

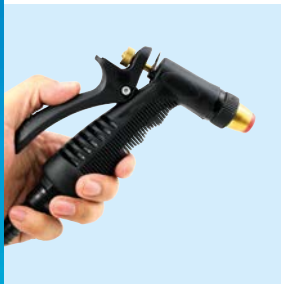
Designed for Automation

Tailored for Fast Weighing



Fast Filling

Up to 1'200 weight values per second can be delivered from the load cell, making it possible to support high speed filling processes.



Easy Cleaning

Stainless steel counterforce (17-4PH) and high ingress protection (IP69K) permit disinfection procedures with acidic agents and high pressure water jets.



Overload Protection

Load cell is protected against overloads up to 100 kg with no shift in performance characteristics.



Diagnostic Features

Load cell continuously monitors its health and issues warning messages if there is an error potential which can turn into a failure in the future; thus, downtime can be minimized.



EtherNet/IP™



SLP85xD Family

Hermetic Single Point Load Cells

Automated filling of liquid food products sets high standards for the sensors used inside the filling machines in terms of fast filling, easy cleaning and robust design.

SLP85xD family is specifically designed to address these special needs in an easy and efficient way.

With PROFIBUS DP®, PROFINET IO RT® and EtherNet/IP™ as main communication interfaces, SLP85xD Family enables a seamless integration with most popular PLC systems.

SLP85xD Family Load Cell Specifications

| Parameter | | Unit of Measure | Specification | |
|---|----------------------------|------------------------|-------------------------|----|
| Model No. | | | SLP 850/852/854 | |
| Rated Capacity (R.C.) | | kg | 10 | 20 |
| Zero Load Output | | ppm R.C | ≤ 1000 | |
| Combined Error ^{1) 2)} | | ppm R.C | ≤ 180 | |
| Repeatability Error | | ppm A.L. | ≤ 122.5 | |
| Eccentric loading error according to OIML R76 | | ppm A.L. ³⁾ | ≤ 200 | |
| Creep error, 30 minute | | ppm A.L. | ≤ 230 | |
| Zero return deviation from R.C: | | ppm A.L. | ≤ 167 | |
| Temperature Effect on | Min. Dead Load Output | ppm R.C./ °C | ≤ 16 | |
| | Sensitivity ²⁾ | ppm A.L./ °C (./°F) | ≤ 13.3 | |
| Temperature Range | Compensated | °C | -10 ... +40 | |
| | Operating | | -10 ... +50 | |
| | Safe Storage | | -20 ... +80 | |
| OIML / European Approval ⁴⁾ | Class | | C3 | |
| | nmax | | 3000 | |
| | Vmin | g | 1 | 2 |
| | Apportionment factor (PLC) | | 0.8 | |
| | Humidity classification | | CH | |
| | Min. dead load | kg | 0 | |
| | Z | | 3000 | |
| Approvals | | | OIML R60 | |
| Input Voltage Requirements | | V DC | +10 ... +30 | |
| Power consumption | | W | ≤ 2 | |
| Material | Spring element | | Stainless steel 17-4 PH | |
| | Connector | | Stainless steel SUS304 | |
| | Cable | | PU | |
| Protection | Typ | | sealed | |
| | IP Rating | | IP68/69K | |
| Maximum Static Safe Central Load | | kg | 100 | |
| Maximum Static Safe Side Load ⁵⁾ | | % R.C | 150 | |
| Direction of Loading | | | beam | |
| Deflection @ R.C., nominal | | mm | 0.05 | |
| Cable | Length | m | 6 | |
| | Diameter | mm | 7.8/10 | |

¹⁾ Error due to the combined effect of non-linearity and hysteresis

²⁾ Typical values only. The sum of errors due to Combined Error and Temperature Effect on Sensitivity comply with the requirements of OIML R60 and NIST HB44

³⁾ A.L. = Applied Load

⁴⁾ See certificate for complete information

⁵⁾ Measured with maximum platter size (40 x 40 cm)

