SYSTEM SOLUTIONS INDUSTRY 4.0

Bluetooth | WiFi

Printer | Tablet | PC

Remote control / monitoring

Digital platform KDP

Bluetooth Adapter KDP-A03

Ethernet Adapter KDP-A02

WiFi Adapter KDP-A01

Analog platform + digital weighing transmitter KGP

Ethernet

Internet
Company network
Cloud

Wireless monitoring

WiFi

Server = Auto archiving / recording
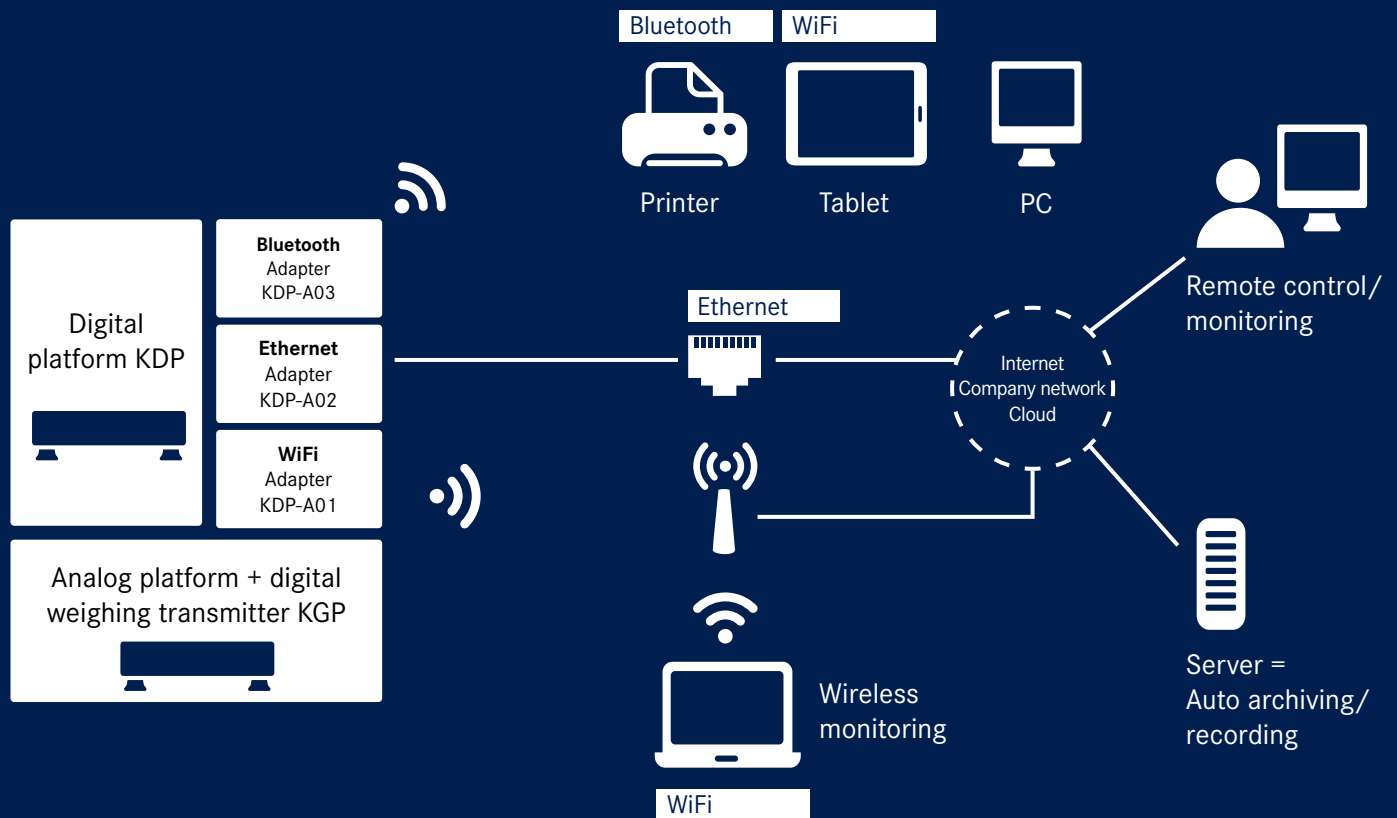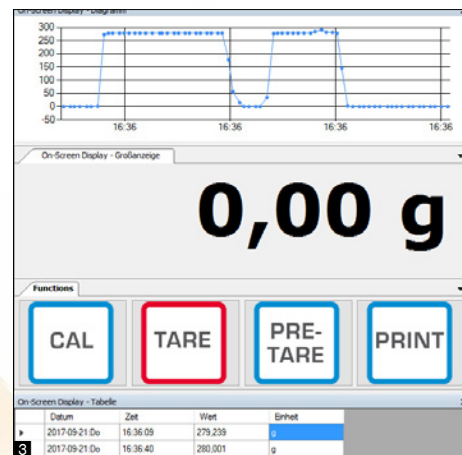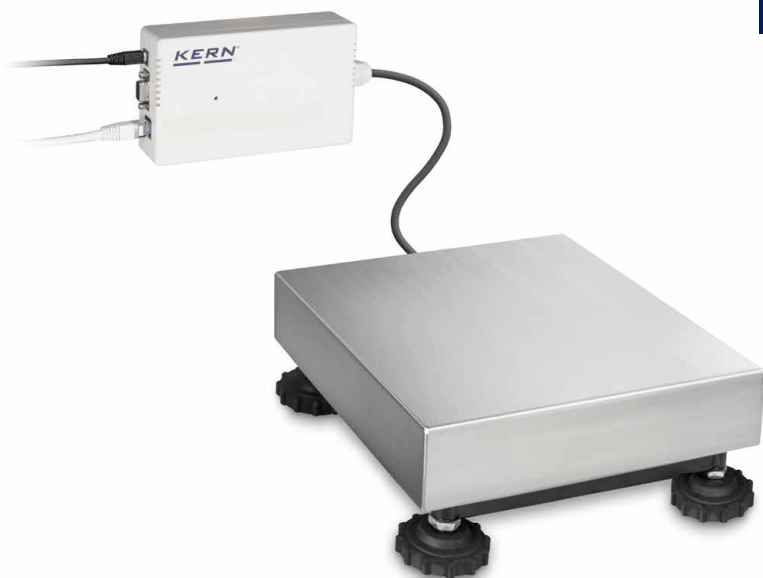
We will help to combine industrial production with the latest information and communication technology, with the aim of improving quality, reducing costs and using time and resources more efficiently so that you are able to react to future requirements in a more flexible manner. You will benefit from our uniform data protocol combined with our BalanceConnection 4.0 data software, see *Software*.

