

## BBA422 – BBA425 – BBA432 – BBA442 – BBA462

Reliable measurement accuracy for any location



Illustration: BBA462-6SM

The BBA4xx compact scales with strain gauge technology (SG) from METTLER TOLEDO offer you approvable and GMP certified quality – also for mobile use – at an attractive price

### Technical Data

Enclosure / Environment	
Material	Aluminum diecast housing with stainless steel load plate
Ambient temperature	-10° to +40°C for class III
Humidity	80% rel. up to 31°C 50% rel. up to 40°C
Level	Up to 2000m / above sea level, indoors

Display / units of weight	
<b>BBA422; BBA425; BBA432; BBA442</b>	
Backlit, 7-digits 7-segment LC-Display	
Character height	16mm (BBA42x), 21mm (BBA432, BBA442)
Units of weight	g, kg, t, oz, lb
<b>BBA462</b>	
Active dot matrix LC-Display (235x64 pixel)	
Character height	5 - 21mm (depending on application)
Units of weight	g, kg, t, oz, lb + 20 freely definable units (resp. 1500 within the article database)

Approvals / assessments	
Pharma industry	GMP
Electrical Safety	CSA – C US, CE
IP protection: BBA425	IP65 (DIN 40050)
IP protection: BBA422, BBA432, BBA442, BBA462	IP43 (DIN 40050)*

\* with built-in Ethernet interface no explicit IP protection!

Analogue weighing techn. / 2nd scale connection	
<i>Standard</i>	Integrated A/D converter / 1 integrated SG load cell
Resolution (approved according OIML class. III)	2 x 3000e 1 x 6000e (with premium load cells) (as option)** Depending on model

\*\* not for BBA425

Max. resolution	1 x 300000d (not approvable, depending on model)
<i>Optional 2<sup>nd</sup> scale connection (D-Sub 9 connector)</i>	
Impedance	min. 80 Ohm
Excitation	8.2 V
Sensitivity	2 to 3 mV/V
Min. verification interval	1.3µV / e (approvable)
Resolution	1 x 7500e (OIML) 1 x 300000d (not approvable)

Power supply	
Standard AC power supply	Direct connection to the mains (MAINS supply voltage fluctuations up to ±10% of the nominal voltage): <ul style="list-style-type: none"> <li>▪ 230 V, 50 Hz, 70 mA</li> <li>▪ 240 V, 50 Hz, 70 mA</li> <li>▪ 120 V, 60 Hz, 90 mA</li> <li>▪ 100 V, 50/60 Hz, 90 mA</li> </ul>

<b>Optional battery operation</b>	
Standard DC power supply	<ul style="list-style-type: none"> <li>▪ Connection via mains adapter: 90 – 264 V, 47 – 63 Hz, 300 mA</li> <li>▪ Infeed on the unit: 24 V, 1.3 A</li> </ul>
Operating time	<ul style="list-style-type: none"> <li>▪ 9h (typ.) (continuous operation)***</li> <li>▪ 90h (typ.) ("power off mode" on)</li> </ul>
Charging time	6h (typ.)
Lifetime	1000 charge- / discharge cycles (typ.)
<i>Optional external 12 – 20VDC (-500mA) connection (BBA42x, BBA432, BBA442)</i>	
<i>Optional external 17 – 24VDC (-500mA) connection (BBA462)</i>	

\*\*\* Reduction of operating time up to 8h because of built-in options and peripherals possible.