SLP85xD Family Load Cell Specifications

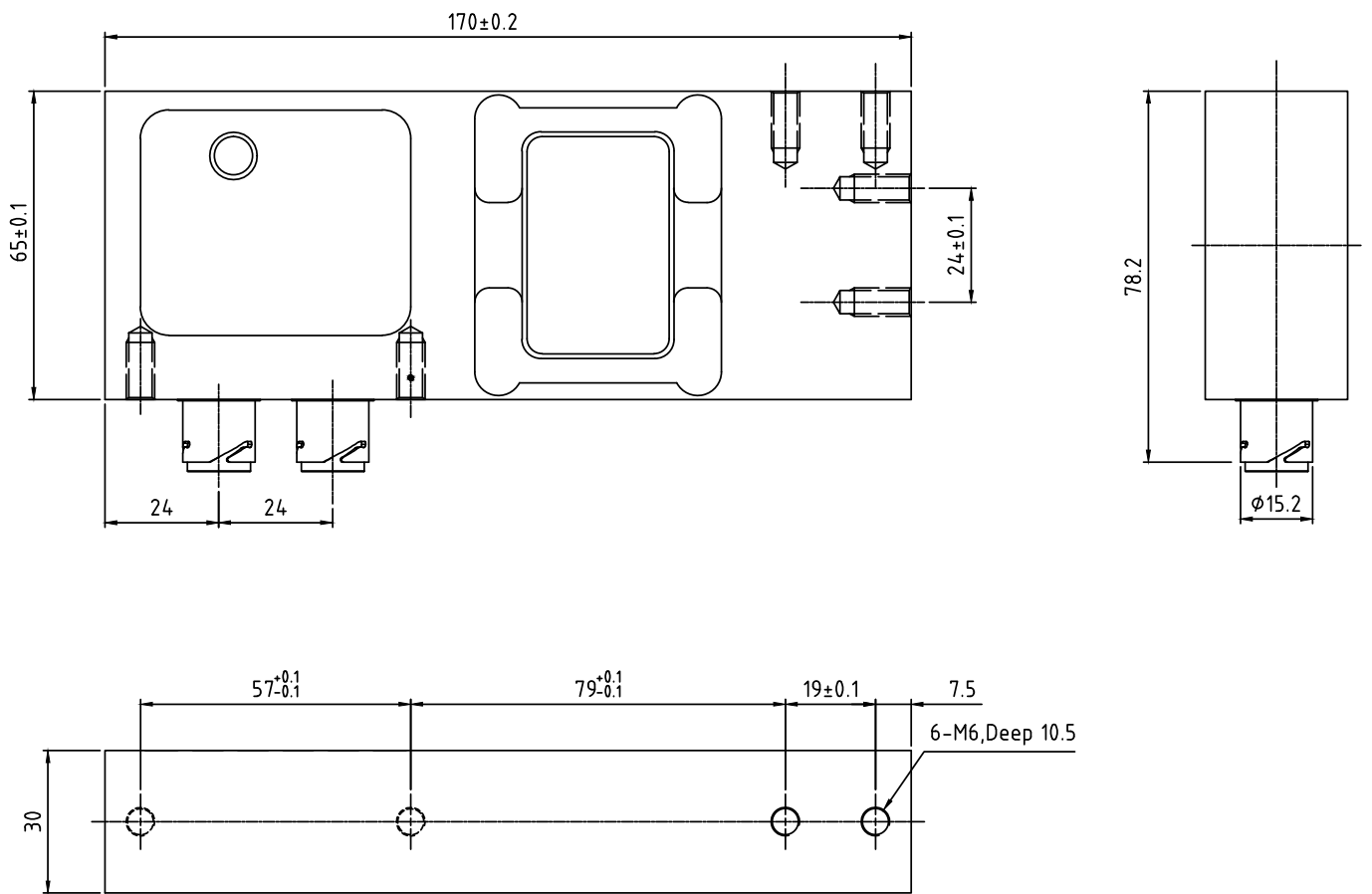
| Parameter | | Unit of Measure | Specification |
|-------------------------------|------------------------------------|-------------------|---|
| Overload Protection | | | Integrated internally |
| Max Platter Size | | cm x cm | 40 x 40 |
| Mounting Screw | Size / thread | mm | M6/1 |
| | Engaged Length | mm | 12 |
| | Torque, nominal | Nm | 10 |
| Maximum Interface Update Rate | | Values per second | 1200 |
| Data Interfaces | | | PROFIBUS DP®, PROFINET IO RT®, EtherNet/IP™ |
| Data Interface Protocol | | | SAI |
| Service Interface | | | RS-232C |
| Service Interface Protocol | | | MT-SICS |
| Digital Inputs | Number | | 3 |
| | Permissible input voltage | V | 0 ... + 30 |
| | Low-level | V | < 1.5 |
| | High-level | V | > 10 |
| | Input resistance | kΩ | > 1.2 |
| Digital Outputs | Number | | 5 |
| | External supply voltage | V | +11 ... + 30 |
| | Max. current of one output | A | < 0.5 |
| | Accumulated current of all outputs | A | < 1.2 |
| | Voltage drop | V | <1 |

