WIPOTEC WEIGHING TECHNOLOGY

PRODUCT
CATALOG

/ **WEIGH CELLS**
/ **WEIGHING KITS**
/ **ACCESSORIES**

WIPOTEC

WEIGHING TECHNOLOGY

THIS IS WIPOTEC

/COMPANY

WIPOTEC Weighing Technology is the global market leader and recognised OEM system supplier for machine manufacturers in terms of integration of intelligent weighing technology. Our core business is the development, production and integration of ultra-fast precision Weigh Cells and high-tech weighing systems for high-speed applications.

WIPOTEC Weighing Technology is part of the WIPOTEC Group, one of the leading companies for high-performance weighing and inspection solutions. The company continuously contributes to greater product safety, line efficiency and productivity for customers worldwide. In addition, WIPOTEC solutions make a significant social contribution to greater consumer and patient safety.

More than 30 years ago, WIPOTEC developed the "monoblock" – the core component of modern Weigh Cells – and made the high-precision weighing technology of electro-magnetic force restoration (EMFR) suitable for industrial use. The monoblock allows maximum accuracy with the shortest settling times and sampling rates of 1 millisecond and guarantees reliable weighing in inline production processes.

Our customers benefit from an exceptional level of vertical integration exceeding 90%. The result is market-leading quality, reliability and flexibility in terms of the best integration solution. We work closely with our customers on their specific requirements, drawing on the knowledge of experts from different areas, which enables us to rule out possible sources of errorin advance and to integrate the WIPOTEC weighing systems smoothly in the customer's machinery.

/SERVICE

In addition to the advantages of integrated weighing technology, our customers enjoy special services. This includes advice on defining and implementing the best application solution and extends to a professional remote service via a telephone hotline. An on-site service, staffed by experts, deals with service and maintenance cases quickly and easily. Service technicians do not simply provide first-level support just to identify the next steps, they also implement the solutions.

General and customised training courses create, application-specific expertise and complete our range of services.
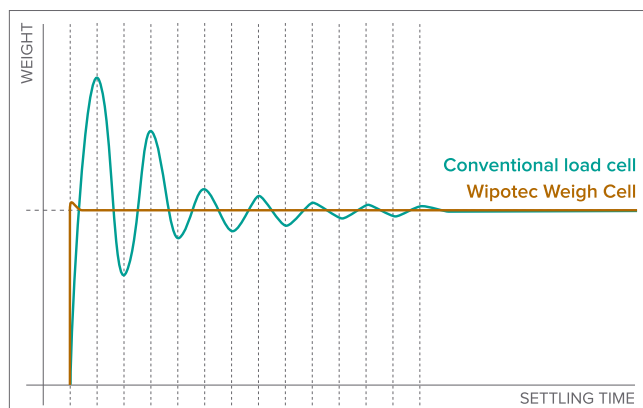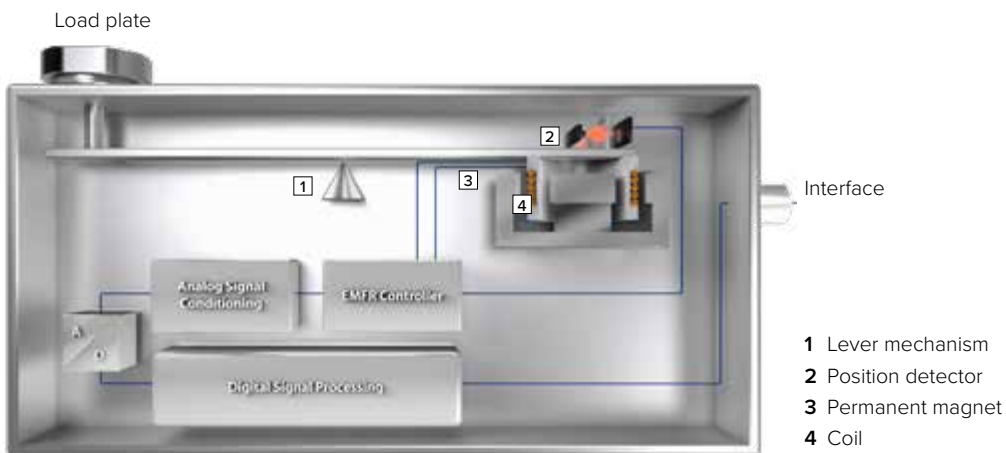
ELECTRO-MAGNETIC FORCE RESTORATION (EMFR)