Robust industrial platform scale with digital weighing transmitter, ideal for varied range of applications for Industry 4.0

Features

- With this combination of platform 🔳 (KERN KFP V20 IP65) and digital weighing transmitter (KERN YKV-01) your weighing processes are ready for the requirements of Industry 4.0. Simply install the platform, connect the digital weighing transmitter to the network and start weighing
- For rapid transfer of weighing data to connected networks, computers, etc.
- USB and RS-232 data interface standard, Power supply via USB interface
- Transfer formats are freely configurable
- Digital weighing transmitter with standard ethernet data interface on request
- Functions: Weighing, taring
- Internal resolution 16 million divisions

- Measuring frequency 10 Hz
- Easy configuration using the software supplied
- KERN YKV-01: Robust plastic die-cast housing
- 🔳 KERN YKV-01: Suitable for wall mounting and DIN track mount (optional)
- included with the delivery:
  - Industrial platform KERN KFP
  - Digital weighing transmitter KERN YKV-01
  - 🔳 DIN rail mounting bracket for KERN YKV
  - Configuration software for adjusting and managing the KERN KGP, for large-format display of the values collected on the PC as well as transfer of this data to other Apps and programs. The displayed result can therefore be converted to any format for communication with the different user programs, such as, for example, e.g. SAP, Oracle etc.

