height of characters: max. 21 mm

Keypad:
Large, clearly-structured keypad with tactile feedback
IND425:	6 keys: ON/OFF; Zero; Tare; Transfer; Change unit; Clear tare
IND435:	10 keys: ON/OFF; Zero; Tare; Transfer; Toggle gross/net; High resolution; Toggle scale 1 and scale 2; Toggle count and weigh mode; Ten's reference, Variable reference
IND445:	25 keys: ON/OFF; Zero; Tare; Transfer; Info; Toggle scale 1 and scale 2; Toggle count and weigh mode; Display item weight; Ten's reference; Variable reference; Memory; ID; +/–; Delete; Numeric keypad
IND465:	25 keys: ON/OFF; Zero; Tare; Transfer; 6 freely-definable function keys (soft keys); Call database; Toggle: Upper/lower case; Delete; Alphanumeric keypad

Units: g, kg, t, oz, lb

Power supply:
- Main connections
  - country-specific power supply: 240 V, 50 Hz, 70 mA/230 V, 50 Hz, 70 mA/120 V, 60 Hz, 90 mA/100 V, 50/60 Hz, 90 mA

Battery operation
- universal charger 90–264 V, 47–63 Hz, 300 mA
- NiMH Battery, 2800 mAh charging with max. 24 V = 1,3 A
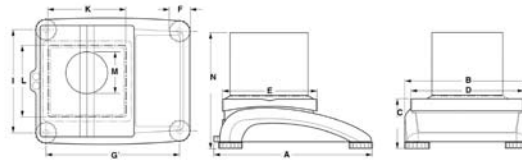
External power supply
- IND425, IND435 and IND445: 12–20 V DC, max. 500 mA
- IND465: 17–24 V DC, max. 500 mA

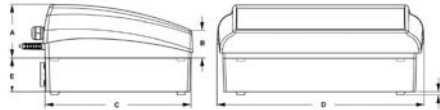| Model	IND425/IND435/IND445/IND465
Dimensions (mm)	277 × 200 × 71
Dimensions of option box (mm)	277 × 200 × 36
Max. resolution (not certifiable)	300 000d
Max. resolution (certifiable)	1× 7500e single range, 2× 5000e multi range/multi interval
Linearization	Can be set to 3-point or 5-point
Linearity (s) (g)	+/-0.01 % of def. max. capacity
A/D converter for input signal (certifiable)	0.5 µV/e (EN 61000-6-1)
	1.3 µV/e (EN 61000-6-2)
Output signal	2 mV/V
Power supply, connected weighing cell	8.2 V
Impedance	80–1000 Ω
Type of protection	IP65*

* Not with built-in Ethernet interface

BBA4../BBK4..

	A	B	C	D	E	F	G	H	I	K	L	M	N
XXS	335	265	100	240	200	46	276	208	215	–	–	100	260
XS	335	265	100	240	200	46	276	208	215	165	165	–	–
SM	335	265	100	240	200	46	276	208	215	–	–	–	–
LA	370	360	115	350	240	52	311	305	311	–	–	–	–

Dimensions in mm

IND4..

A	B	C	D	E	F
71	36	200	277	49	4.5

Dimensions in mm

Accessories

Code	Description	BBA4x2/5-SM	BBA4x2/5-LA	BBK4x2-XXS	BBK4x2-XS	BBK4x2-SM	BBK4x2-LA	IND4x5
21203207	Protective cover PVC small	■	□	■	■	■	□	□
21203206	Protective cover PVC large	□	■	■	■	■	■	□
21255045	Protective cover PVC	□	□	□	□	□	□	■
21253399	Printer "Sprinter 1" Euro	■	■	■	■	■	■	■
21253745	Printer "Sprinter 1" UK	■	■	■	■	■	■	■
22009327	Printer "Zebra LP 2844"	▣	▣	▣	▣	▣	▣	▣
22009328	Printer "Zebra LP 2824"	▣	▣	▣	▣	▣	▣	▣
21252588	RS232 cable for "Zebra LP 2824/2844" (1.8 m)	▣	▣	▣	▣	▣	▣	▣
22009329	Labels for "Zebra LP 2844" (102×102 mm, 1 roll, 380 labels)	▣	▣	▣	▣	▣	▣	▣
22009330	Labels for "Zebra LP 2824" (57×102mm, 1 roll, 380 labels)	▣	▣	▣	▣	▣	▣	▣
22013978	2nd display ADI412	■	■	■	■	■	■	■
22013977	2nd display ADI412 (backlit)	■	■	■	■	■	■	■
21901297	PS/2 Barcode reader MT Heron-G D130	▣	▣	▣	▣	▣	▣	▣
21901308	Y-cable for PS/2 barcode reader	▣	▣	▣	▣	▣	▣	▣
21900944	Mini keyboard PS/2 (USA)	▣	▣	▣	▣	▣	▣	▣
21900945	Cover for mini keyboard	▣	▣	▣	▣	▣	▣	▣
22011967	Relay box 4	■	■	■	■	■	■	■
21202217	Relay box LC-I/O	▣	▣	▣	▣	▣	▣	▣
22011304	Adapter for draft shield PG for XS size	□	□	□	■	□	□	□
00225269	Draft shield PG	□	□	■	■	□	□	□
21254225	RS232 cable for relay box 4	■	■	■	■	■	■	■
21253677	RS232 cable for "Sprinter 1" (1.8 m)	■	■	■	■	■	■	■
21252588	RS232 cable for 2nd scale or ADI412 (1.8 m)	■	■	■	■	■	■	■
00410024	RS232 cable for PC (1.8 m)	■	■	■	■	■	■	■
22013451	Special load plate 186×186mm for BBK4..–..XS	□	□	□	■	□	□	□
22018833	Counting tweezers for BBK4..-0.6 DXXS, stainless steel, anti-magnetic	□	□	■	□	□	□	□
22011469	Column, 330mm for PBA330 (includes 22011471)	□	□	□	□	□	□	■
22011470	Column, 660mm for PBA330 (includes 22011471)	□	□	□	□	□	□	■
22011471	Wall/Stand mount	□	□	□	□	□	□	■
21255259	Connection plate for PBA330, Size A, BB, B, BC	□	□	□	□	□	□	■
22011459	SICS Manual 4 Series (English)	■	■	■	■	■	■	■
22009973	SmartManager software (full version)	■	■	■	■	■	■	■

■ Available   ▣ Available only on application level Smart+ (462/465)   □ Not available

www.mt.com

For more information

Quality certification. Development, production and testing to ISO 9001. Environmental management system to ISO14001.

ISO 14001 certified   ISO 9001 certified

ServiceXXL
Tailored Services

Global service. Our extensive service network is one of the best in the world and is your guarantee of optimum product availability and service life.

M Certified version available