EMFR Weigh Cell provides very fast and highly precise measured results

The crucial advantage of a Weigh Cell with electro-magnetic force restoration (EMFR) from WIPOTEC is its extremely short settling time and sampling rates of 1 millisecond. Compared with the weighing principle with strain gauges, it provides very precise weights significantly faster and is also straightforward, space and cost-saving to integrate into existing systems. The WIPOTEC Weigh Cell scope covers a weighing range from 1 microgram to 120 kilograms and with MMS offers the most innovative Modular Multilane System on the market. The special feature here is that customers benefit from a global range of Weigh Cells that delivers the same high quality and performance values in all markets.

Other advantages are found in product features such as robust mechanical design and reliable overload protection of the Weigh Cell. In addition, an adjustable dead load range for customer structures ensures customers enjoy key benefits.

The basis of WIPOTEC's high-precision weighing technology is the monoblock produced internally, a masterpiece of in-house machining technology. State-of-the-art CNC technology turns an aluminum into an instrument for highest precision. The monoblock forms the basis for weighing by the method of electro-magnetic force restoration (EMFR).
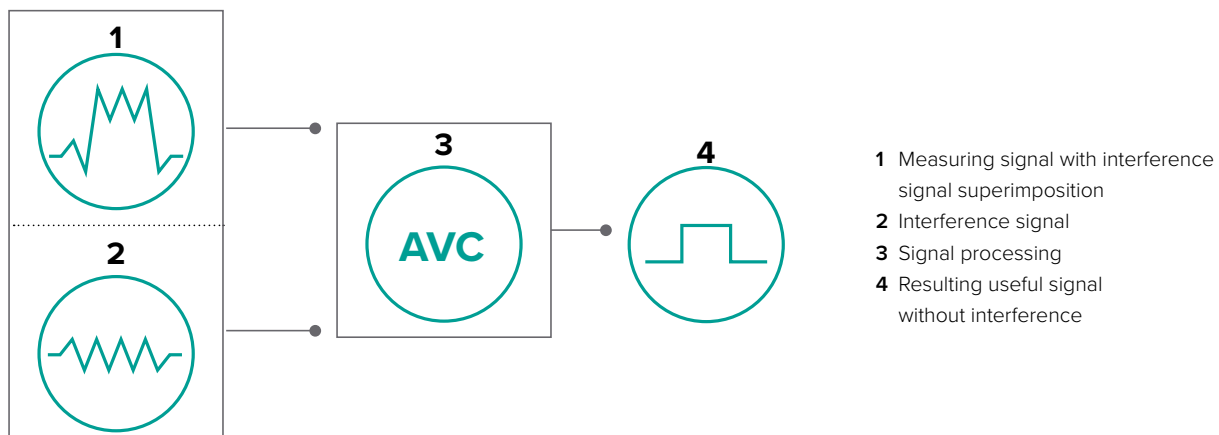
Load plate

Interface

1 Lever mechanism
2 Position detector
3 Permanent magnet
4 Coil

WEIGHT

Conventional load cell
Wipotec Weigh Cell

SETTLING TIME

ACTIVE VIBRATION COMPENSATION (AVC)

Best results despite vibration, thanks to Active Vibration Compensation

Accurate weighing results despite severe ambient vibrations? Our proprietary Active Vibration Compensation (AVC) technology, which is unique in the market, makes this possible. As a stand-alone sensor or optionally integrated in the Weigh Cell, WIPOTEC's exclusive vibration compensation technology uses intelligent algorithms to deliver precise weighing results even under the influence of vibrations and in high-speed inline processes – and without any loss of performance at that.

WIPOTEC stands for innovative solutions "Made in Germany". This seal of quality is the source for incentive and commitment in equal measure and also the basis for continuing our 30-year success story with pioneering developments in the same vein.

