

BBK422 – BBK432 – BBK442 – BBK462

Maximum precision for more complex requirements



Illustration: BBK462-3XS

The BBK4.2 compact scales with MonoBloc (MB) technology from METTLER TOLEDO offer highest precision and GMP certified quality – also for mobile use - for complex requirements.

Technical Data

Enclosure / Environment	
Material	Aluminum diecast housing with stainless steel load plate
Ambient temperature	10° to +30°C for class II
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	
BBK422; BBK432; BBK442	
Backlit, 7-digits 7-segment LC-Display	
Character height	16mm (BBK422), 21mm (BBK432, BBK442)
Units of weight	g, kg, t, oz, lb
BBK462	
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: BBK422, BBK432, BBK442, BBK462	IP43 (DIN 40050)*

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

Analogue weighing technology / 2nd scale connection	
<i>Standard</i>	Integrated A/D converter / 1 integrated MB load cell
Resolution	1 x 61000e (approvable) (depending on model)
Max. resolution	1 x 6100000d (not approvable) (depending on model)
<i>Optional 2nd 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"> 230 V, 50 Hz, 70 mA 240 V, 50 Hz, 70 mA 120 V, 60 Hz, 90 mA 100 V, 50/60 Hz, 90 mA
<i>Optional battery operation</i>	
Standard DC power supply	<ul style="list-style-type: none"> Connection via mains adapter: 90 – 264 V, 47 – 63 Hz, 300 mA Infeed on the unit: 24 V, 1.3 A
Operating time	<ul style="list-style-type: none"> 9h (typ.) (continuous operation)** 90h (typ.) ("power off mode" on)
Charging time	6h (typ.)
Lifetime	1000 charge- / discharge cycles (typ.)
<i>Optional external 12 – 20VDC (-500mA) connection (BBK422, BBK432, BBK442)</i>	
<i>Optional external 17 – 24VDC (-500mA) connection (BBK462)</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)	BBK422: 6 BBK432: 10 BBK442, BBK462: 25			
Functionality	BBK422	BBK432	BBK442	BBK462
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	-	-	•	-
Alphanumeric keypad	-	-	-	•
Internal battery (optional)	•	•	•	•

Interfaces	
BBK422; BBK432; BBK442	
Standard	RS232
One additional interface as option:	RS232
	RS422 / RS485
	Ethernet
	USB (Slave)
	Digital I/O (4 in / 4 out)
	Analogue 2 nd scale interface (not for BBK422)
BBK462	
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	

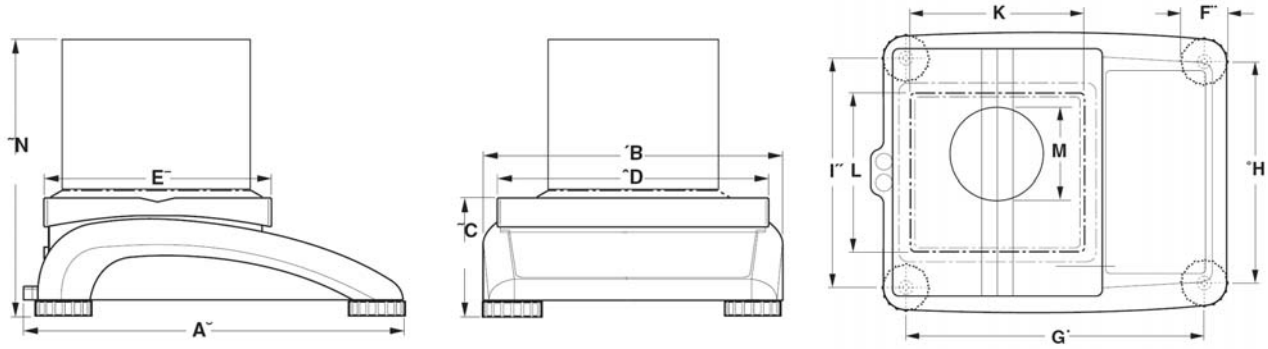
Digital I/Os				
4 Digital IN	electrically isolated via opto coupler $I_{min} = 1mA @ U_{min} = 5VDC$ $I_{max} = 8mA @ U_{max} = 30VDC$			
	BBK422	BBK432	BBK442	BBK462
On / Off	•	•	•	•
Zero setting	•	•	•	•
Taring	•	•	•	•
Printing/transferring	•	•	•	•
Clearing (Clear key)	•	-	•	•

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; $I_{max} = 100mA$, $U_{max} = 30VDC$			
	BBK422	BBK432	BBK442	BBK462
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 BBK422, BBK432, BBK442, BBK462	
Protective cover PVC small (for XXS / XS / SM-models)	21203207
Protective cover PVC large (for LA-models)	21203206
Printer "Sprinter 1" Euro	21253399
Printer „Sprinter 1" UK	21253745
2 nd display RS-PD/PASM	21302875
2 nd display ADI412	22013978
2 nd display ADI412 (backlit)	22013977
Relay box 4	22011967
Adapter for draft shield PG for XS size	22011304
Draft shield PG for adapter 22011304) (to be ordered at MT-Log)	00225269
RS232 cable for relay box 4	21254225
RS232 cable for „Sprinter 1" (1.8m)	21253677
RS232 cable for 2 nd scale or ADI412 (1.8m)	21252588
RS232 cable for PC (1.8m)	00410024
SICS Manual 4 Series (English)	22011459
Special load plate 186 x 186 mm for BBK4...XS	22013451
Counting tweezers for BBK4...0.6 DXXS, stainless steel, anti-magnetic	22018833

Accessories for BBK462	
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

BBK4x2 Dimensions



	A	B	C	D	E	F	G	H	I	K	L	M	N
XXS	335	265	100	240	200	46	276	208	216	165	165	100	260
XS	335	265	100	240	200	46	276	208	216	165	165		
SM	335	265	100	240	200	46	276	208	216	-	-		
LA	370	360	115	350	240	52	310	304	310	-	-		
In mm													

BBK422 / BBK432 / BBK442 / BBK462

Model	0.6DXXS ¹	-3DXS	-3XS	-6DXS	-6XS	-6DSM	-6SM	-15DLA	-15LA	-35DLA	-35LA
Capacity (g)	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 value (g)	0.01	0.1	0.1	0.1	0.1	1	0.2	1	0.5	1	1
Max. readability (not approvable) (selectable in the menu; dep. on model) (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	0.02	0.02	0.02	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Minimum permissible item weight (g) ²	0,00041	0,0020	0,0020	0,0040	0,0040	0,0040	0,0040	0,010	0,010	0,023	0,023
Stabilisation time [s] (sec.)	~1.0										
Net weight (kg)	6.1	4.9				4.7		10.5			
Net weight incl. battery (kg)	-	5.6				5.4		11.2			
Net weight with int. calibration weight (w/o battery) (kg)	6.1	5.4				5.2		11.7			

¹ only for BBK432, BBK442 and BBK462 (EN 61000-6-1)

² 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.