

# Labor

## PRS • PRJ

Precision balance

**DIRECT SCALE**  
www.direct-scale.com



### Standard

**CAL INT** **Internal adjusting (CAL):** Quick setting of the balance's accuracy with internal adjusting weight (motor-driven).

**CAL EXT** **Adjusting program (CAL):** For quick setting of the balance's accuracy. External adjusting weight required.

**PCS** **Piece counting:** Reference quantities selectable. Display can be switched from piece to weight.

**PC IT-Net** **Data interface:** The type of interface is shown by the pictogram. For a definition, see page 88.

**GLP** **GLP/ISO record keeping** of weighing data with date, time and ident.-no. Only with printers from KERN, see page 88.

**REZ** **Net-total weighing:** weight of tare cup and weight of components memorized in two separate stores.

**%** **Percentage determination:** Displays the deviation from the reference weight (100%) in % instead of grams.

**UNIT** **Weighing units:** can be switched to e.g. non-metric units at the touch of a key. See balance model.

**TOL** **Weighing with tolerance range:** Upper and lower limiting can be programmed individually, e.g. dosing / sorting.

**U** **Suspended weighing:** load support with hook on the underside of the balance.

**Animal weighing program:** strong vibrations are filtered out.

**230** **Mains adapter:** 230 V/50Hz in standard version for Germany. On request GB, AUS or USA version.

### Option [additional price]

**AU** **Rechargeable battery pack:** rechargeable set.

**IP 54-68** **Spray and dust protection:** The type of protection is shown by the pictogram. For a definition see the glossary, page 96.

### KERN PRS • PRJ Precision balance

Premium laboratory class –  
always up to date via the internet

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#### STANDARD

**CAL INT** only PRJ

**CAL EXT** only PRS

**PCS**

**PC RS 232**

**GLP** only PRJ

**REZ**

**%**

**UNIT** only PRS

**TOL**

**U**

**Animal weighing**

**230**

#### FACTORY OPTION

**AU**

**IP 54-68**



**Bright fluorescent display** with high contrast, digit height 15 mm

**Capacity display** a bar graph shows the current available weighing range

**User guidance** Step by step on the display



**Main function keys** for transmitting deposited individual functions in the display. E.g. 4 reference quantities when piece counting or 4 secondary units



**Glass draft shield** with removable metal cover, standard for all models with readout  $d = 0.001g$ , weighing space  $W \times D \times H$  155x155x55 mm

**TOL** **Threshold value programming** for check weighing. In connection with KERN PR-A18 signal lamp (see page 29) ideal for dosing or sorting

**Metal housing** robust and sturdy

**Weighing sum memory** adds single weighing results

### Software for KERN PRS-PRJ models. Update via the Internet.

#### Configuration menu

To define the basic functions

- Language: German, English or French
- Automatic internal adjusting (only KERN PRJ) can be programmed to any time of the day. Subsequent automatic adjusting every 24 hours or after a temperature change of  $> 2^{\circ}C$ .
- Interface setting as baud rate, parity, etc.
- Printing commands and formats
- Date and time
- Density determination of liquids and solids with direct display of the density. See also "Interesting facts about density determination" on page 29.

#### Application menu

to define the balance to the user requirements

- Counting with freely selectable reference quantity, automatic reference optimization
- Call 4 secondary units, e.g. mg, ct etc.
- Animal weighing function

#### Individual user configuration

For a personal or user specific definition. Can be called up independently of the existing programme configuration of the balance as a closed unit.

#### Update via the Internet

Future software updates, additional applications and other things can be loaded on to the balance through a PC with an internet link

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### KERN – Your DKD-Calibration Partner











issues DKD calibration certificates for balances and test weights in its own accredited laboratories. It is internationally valid.

KERN is a manufacturer of test weights in the international classes of accuracy E1, E2, F1, F2, M1, M2, M3, from 1 mg up to 2000 kg  
DKD = German Calibration Service







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### Option (Mehrpreis)


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**Protective working cover** over key pad and housing, standard. Can be reordered, **KERN PR-A25**

 **Protection IP 65** (only with rechargeable battery pack) for **PRS/PRJ 4200-2 N (NM)** and all models with readout  $d = 0,1 \text{ g}$ .