1 Measuring signal with interference
 signal superimposition
2 Interference signal
3 Signal processing
4 Resulting useful signal
 without interference

EMFR WEIGHING KITS

Our range of Weighing kits is based on our broad market knowledge of the respective industry and product-specific applications for integrated weighing technology. The breadth of models and types, supplemented by a large number of interfaces and support for all common fieldbus systems, enables fast and efficient integration. For special requirements that the standard range cannot cover, we are advisory engineering partners who implement the best customised application with you.

/WIPOTEC ADVANTAGES
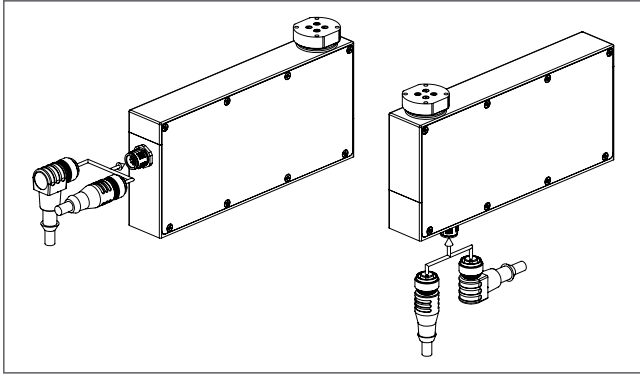
Connection options

Regardless of the installation position, the option to design the interface connection at the rear or on the bottom ensures that our Weigh Cells adapt to your machine concept. The optional straight or angled connector completes the flexible connection options.

Whether your machine communicates via CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP, EtherCAT or Powerlink, our Weigh Cells speak the same language.
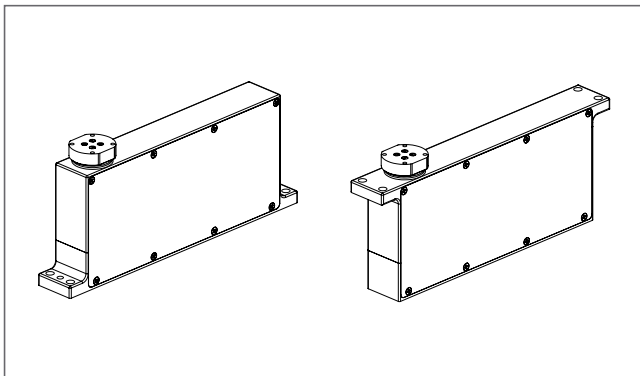

Installation options

Your machine position doesn't permit you to screw through the mounting plate from below? This is where our mounting flange, optionally on top or at the bottom, helps with installation.
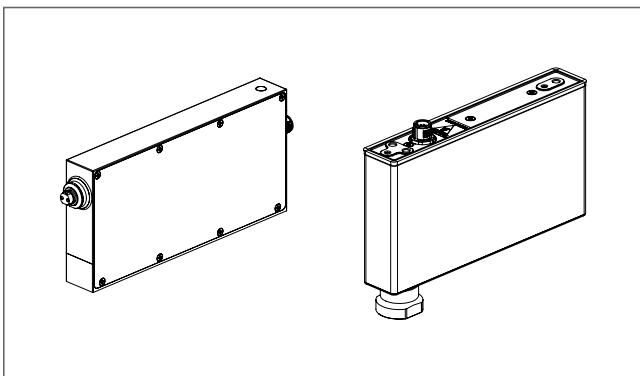

Wide variety

With Weigh Cells, the load is usually introduced from above. Do you have an innovative idea and need to introduce the load from the front? Or would you like to flip the Weigh Cells over and use them in upside down operation? You've come to the right place with us.
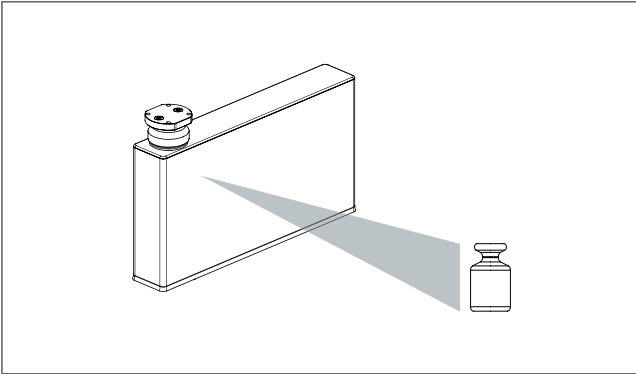
Self Check