Technical data

- Weighing plate material: stainless steel
- KERN YKV-01: Overall dimensions W×D×H 100×140×36 mm
- Permissible ambient temperature -10 °C/40 °C

Accessories

- Bluetooth data interface, KERN YKV-A02
- WiFi interface, KERN YKV-A01
- Ethernet data interface on request
- 🔳 Software BalanceConnection, for flexible recording or transmission of measured values, in particular also to Microsoft® Excel or Access as well as transfer of this data to other Apps and programs, for more details see internet, scope of supplies: 1 CD, 1 license, KERN SCD-4.0
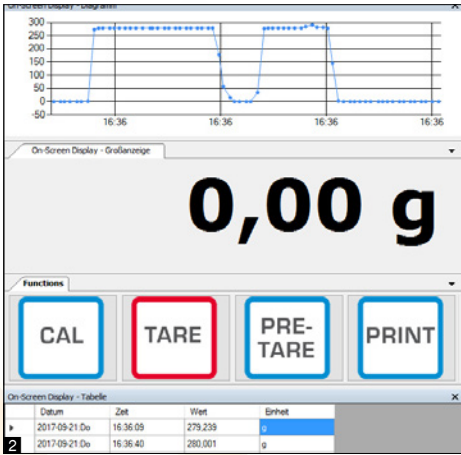
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Model	Weighing capacity [Max]	Readability [d]	Weighing plate W×D×H	Cable length approx.	Net weight approx.	Options DAkkS Calibr. Certificate DAkkS
KERN	kg	g	mm	m	kg	KERN
KGP 6K-4	6	0,2	230×230×103	2,5	6	963-128
KGP 6K-4L	6	0,2	300×240×105	2,5	10	963-128
KGP 10K-4	15	0,5	300×240×105	2,5	6	963-128
KGP 10K-4L	15	0,5	400×300×114	2,5	10	963-128
KGP 30K-3	30	1	300×240×105	2,5	6	963-128
KGP 30K-3L	30	1	400×300×114	2,5	10	963-128
KGP 60K-3	60	2	400×300×114	2,5	10	963-129
KGP 60K-3L	60	2	500×400×124	2,5	14	963-129
KGP 100K-3	150	5	500×400×124	2,5	14	963-129
KGP 100K-3L	150	5	650×500×136	2,5	22	963-129
KGP 300K-2L	300	10	650×500×136	2,5	22	963-129

Modern digital weighing transmitter for the rapid recording of weighing data and forwarding it to the most varied output channels such as tablets, networks, SPS controllers, etc. – ideal for operating balances in systems or conveyors

Features

- With this digital weighing transmitter your weighing processes are ready for the requirements of Industry 4.0. Simply connect a weighing platform or measuring cell, integrate the digital weighing transmitter into the network and start weighing
- For rapid transfer of weighing data to connected networks, computers, etc.
- USB and RS-232 data interface standard, Power supply via USB interface
- Transfer formats are freely configurable
- Functions: Weighing, taring
- Measuring frequency 10 Hz
- Easy configuration using the software supplied
- Robust plastic die-cast housing
- ■ Suitable for wall mounting and DIN track mount
- Compatible with all KERN weighing platforms

- Included with the delivery:
  - Digital weighing transmitter KERN YKV
  - USB cable incl. mains plug
  - DIN rail mounting bracket
  - Configuration software for adjusting and managing, for large-format display of the values collected on the PC as well as transfer of this data to other Apps and programs. The displayed result can therefore be converted to any format for communication with the different user programs, such as, for example, SAP, Oracle etc.

Technical data

- Overall dimensions W×D×H 100×140×36 mm
- Net weight approx. 0,35 kg
- Permissible ambient temperature -10 °C/40 °C

Accessories

- Bluetooth data interface, KERN YKV-A02
- WiFi interface, KERN YKV-A01
- ■ Software BalanceConnection, for flexible recording or transmission of measured values, in particular also to Microsoft® Excel or Access as well as transfer of this data to other Apps and programs, for more details see internet, scope of supplies: 1 CD, 1 license, KERN SCD-4.0

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STANDARD

CAL EXT	RS 232	USB	LAN	KCP PROTOCOL	GLP PRINTER	UNIT	MULTI	1 DAY

YKV-02

FACTORY

BT 4.0	WIFI

Model	Standard interfaces
KERN	
YKV-01	RS-232, USB
YKV-02	RS-232, USB, Ethernet

CE HSA

Compact display device (rail-mounted module) for installation in switch cabinets

Features

- Compact display unit for recording weighing data using strain gauge load cells, e.g. in industrial applications
- Due to its small size, it is particularly space-saving to install in switch cabinets
- Thanks to the many interface variants, the modules can be ideally integrated into existing infrastructures and systems
- The modules can be used either individually or as a Buslink system with a total of up to 332 DIN rail modules
- The configuration of the module can be carried out conveniently via a connected PC with the suitable software (Download see Internet)
- Bright LED display for optical control and settings
- Time-saving G-Cal™ (Geographic Calibration) technology for fast and accurate calibration without weights conveniently over a network or the Internet worldwide
- Convenient communication via remote devices