Scope of Delivery

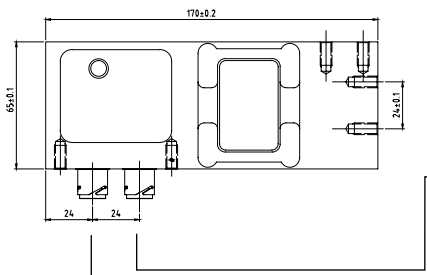
All SLP85xD Family models are supplied by default with the following items:

- Load Cell
- Production Certificate
- Declaration of Conformity
- Quick Guide

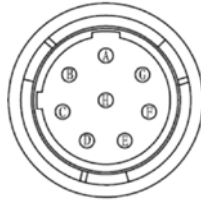
SLP85xD Family Load Cell Dimensions mm [inch]



SLP85xD Family Electrical Connections

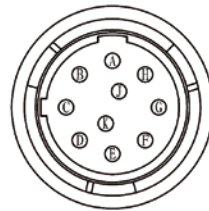


Communication Connector



| Pin number | Industrial Ethernet | Profibus DP | Cable color |
|------------|---------------------|-------------------------|----------------|
| "A" | UB1 | UB1 | Red |
| "B" | GND1 | GND1 | Black |
| "C" | RS232-RxD | RS232-RxD | Blue |
| "D" | RS232-TxD | RS232-TxD | White |
| "E" | RX- | RxD/TxD – P (RS485-B) | Green |
| "F" | TX- | ISO GND | Orange |
| "G" | TX+ | ISO VCC | White / Orange |
| "H" | RX+ | RxD/TxD – N (RS485 – A) | White / Green |

IO Connector



| Pin number | Signal | Cable color |
|------------|--------|-------------|
| "A" | OUT1 | White |
| "B" | OUT2 | Blue |
| "C" | OUT3 | Brown |
| "D" | OUT4 | Yellow |
| "E" | IN3 | Green |
| "F" | IN1 | Gray |
| "G" | GND2 | Black |
| "H" | UB2 | Red |
| "J" | OUT5 | Purple |
| "K" | IN2 | Orange |

Order Information SLP85xD Family Load Cell

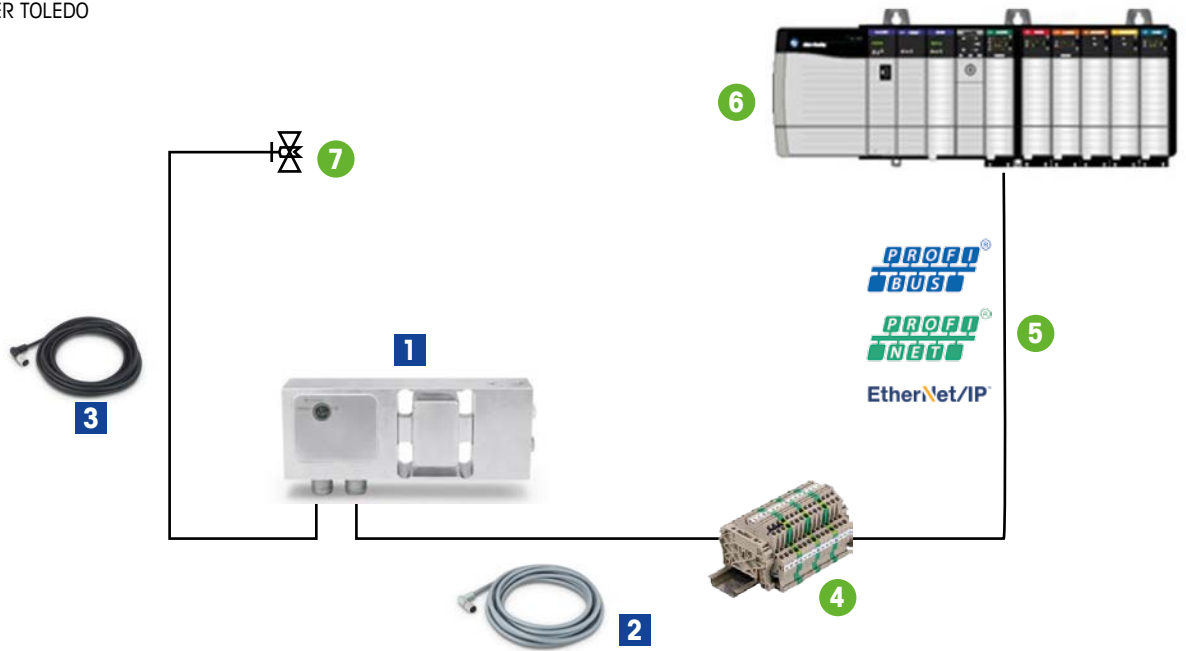
| Use Mode | Integrated Application | Physical IOs | Capacity | Profibus DP | Ethernet IP | Profinet IO |
|----------|------------------------|--------------|----------|-------------|-------------|-------------|
| SLP850D | None | None | 10 kg | 30219360 | 30219372 | 30219384 |
| | | | 20 kg | 30219362 | 30219374 | 30219386 |
| SLP852D | Filling | None | 10 kg | 30219364 | 30219376 | 30219388 |
| | | | 20 kg | 30219366 | 30219378 | 30219390 |
| SLP854D | Filling | Yes | 10 kg | 30219368 | 30219380 | 30219392 |
| | | | 20 kg | 30219370 | 30219382 | 30219394 |