Do you want to be able to check the WIPOTEC Weigh Cell is working properly at any time? For this we've integrated a test weight.
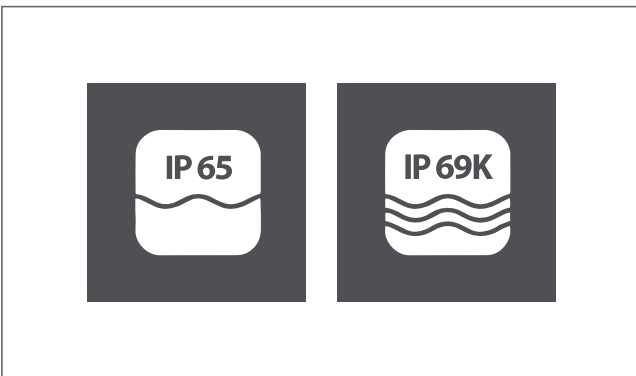
Wash Down

Do you think that WIPOTEC Weigh Cells can't be wet cleaned because they're high-precision weighing systems? We've developed Weigh Cells that meet protection class IP65 in cleaning mode. We can even cover IP69K applications with the right Weigh Cell from our extensive range.
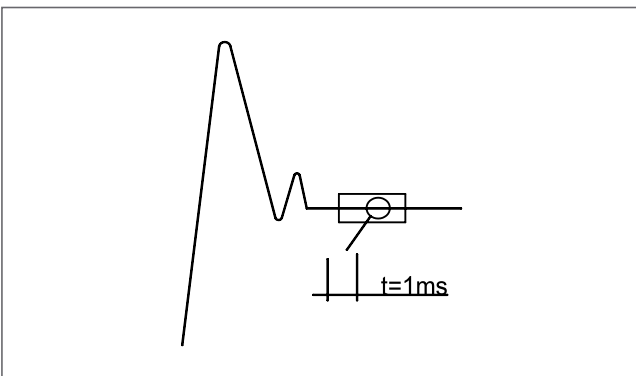
Sampling rate

A sampling rate with 1000 measured values per second makes our Weigh Cells the fastest for industrial use. At high throughputs, we determine the maximum possible number of individual weight values which ensures a precise weighing result even with short measuring times. Your task isn't a high-speed application? No problem, there's no harm in having more measuring points for the correct weighing result. Either way, a more precise weighing result will minimise your giveaway and help increase your machine performance.

/WEIGH CELLS

WEIGHING RANGE 0 - 2,000 g

10 MMS
MODULAR MULTILANE SYSTEM

17 SL-M-FS
WEIGHING RANGE 0 - 1,000 g

20 SW-M-FS
WEIGHING RANGE 0 - 2,000 g

14 SX-M-FS
WEIGHING RANGE 0 - 60 g

23 SL-E
WEIGHING RANGE 0 - 70 g

26 SL-FS
WEIGHING RANGE 0 - 1,000 g

29 SW-FS
WEIGHING RANGE 0 - 2,000 g

32 SW-D-FS
WEIGHING RANGE 0 - 2,000 g

Weigh Cell production in a clean room

35 SW-D-FS-EX
WEIGHING RANGE 0 - 2,000 g

38 SW-WD-FS
WEIGHING RANGE 0 - 2,000 g

/MMS
Modular Multilane System

The Modular Multilane System (MMS) is a flexible and individually configurable multilane system with Active Vibration Compensation (AVC). The simple plug-in system can be used for a centreline distance of 25 mm or more. All Weigh Cells of types SX-M-FS, SL-M-FS and SW-M-FS can be used within the MMS system.

The MMS with optional latest generation AVC is used wherever the weighing results and cycle rates may be adversely affected by vibrations and interference in the machine. In many cases a separate base frame is not required.