Keyboard				
Material	Polyester (PE)			
Number of keys (keys with tactile feedback)	BBA422; BBA425: 6 BBA432: 10 BBA442, BBA462: 25			
Functionality	BBA422/ BBA425	BBA432	BBA442	BBA462
Simple weighing	•	•	•	•
Dynamic weighing	•	•	•	•
Zero setting	•	•	•	•
Taring	•	•	•	•
Printing/transferring	•	•	•	•
Two scales operation	-	•	•	•
Counting	-	•	•	•
Totalising/Subtracting	-	-	•	•
Checking	-	-	•	•
Filling/Count. to target values	-	-	•	•
Freely definable setpoints (2 setpoints)	•	•	•	•
Freely configurable operating processes	-	-	-	•
Freely definable units of weight	-	-	-	•
Freely definable soft keys	-	-	-	•
Labels printout	-	-	-	•
Memory for Tare-/ piece weight-/ target values	-	-	•	•
Internal article database (1500 data strings)	-	-	-	•
Opt. internal alibi memory (158000 entries)	-	-	-	•
Date/time	-	-	•	•
Numerical keypad	-	-	•	-
Alphanumerical keypad	-	-	-	•
Internal battery (optional)	•	•	•	•

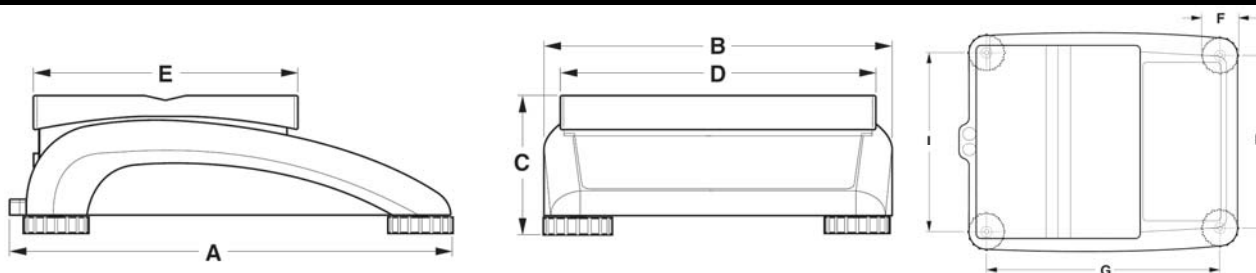
Interfaces	
<b>BBA422; BBA425; BBA432; BBA442</b>	
Standard	RS232
One additional interface as option:	RS232
	RS422 / RS485
	Ethernet
	USB (Slave)
	Digital I/O (4 in / 4 out)
	Analogue 2 <sup>nd</sup> scale interface (not for BBA422 and BBA425)
<b>BBA462</b>	
Standard	3 RS232, 1 PS/2
Following interface combinations as option:	RS232 + RS485 + RS232 + PS/2
	RS232 + Ethernet + RS232 + PS/2
	RS232 + Digital I/O + RS232 + PS/2
	RS232 + USB (Slave) + RS232 + PS/2
	RS232 + RS232 + Analogue + PS/2
	RS232 + RS485 + Analogue + PS/2
	RS232 + Ethernet + Analogue + PS/2
	RS232 + Digital I/O + Analogue + PS/2
RS232 + USB (Slave) + Analogue + PS/2	

Digital I/Os				
4 Digital IN	electrically isolated via opto coupler $I_{min} = 1mA @ U_{min} = 5VDC$ $I_{max} = 8mA @ U_{max} = 30VDC$			
	BBA422 / BBA425	BBA432	BBA442	BBA462
On / Off	•	•	•	•
Zero setting	•	•	•	•
Taring	•	•	•	•
Printing/transferring	•	•	•	•
Clearing (Clear key)	•	-	•	•
Change units	•	•	•	•
Reference 10	-	•	•	•
Variable reference	-	•	•	•
Info key	-	-	•	•
Change scale	-	•	•	•
Totalising	-	-	•	•
Subtracting	-	-	•	•
Soft keys 1-6	-	-	-	•
4 Digital OUT	electrically isolated via opto coupler open collector; $I_{max} = 100mA, U_{max} = 30VDC$			
	BBA422 / BBA425	BBA432	BBA442	BBA462
Stable weight	•	•	•	•
< min. weight	•	•	•	•
≥ min. weight	•	•	•	•
Underload	•	•	•	•
Overload	•	•	•	•
Display asterisk	•	•	•	•
< Setpoint 1 (2)	•	•	•	•
≥ Setpoint 1 (2)	•	•	•	•
< tolerance -	-	-	•	•
Inside tolerance	-	-	•	•
≥ tolerance +	-	-	•	•
< max. n	-	-	-	•
Max n reached	-	-	-	•

