### **BALANCES & TEST SERVICE 2024**

Display Devices, Platforms, Weighing Bridges



Display Devices KERN KFB-TM  $\cdot$  KFS-TM



#### **11** KERN KFB-TM

Display device with large digits easy to read and optional analogue output for controlling systems (PLC) etc.



#### **2** KERN KFS-TM

Professional indicator with 3 displays, also with EC type approval [M]



**Features** 

to see what options are offered by this display device, please see the KERN platform scale IFB on page 114



to see what options are offered by this display device, please see the KERN counting scale IFS on page 92

#### STANDARD - ASSA CAL EXT RS 232 PROTOCOL PRINTER \* M MOVE MULTI 1 DAY ACCU BT 2.0 ANALOG





Model KERN

KFR-TM





Model KERN

KERN KES-TM

	■ KFB-TM	KERN KFS-TM
Display (segments)	5 + ½ digits	6 digits
EC type approval	yes	yes
Resolution verifiable	6000 e	3000 e
Resolution non verifiable	30000 d	60000 d
Weighing capacities	≤ 2	≤ 2
Weighing units	kg, lb	kg, g
Readability	1, 2, 5, 10, n	1, 2, 5, 10, n
Piece counting with reference	10, 20, 50, 100, 200	n
Display, digit height	Backlit LCD display, 52 mm	Backlit LCD displays, 13/16,5 mm
Additional functions	Totalising, HOLD function, Integrated KERN Communication Protocol (KCP), ideal for connecting an Merchandise Management or ERP system, Compatible with the KERN EasyTouch App	99 item memories, totalising, printing of date and time, Integrated KERN Communication Protocol (KCP), ideal for connecting an Merchandise Management or ERP system, Compatible with the KERN EasyTouch App
Strain gauge load cells	87 - 1600 Ω	87 - 1600 Ω
Linearisation	3 points	4 points
Input voltage	12 V, 500 mA	12 V, 500 mA
Permissible ambient temperature	-10 °C/40 °C	0 °C/40 °C
Interface RS-232	yes	yes
2. Interface RS-232, separate Y cable	CFS-A04	CFS-A04
Interface RS-485	-	_
Interface USB	-	
Interface Bluetooth	KERN KFB-A03	
Analogue module	0-10V: KERN KFB-A04 4-20 mA: KERN KFB-A05	-
Signal lamp	CFS-A03	CFS-A03
Foot switch	=	-
Stand	BFS-A07	BFS-A07
Benchtop stand for display device/wall mount	yes/yes	yes/yes
Protective working cover	KFB-A02S05,	KFB-A02S05,
Rechargeable battery pack	KFB-A01,	KFB-A01,
Operating/charging time	up to 35 h/12 h	up to 40 h/12 h
Dimensions Housing W×D×H	250×160×65 mm	260×150×65 mm
Net weight	1,2 kg	1,5 kg
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- not possible in combination with verification. When installing the Bluetooth data interface, the RS-232 data interface can no longer be used
- \*\* not possible in combination with signal lamp. When installing the analogue module, the RS-232 data interface can no longer be used

### **BALANCES & TEST SERVICE 2024**

**KERN Pictograms** 



Conformity Assessment

conformity assessment is

specified in the pictogram

The time required for

**DAkkS** calibration

DAkkS calibration

pictogram

. The time required for

is shown in days in the

The time required for

Package shipment

The time required for

in the pictogram

Pallet shipment

in the pictogram

The time required for

internal shipping prepa-

rations is shown in days

internal shipping prepa-

rations is shown in days

in days in the pictogram

Factory calibration (ISO)

Factory calibration is shown

possible (DKD)

M

DAkkS

+3 DAYS

**ISO** 

á...



### Internal adjusting

Quick setting up of the balance's accuracy with internal adjusting weight (motordriven)



### Adjusting program CAL

For quick setting up of the balance's accuracy. External adjusting weight required



#### **EasyTouch**

Suitable for the connection, data transmission and control through PC or tablet



#### Memory

Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.



#### Alibi memory

Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard.



# KERN Universal Port (KUP)

allows the connection of external KUP interface adapters, e.g. RS-232, RS-485, SB, Bluetooth, WIFI, Analogue, Ethernet etc. for the exchange of data and control commands, without installation effort



## RS-232 Data interface

To connect the balance to a printer, PC or network



#### **RS-485 Data interface**

To connect the balance to a printer, PC or other peripherals. Suitable for data transfer over large distances. Network in bus topology is possible



### USB Data interface

To connect the balance to a printer, PC or other peripherals



#### Bluetooth\* Data interface

To transfer data from the balance to a printer, PC or other peripherals



### WIFI Data interface

To transfer data from the balance to a printer, PC or other peripherals



#### **Control outputs**

(optocoupler, digital I/O) To connect relays, signal lamps, valves, etc.



### Analogue interface

to connect a suitable peripheral device for analogue processing of the measurements



# Interface for second balance

For direct connection of a second balance



#### **Network interface**

For connecting the scale to an Ethernet network



# KERN Communication Protocol (KCP)

It is a standardized interface command set for KERN balances and other instruments, which allows retrieving and controlling all relevant parameters and functions of the device. KERN devices featuring KCP are thus easily integrated with computers, industrial controllers and other digital systems



#### GLP/ISO log intern

The balance displays weight, date and time, independent of a printer connection



#### **GLP/ISO log Printer**

With weight, date and time. Only with KERN printers.



#### Piece counting

Reference quantities selectable. Display can be switched from piece to weight



#### Recipe level A

The weights of the recipe ingredients can be added together and the total weight of the recipe can be printed out



#### Recipe level B

Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display



### Totalising level A

The weights of similar items can be added together and the total can be printed out



Percentage determination Determining the deviation in % from the target value (100 %)



#### Weighing units

Can be switched to e.g. nonmetric units. See balance model. Please refer to KERN's website for more details



# Weighing with tolerance range (Checkweighing)

Upper and lower limiting can be programmed individually, e.g. for sorting and dosing. The process is supported by an audible or visual signal, see the relevant model



#### Hold function

(Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value



# Protection against dust and water splashes IPxx

The type of protection is shown in the pictogram



#### Suspended weighing Load support with hook on the underside of the

balance



#### **Battery operation**

Ready for battery operation. The battery type is specified for each device



# Rechargeable battery pack

Rechargeable set



# Universal plug-in power supply

with universal input and optional input socket adapters for A) EU, CH, GB B) EU, CH, GB, US C) EU, CH, GB, US, AUS

Plug-in power supply



# 230V/50Hz in standard version for EU, CH. On request GB, USA or A

On request GB, USA or AUS version available



# Integrated power supply unit

Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request



#### Weighing principle Strain gauges

Electrical resistor on an elastic deforming body



#### Weighing principle Tuning fork

A resonating body is electromagnetically excited, causing it to oscillate



#### Weighing principle Electromagnetic force compensation

Coil inside a permanent magnet. For the most accurate weighings



#### Weighing principle Single cell technology

Advanced version of the force compensation principle with the highest level of precision