- Backup and restore function via USB port
- Can handle various industrial protocols such as Ethernet IP, Modbus TCP, Modbus RTU, FINS, PROFIBUS DP and PROFINET (according to model)
- Extremely high measurement frequency possible, up to 1600 data records/second
- Internal resolution 24 Bit

Technical data

- 7 segment LED display, digit height 7,62 mm
- Dimensions W×D×H 120×101×23 mm
- Power supply 18-32 Vdc; 4 W max.
- Power supply load cell 5 Vdc
- Sensitivity 0,1 µV/d
- Adjustable nominal sensitivity 1; 1.5; 2; 2.5; 3 mV/V
- Input voltage unipolar @3mV/V: -1 mV to + 16 mV
- Input voltage bipolar @3mV/V: -16 mV to +16 mV
- Max. load cell impedance 1200 Ω
- Min. load cell impedance 43,75 Ω
- Max. no. of load cells 350 Ω: 8

- Max. no. of load cells 1000 Ω: 22
- Max. resolution d 10.000
- Display steps 1, 2, 5, 10, 20, 50, 100, 200
- Permissible ambient temperature -10 °C/40 °C

Accessories

- Mains adapter for voltage supply to the KERN CE, can be fitted on the DIN rail, KERN CE HSS
- Large display with superior display size, KERN YKD-A02
- For further accessories, such as load and load cells, torque sensors and weighing platforms (strain gauge based only) from the SAUTER and KERN range, see internet
- Further accessories such as DIN rail, housing as well as individual assembly, configuration, adjustment, etc. on request

Note: Models optionally also available verified, please enquire

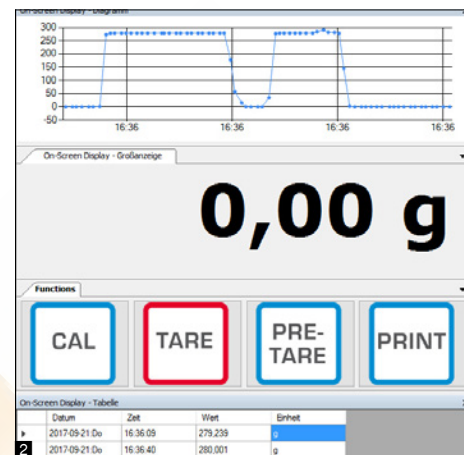STANDARD

| CAL EXT | USB | UNIT | 1 DAY |

OPTION

| RS 232 | PROFIBUS | PROFINET | SWITCH | ANALOG | LAN |

Model	Communication Interfaces	Digital I/O	Analog output
KERN			
CE HSA*	USB	-	0/4-20/24 mA
CE HSAIO*	USB	3 input / 4 output	0/4-20/24 mA
CE HSE*	USB, Ethernet	3 input / 4 output	-
CE HSP*	USB, PROFIBUS	3 input / 4 output	-
CE HSR*	USB, RS-232, RS-422	3 input / 4 output	-
CE HSN	USB, PROFINET	3 input / 4 output	-

* ONLY WHILE STOCKS LAST

Universal weighing platforms for flexible connection in process chains

Features

- Industry 4.0 process chains: these weighing platforms can be easily integrated into your process chain. All recorded values can be easily transferred and processed further in your system as digital data and data that has already been compared using the many interfaces available. This saves cost, time and resources and ensures even more effective working
- Connecting the platform with a tablet or PC offers the advantage of being able to use the apps and programs which are on that device. These apps and programs are usually already tailored to your needs, are easy and convenient to use and can often be expanded as needed. This offers you the maximum level of flexibility when displaying, processing and saving the recorded weighing data
- Searching and remote control of the balance using external control devices or computers with the KERN Communication Protocol (KCP).