The basic module is available with different numbers of slots, as needed for application-specific lane implementations. The appropriate electronic modules for the Weigh Cells, AVC sensor, and communications are plugged into the basic module. The communications system supports all common field bus systems.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling machines for vials, syringes, etc.
- In Process Controls (IPC)
- Special machine manufacturing

/ FEATURES

- Modular system
- Individually configurable multilane system with Active Vibration Compensation
- Weigh Cell type SX-M-FS, SL-M-FS and SW-M-FS may be used
- Track distance min. 25 mm
- Separate AVC sensor for Active Vibration Compensation
- AVC sensor compensates for rotational and translational disturbances in the machine
- Separate base frame not required
- Various field bus modules for a wide variety of interfaces

/ OPTIONS

- Basic module with 3, 6, 10, or 14 slots
- AVC sensor
- Various interfaces (CAN, Profibus DP, Profinet IO, Ethernet/IP, EtherCAT, Powerlink)
- Connection cable, 4 different versions, 5m in length

COMPONENTS

AVC sensor
Type AVC1/3 – 62024655

Electronic module AVC sensor
65001210

CFI module MMS
65001120 - Ethernet/IP
65001130 - Powerlink
65001145 - Profinet IO
65001150 - EtherCat
65001160 - Profibus DP V1

Basic module MMS
58000505 - 3 slots
58000510 - 6 slots
58000520 - 10 slots
58000530 - 14 slots

Weigh Cell
SX-M-FS, SL-M-FS or SW-M-FS with option 50
(prepared for AVC)
(Data and dimensions according to separate
product information)

Connecting cable
(See below for selection)

Electronic module of Weigh Cell
65001220   Measuring resistor 50 Ohm
65001221   Measuring resistor 100 Ohm
65001222   Measuring resistor 300 Ohm
65001223   Measuring resistor 1000 Ohm
65001230   Measuring resistor 50 Ohm with I/O
65001231   Measuring resistor 100 Ohm with I/O
65001232   Measuring resistor 300 Ohm with I/O
65001233   Measuring resistor 1000 Ohm with I/O

Cover plate MMS – 15028099

CABLE VARIATIONS

25316412
5m, angled female coupling /
angled coupling plug

25316414
5m, angled female coupling /
straight coupling plug

25316415
5m, straight female coupling /
angled coupling plug

25316413
5m, straight female coupling /
straight coupling plug

25316412
5m, angled female coupling /
angled coupling plug

25316415
5m, straight female coupling /
angled coupling plug

25316414
5m, angled female coupling /
straight coupling plug

25316413
5m, straight female coupling /
straight coupling plug

30

194

43.5

113

20

A

220

B

Ø 5.3 (4x)

206

3 slots		6 slots		10 slots		14 slots	
A=192	B=178	A=294	B=280	A=430	B=416	A=566	B=552