SLP85xD Family

Communication with Control System (e.g. PLC)

■ Available from METTLER TOLEDO

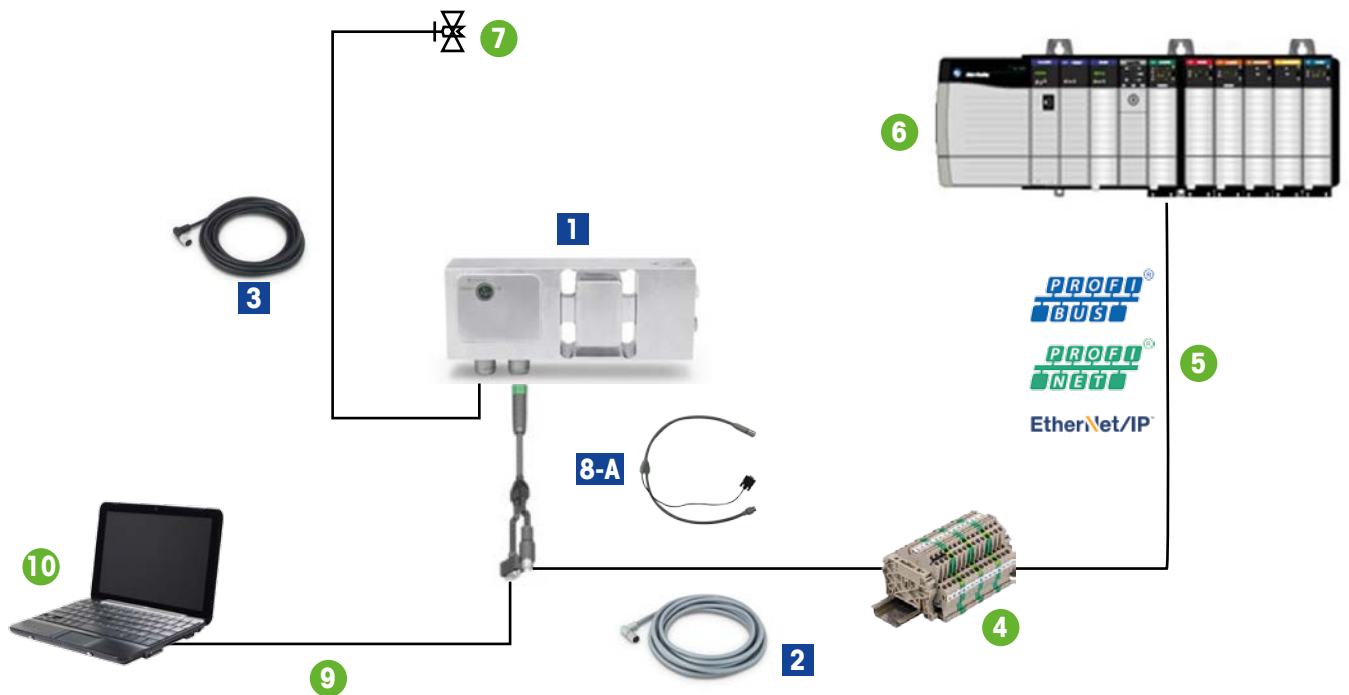
● Third party product



Communication with Control System & PC

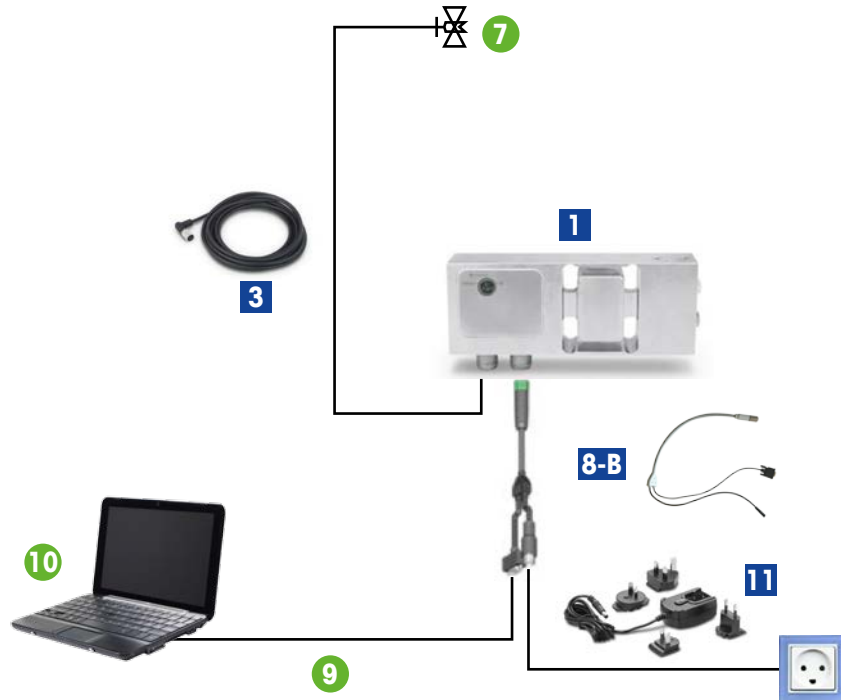
■ Available from METTLER TOLEDO

● Third party product









Communication with PC

- Available from METTLER TOLEDO
- Third party product



| No. | Item | Description | Order number |
|-----|--------------------------------------|--|-----------------------|
| 1 | Load Cell | Different models available | See order information |
| 2 | Communication cable | 6-pin / 6 m cable for the communication with the control system | See accessories |
| 3 | Input / Output cable | 10 pin / 6 m cable for the digital inputs / outputs; Only available for SLP854 | |
| 4 | Terminal strip or Switch | To make the wiring of the load cell and to connect it to a network | 3rd party product |
| 5 | Customer cable | Fieldbus cable | |
| 6 | PLC | Control system | |
| 7 | Actuator device (e.g. filling valve) | SLP854 model can control actuator devices based on binary input | |
| 8-A | Online Adapter Cable | Online adapter cable can enable simultaneous communication with the control system and PC | See accessories |
| 8-B | Offline Adapter Cable | Offline adapter cable can be used to do service/configuration on the load cell when it is not connected to the control system. | |
| 9 | Standard RS232 Cable | DSUB9 Male / Female | 3rd party product |
| 10 | PC or Laptop | For configuration or service purposes | |
| 11 | Power adapter | 12 V DC power adapter Country specific power plug needs to be ordered separately | See accessories |

Order Information SLP85xD Family Accessories