KCP is a standardised interface command structure for KERN balances and other instruments which allows you to recall and manage all relevant parameters and device functions. You can therefore simply connect KERN devices with KCP to computers, industrial control systems and other digital systems. In a large number of cases the KCP is compatible with the MT-SICS protocol

- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels
- **1** A practical status LED informs about the active power supply
- Draught shield standard for models with weighing plate size ∅ 105 mm, weighing space W×D×H 146×146×80 mm
- included with the delivery:
- **2** Software BalanceConnection for adjusting and managing the KERN KDP, for large-format display of the values collected on the PC as well as transfer of this data to other Apps and programs

Technical data

- Dimensions weighing surface
  - **A** ∅ 105 mm, plastic, with conductive lacquer
  - **B** W×D 160×160 mm, stainless steel
- Overall dimensions W×D×H 165×166×75 mm (without draught shield)
- Cable length approx. 1,2 m
- Net weight approx. 1,2 kg
- Permissible ambient temperature 5 °C/35 °C

Accessories

- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, KERN KDP-A03
- WiFi data interface to transfer data from balances to PC or tablet, must be ordered at purchase, KERN YMI-A01
- Ethernet data interface, to connect an IP-based Ethernet network, continuous data transfer, must be ordered at purchase, KERN KDP-A02

*WiFi and Ethernet data interface cannot be combined

STANDARD					OPTION		FACTORY		
CAL EXT	USB	KCP PROTOCOL	B MULTI	DMS	1 DAY	ET	DAkkS +3 DAYS	BT 4.0	WIFI *	LAN *

Model	Weighing capacity	Readability	Reproducibility	Linearity	Weighing plate	Options DAkkS Calibr. Certificate DAkkS
	[Max]	[d]				
KERN	g	g	g	g		KERN
KDP 300-3	350	0,001	0,002	± 0,005	**A**	963-127
KDP 3000-2	3500	0,01	0,02	± 0,05	**B**	963-127
KDP 10K-4	10000	0,1	0,1	± 0,3	**B**	963-128
KDP 10K-3	10000	1	1	± 3	**B**	963-128

WE CAN MAKE YOUR WEIGHING DATA DIGITAL – KERN EASYTOUCH

The KERN EasyTouch software combines the performance of KERN scales with the flexibility of a Windows or Android environment.

The modular system solution for efficient weighing – perfect for your individual requirements

See for yourself how convenient and easy it is to use KERN EasyTouch

See for yourself the many benefits of the new KERN EasyTouch App:

→ Greater efficiency through short workflows for the user

→ Greater security of the measuring results

→ Avoiding measuring and process errors

→ Unlimited master data memory

→ Central data storage and data security (tamper-proof)

→ Interfaces to ERP, PPS, etc. systems

All details about the new KERN EasyTouch App can be found at
https://lp.kern-sohn.com/en/easytouch

Working with the KERN EasyTouch is so easy

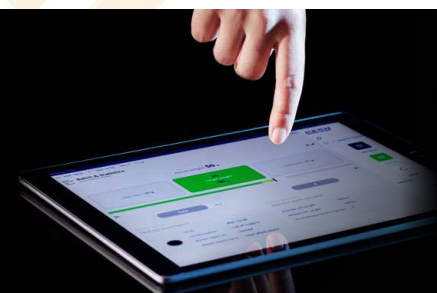| Collect the weight and measurement data with the appropriate device	Transfer, process and agument the weight or measurement data through KERN EasyTouch	Output or store the weight or measurement data to connected systems or peripheral devices

→ A standard balance is connected to an external laptop/tablet

→ The performance of the balance is transferred to the terminal device 1:1

→ Even simpler control and use of data by expanding the user interface

→ The data is integrated directly in the process and this means it can continue to be used and stored

→ Errors in the process or application are avoided

→ In this way a simple balance becomes a highly-complex measuring device

→ The recorded data can be processed further in a flexible way

The EasyTouch App – these functions are included:

• Operating system with Basic Weighing and Laboratory Package

• At present 20 optional add-on functions

• Data storage functions

• On request we can also offer tailor-made solutions – get in touch with us

KERN EasyTouch App – download now from Microsoft Store® (for Windows®) or Google Play Store® (for Android™)

Test it without any risk and free of charge – it's that easy!