Accessories for BBA42x, BBA432, BBA442, BBA462	
Protective cover PVC small (for SM-models)	21203207
Protective cover PVC large (for LA-models)	21203206
Printer „Sprinter 1“ Euro	21253399
Printer „Sprinter 1“ UK	21253745
2 <sup>nd</sup> display RS-PD/PASM	21302875
2 <sup>nd</sup> display ADI412	22013978
2 <sup>nd</sup> display ADI412 (backlit)	22013977
Relay box 4	22011967
RS232 cable for relay box 4	21254225
RS232 cable for „Sprinter 1“ (1.8m)	21253677
RS232 cable for 2 <sup>nd</sup> scale and ADI412 (1.8m)	21252588
RS232 cable for PC (1.8m)	00410024
SICS Manual 4 Series (English)	22011459

Accessories for BBA462	
Printer „Zebra LP 2844“	22009327
Printer „Zebra LP2824“	22009328
RS232 cable for „Zebra LP 2824/2844“ (1.8m)	21252588
Labels for „Zebra LP 2844“ (102x102mm, 1 roll, 380 labels)	22009329
Labels for „Zebra LP 2824“ (57x102mm, 1 roll, 380 labels)	22009330
Relay box LC-I/O (to be ordered at MT-Log)	21202217
Mini keyboard PS/2 (USA) (to be ordered at MT-Log)	21900944
Cover for mini keyboard (to be ordered at MT-Log)	21900945
PS/2 Barcode reader MT Heron-G D130 (to be ordered at MT-Log)	21901297
Y-cable for PS/2 barcode reader (to be ordered at MT-Log)	21901308
SmartManager software (full version)	22009973

## BBA4xx Dimensions



	A	B	C	D	E	F	G	H	I
SM	335	265	100	240	200	46	276	208	216
LA	370	360	115	350	240	52	310	304	310

in mm

	BBA422 / BBA432 / BBA442 / BBA462					BBA425				
Model	-3SM	-6SM	-15LA	-35LA	-60LA	-3SM	-6SM	-15LA	-35LA	-60LA
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
Resolution standard (not approvable) 2 x 3000e (g)	0.5 / 1	1 / 2	2 / 5	5 / 10	10 / 20	0.5 / 1	1 / 2	2 / 5	5 / 10	10 / 20
Resolution (optional) (not approvable) 1 x 6000d (g)	0.5	1	2	5	10	-	-	-	-	-
Resolution (optional) (not approvable) 1 x 15000d (g)	0.2	0.5	1	2	5	-	-	-	-	-
Resolution (optional) (not approvable) 1x 30000d (g)	0.1	0.2	0.5	1	2	-	-	-	-	-
Resolution (optional) (approvable) 2 x 3000e (g)	0.5 / 1	1 / 2	2 / 5	5 / 10	10 / 20	0.5 / 1	1 / 2	2 / 5	5 / 10	10 / 20
Resolution (optional) (approvable) 1 x 6000e (g)	0.5	1	2	5	10	-	-	-	-	-
Max. resolution (selectable in the menu) (not approvable; depending on model) (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 (g)	+/-0.05	+/-0.1	+/-0.2	+/-0.5	+/-1	+/-0.15	+/-0.2	+/-0.2	+/-0.5	1
Minimum permissible item weight (g)****	0.01	0.02	0.05	0.1	0.2	-	-	-	-	-
Stabilisation time [s] (sec.)	~1.0									
Net weight (kg)	4.6		8.2			4.6		8.2		
Net weight incl. Battery (kg)	5.3		8.9			5.3		8.9		

\*\*\*\* 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.