| Picture | Accessory | Description | Version | Order number |
|---|---|--|-----------------------|--------------|
|  | Communication cable (6-pins, 6 m) | For the communication with the control system (PLC or PC) | Straight connector | 30219421 |
| | | | Right-angle connector | 30219417 |
|  | IO cable (10-pins, 6 m) | For the connection with digital inputs/outputs | Straight connector | 30219422 |
| | | | Right-angle connector | 30219418 |
|  | Off-line adapter cable (8 pins, 0.8 m) | Provides RS232 interface (DSUB9) and a socket for connecting power adapter No connection possible with control system | Straight connector | 30219420 |
| | | | Right-angle connector | 30219416 |
|  | On-line adapter cable (8 pins, 0.8 m) | Provides RS232 interface (DSUB9) and a bus-capable data interface Connection possible with control system | Straight connector | 30219423 |
| | | | Right-angle connector | 30219419 |
|  | Power Adapter ¹⁾ | AC adapter • Input: 100 – 240 V, 50-60 Hz, 0.3 A • Output: 12 V, 0.84 A | None | 46001802 |
|  | Power Plug | For Europe | | 46001774 |
| | | For Australia, New Zealand and China | | 46001775 |
| | | For USA, Canada and Japan | | 46001776 |
| | | For UK | | 46001777 |

1) Country specific power plug needs to be ordered separately

Convenient Service Tool Speeds up Commissioning

The APW-Link™ PC based software can be used for simple configuration purposes.

The following operations can be performed:

- Configuration of weighing parameters
- Optimization of filter settings
- Calibration & adjustment
- Observe weighing data on a graph and export to a spreadsheet for further processing

www.mt.com/apw-link



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For more information