41.7

148

41.5

83

19

19.5

132

76

29

Y

4.5

21.5

15

40

Ref-AVC X

∅ 5.4 (3x)
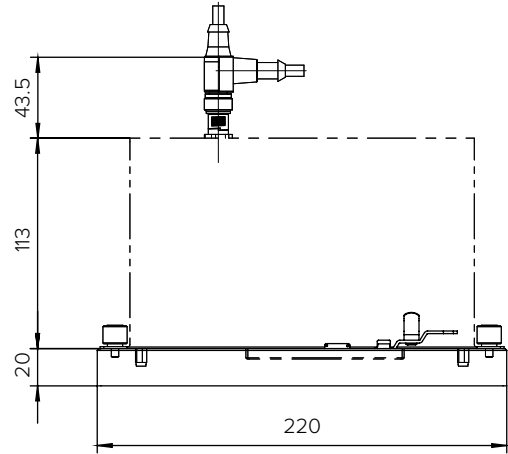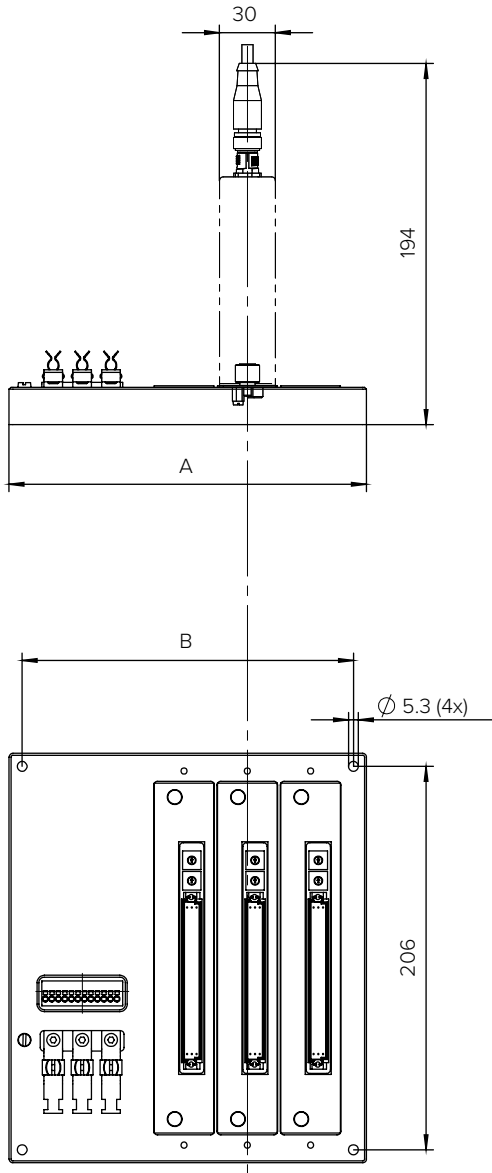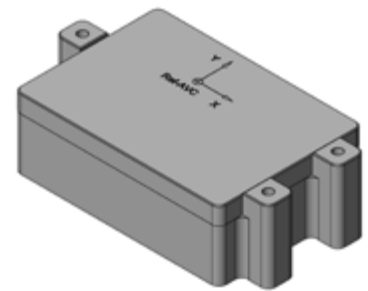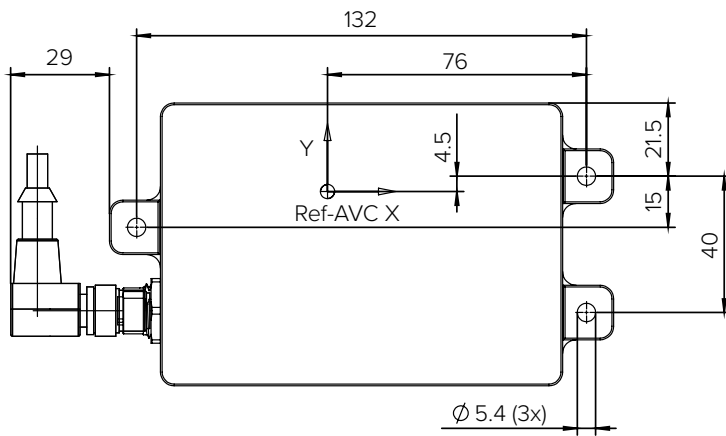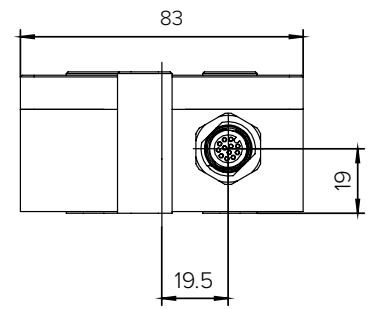
/SX-M-FS

WEIGHING RANGE 0-60 g

The series SX-M-FS Weigh Cells cover a weighing range up to 60 g. They have been specifically designed as a compact sensor component and are especially suited for installation in multi-lane applications with centerline distance of 25 mm or more.

The load distribution is designed in such a way that a customers provided housing/stainless steel cover can very easily be adapted across all Weigh Cells. System-induced active self-damping guarantees the shortest possible measuring times while maintaining the highest resolution. The Weigh Cell sensor is connected to the separate electronics via a 5 m long cable. The electronics are prepared for rail mounting in the control cabinet (in accordance with DIN 60715). The system already supplies final weight values as standard via a CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP or EtherCAT interface.