1 **Load the basic App from the Appstore**
The KERN EasyTouch App already contains many helpful functions.

2 **Connect the devices you need**
Connect to devices using the four interfaces provided (Bluetooth, wired or USB adapter or WiFi).

3 **Test the basic package for 6 weeks, without obligation and free of charge**
After 6 weeks you can decide whether to continue using the Apps. With absolutely no loss of data.

Talk to the professionals

Our KERN EasyTouch specialists will gladly inform and advise you on all questions regarding the new KERN EasyTouch App

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KERN EasyTouch – You have the following options

Possible interfaces:

→ Wired through RS 232 interface cable + USB adapter AFH 13

→ Bluetooth through KUP-06 or KUM-06

→ Ethernet through KUP-04 or KUM-04

→ WLAN through KUP-05 or KUM-05

**Your benefits of the
KERN EasyToch software**

→ You only pay for the functions that you use

→ Expansion of the range of services of
your balance to meet your individual
ideas and preferences

→ Easy control of your balances from wherever
you currently are: laboratory, production,
office control of a PC, laptop or a tablet

→ Tamper-proof storage of all weighing data
on a central server, in an orderly database

KERN EasyTouch – available right now for the following KERN ranges/models

KERN Balances / Weighing platforms				
572	FCB	IOC[1]	KGP	PKS
CDS	FKB	IXC	PCB	SXC
CKE	IFB	KDP	PCJ	
DS	IFC	KFC-TM	PKJ	

[1] Verified operation: Weighing data from legally regulated uses can be stored and archived in KERN EasyTouch in conformity with standards, by using models from this product family with valid calibration and measurement value memory. This standard-compliant data storage also applies to SaveServer.

Depending on the model and connection type (USB, Bluetooth, Ethernet, WiFi), please contact KERN specifically, as there may currently still be restrictions on the possible combinations.

Tip: Other KERN ranges can be adapted to be EasyTouch compatible – keep up-to-date with the latest new on **https://lp.kern-sohn.com/en/easytouch**

ET

Note: All KERN models which are EasyTouch compatible are marked with the relevant symbol in the catalogue!

EasyTouch function at a glance

Basic Package – Operating system

SET-01 EasyTouch Base

Basic Weighing & Laboratory Package
The basic package contains many useful functions such as weighing, totalizing, target dispensing and percentage weighing.
As well as the local master data administration and management of the weighing results.

The basic package can be expanded at any time with additional, optional add-on functions.

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Optional add-on functions

SET-07 ET Variable

Free variable function
Individually definable units, e.g. cable length g/m, weight per unit area g/m^2, etc.

SET-08 ET Take-Out

Take-out function
Ideal for portioning by removing from a source container

SET-11 ET Safety

Precision & Safety function
Scale monitoring: the MUST for the pharmaceutical sector

SET-16 ET Batch & Statistics

Batch measuring function with statistical analysis
Perfect function in the context of production control, for calculating averages, etc.

SET-21 ET Formulation

Recipe function
Recipe management, dosing aid, recipe adjustment, multiplier function, etc.

SET-22 ET Difference

Difference function
Monitoring of weight increase (e.g. cell growth) or weight decrease (e.g. drying) and calculation of the weight difference

SET-31 ET Tolerance

Tolerance weighing function
Weighing within defined limits ensures fast sorting, portioning, picking, checking

SET-32 ET Count

Piece-counting function
Fast counting of large quantities, avoids counting errors, saves time and money!

SET-33 ET Target Count

Target-counting function
For lightning-fast picking of small parts, safely supported by optical and acoustic signals

SET-17 ET PrePack

Production control and packaging
Perfect for use in sectors such as the food industry for weighing in accordance with pre-packaging legislation

SET-14 ET Individual Print

User-customised print format function
Individual positioning of print elements, form printing, paper sizes and barcode printing is possible

You can find more functions on our EasyTouch home page:

https://lp.kern-sohn.com/en/easytouch

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Central data memory

SET-10 ET Save-Data Server

Weight storage and Save-Server function
Central storage of weighing and measuring data in a network

SET-28 Customization Service

Service for programming
Setting up and configuring interfaces (e.g. to merchandise management, ERP or PPS) and individual customer requirements