Please indicate at purchase: desired model with IP65 add-on e.g. **PRJ 8200-1 IP65 NM**

 **Rechargeable battery pack** internal, operating time approx. 4 h, charging time approx. 12 h, **KERN PR-A22**

 **Data interfaces:** Second RS 232 C, **KERN PR-A11** Analogue, -10 V ... +10 V **KERN PR-A13** 20 mA current loop, **KERN PR-A12**

 **Statistics printer** **KERN YKT-01**  
**Standard printer** **KERN YKB-01**  
For all printers see page 88



**Second display**, tiltable, can be screwed to the back of the balance. Stand inclusive, stand height 240 mm, **KERN PR-A10**



**Second display** for the table, can be tilted, cable length approx. 1.5 m, **KERN PR-A09**



**Signal lamp** yellow/green/red, includes mains and interface cables, **KERN PR-A18**

**Relay box** includes interface cables, **KERN PR-A31**

### Accessories

### KERN PRS • PRJ Precision balance



**Set for density determination** of liquids and solids. Only suitable for models with readout  $d = 0,001 \text{ g}$ , consisting of:

- Board
  - Beaker
  - Thermometer
  - Plummet
  - Sifting pan
- KERN PR-A02**

**Hook for suspended weighing** **KERN PR-A04**



**Draft shield** with glass sliding doors left, right and on top. Weighing space  $W \times D \times H$  170x195x160 mm. Refittable on all models with readout  $d \leq 0,01 \text{ g}$ , **KERN PR-A01**



Interesting facts about the determination of density (Hydrostatic weighing)

**Density determination:** (specific gravity) of liquids and solid matter, in accordance with the buoyancy method, is known for a high degree of accuracy.

**Density determination of liquids:** by means of measuring the buoyancy with a glass plummet, 10 cm<sup>3</sup>, resolution 0,0001 g/cm<sup>3</sup>.

**Density determination of solid matter:** the density is the ratio of weight [g]: Volume [cm<sup>3</sup>]. The weight is derived by weighing the sample in air. The volume is determined from the buoyancy [g] of a sample, which is submerged in a liquid. The density [g/cm<sup>3</sup>] of this liquid is known (Archimedes' principle).

**Applications:**

- Materials analysis
- Cavities in solid objects
- Density of porous materials
- Pre-packaged goods check, whenever the merchandise is sold according to volume [cm<sup>3</sup>]. This volume [cm<sup>3</sup>] is calculated from the weight [g]: density [g/cm<sup>3</sup>].

Model KERN	Weighing range Max	Read-out d	Verific. value e	Repro-ducibility g	Linearity g	Weighing plate A	OPTIONS alternative				
							Veri-fication 950-xxx	M II Certificate 963-xxx	Balance test weight	Certificate 962-xxx	
PRS 320-3N	320	0,001	-	0,001	± 0,0015	A	•	-	-127	190C	-3A2
PRS 620-3N	620	0,001	-	0,001	± 0,0015	A	•	-	-127	1709	-339
PRS 4200-2N	4200	0,01	-	0,01	± 0,015	B	•	-	-127	1912	-3A2
PRS 6200-2N	6200	0,01	-	0,01	± 0,015	B	•	-	-127	1713	-3A3
PRS 8200-1N	8200	0,1	-	0,1	± 0,1	C	•	-	-127	297E	-3A2
PRS 12200-1N	12200	0,1	-	0,1	± 0,1	C	•	-	-128	2774	-444
<b>Verifiable</b>							<b>Factory verification</b>				
PRJ 320-3NM	360	0,001	0,01	0,001	± 0,0015	A	•	1	-116	-127	-
PRJ 620-3NM	620	0,001	0,01	0,001	± 0,0015	A	•	1	-116	-127	-
PRJ 1200-3N*	1220	0,001	-	0,001	± 0,002	A	•	-	-127	-	-
PRJ 4200-2NM	4200	0,01	0,1	0,01	± 0,015	B	•	1	-116	-127	-
PRJ 6200-2NM	6200	0,01	0,1	0,01	± 0,015	B	•	1	-117	-128	-
PRJ 8200-1NM	8200	0,1	1	0,1	± 0,1	C	•	1	-117	-128	-
PRJ 10200-1NM	10200	0,1	1	0,1	± 0,1	C	•	1	-117	-128	-

Overall dimensions  $W \times D \times H$  210x340x85 mm.  
Net weight approx. 5 kg. \* Non verifiable.

Permitted environmental temperature +10 ... +30 °C.  
**UNITS** Further weighing units: see the internet.

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