Alternatively, the sensor can also be used as a Modular Multilane System (MMS) with or without AVC technology (Active Vibration Compensation).

Further information on the Modular Multilane System (MMS) can be found on page 10.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Multilane weighing systems
- In-Process control applications (IPC)
- Special machine manufacturing
- Filling and packaging machines

/ FEATURES

- Weighing range up to 60 g, covered by 2 models
- Additive dead load range up to 60 g
- Very slim construction in aluminum housing with separate electronic box
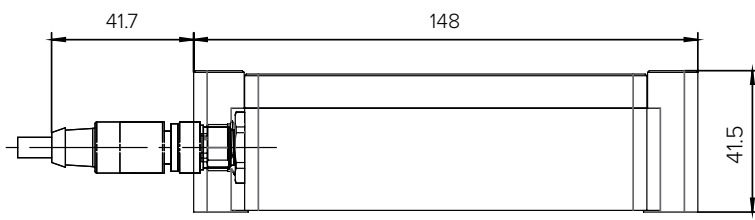- Multilane applications starting from 25 mm centerline distance
- Interface 1: CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP, EtherCAT
- Interface 2: RS 232 for service and configuration
- Sampling rate: 1 ms
- MMS capable (Modular Multilane System)

WEIGH CELL TYPE	SX-M 30/60-FS	SX-M 60/60-FS
Weighing range	30 g	60 g
Electrically adjustable dead load range [1]	60 g	60 g
Display value (d) with higher resolution (standard) [3]	0.00005 g	0.0001 g
Higher display value (d) in combination with MMS and AVC [3]	0.0001 g	0.0002 g
Linearity ≤	± 0.00015 g	± 0.0003 g
Repeatability (s) ≤ [2]	0.00005 g	0.0001 g
Repeatability (s) ≤ [2] in combination with MMS and AVC	0.0001 g	0.0002 g
Maximum dimension of weighing platform	24 x 24 mm	
Settling time (on 1‰ of final weighing range value) [4]	< 120 ms	
Protection class of the Weigh Cell	IP40 [5]	
Temperature range	+10 °C to +30 °C	
Power supply [6]	24 V DC, ± 5 %, 0.5 A	
Weight	approx. 850 g	
Interface 1	CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP, EtherCAT	
Interface 2	RS 232, 115200/8/1/odd	
Housing material	Aluminum hard coated with stainless steel side cover AISI 304	

1| From top edge of factory-provided load bolt. With a load of 50 g on the factory-provided load bolt, by using a standard version without MMS with AVC, the system is in a balanced state and most resistant to floor vibrations. When the optional load plate (approx. 20 g) is used, the dead load range is reduced to 40 g

2| Depends on the preference settings and on setup and ambient conditions of the system | The absolute repeatability is +/- 3 s

3| Temperature range: +10 °C to +30 °C

4| Weighing time = settling time plus (adjustable) measuring time

5| IP44 with customer-provided secondary protection and double labyrinth possible

6| 5 m cable connection between electronic box and sensor

Customer specific variations on request

/ OPTIONS

- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation (standard)
- **Option 12:** Higher display resolution (standard)
- **Option 13:** Binary I/O channels (standard)
- **Option 14:** Filling algorithm
- **Option 25:** Dead load compensation
- **Option 34:** Interface connection at the bottom

- **Option 35:** Profibus DP instead of CAN interface
- **Option 36:** Ethernet/IP instead of CAN interface
- **Option 37:** Profinet IO instead of CAN interface
- **Option 38:** EtherCAT instead of CAN interface
- **Option 39:** Powerlink (only for MMS)
- **Option 40:** Mounting flange bottom
- **Option 43:** Load output front
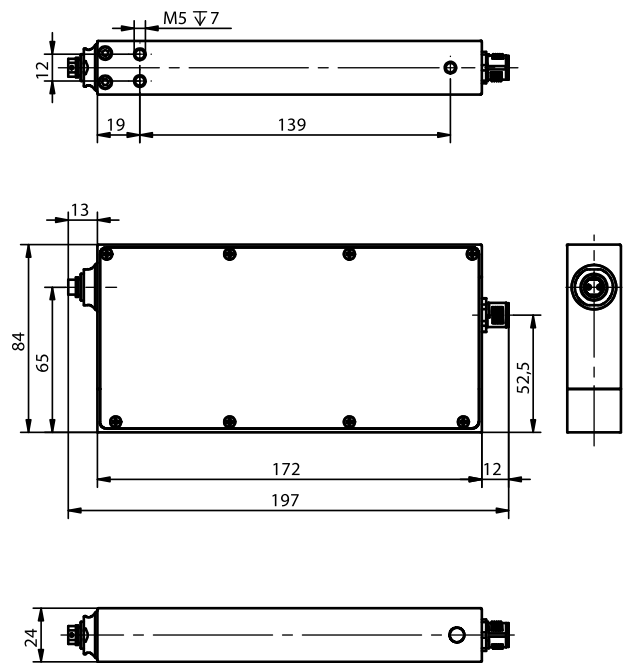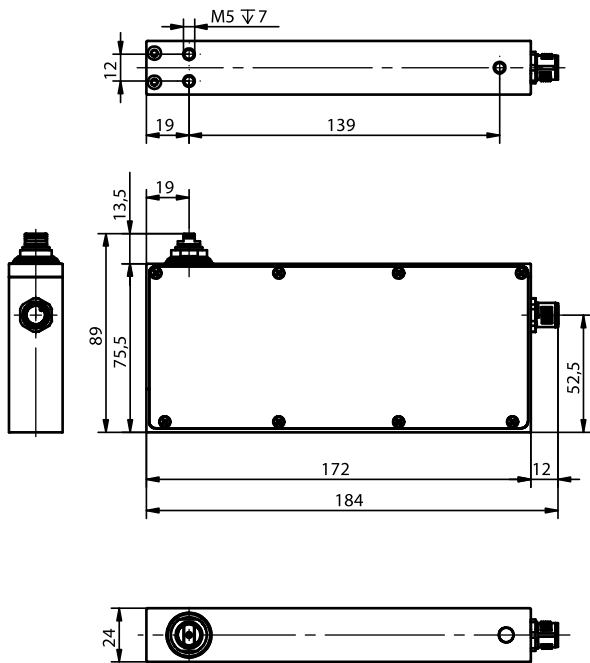
Selectable versions

① Load output
   only load bold
   with load plate
   housing options
② Electrical connection
   pug position
   cable versions
③ Installation
   housing bottom
   mounting flange bottom

All measurements in mm   Subject to technical modifications
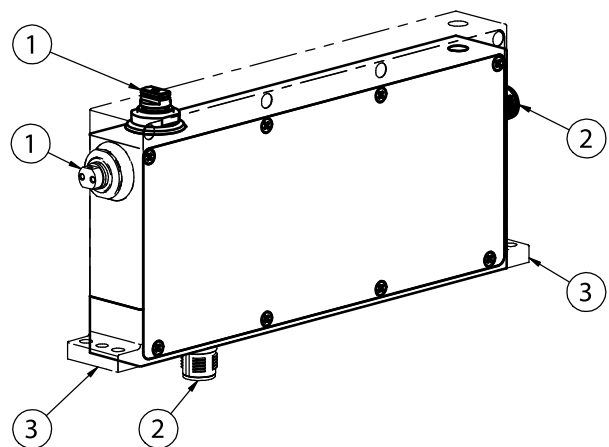
/SL-M-FS

WEIGHING RANGE 0 - 1,000 g

The series SL-M-FS Weigh Cells cover a weighing range up to 1,000 g. They have been specifically designed as a compact sensor component and are especially suited for installation in multilane applications or anywhere that small sizes are in demand. Due to the GMP-compliant design, the Weigh Cells are also suited for use in the pharmaceutical industry. System-induced active self-damping guarantees the shortest possible measuring times while maintaining the highest resolution.

The Weigh Cell sensor is connected to the separate electronics via a 5 m long cable. The electronics are prepared for rail mounting in the control cabinet in accordance with DIN 60715. The system already supplies final weight values as standard via a CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP or EtherCAT interface. The integrated software filters can be configured in many ways and thus allow optimum adaptation of the weighing system to the relevant local conditions. The Weigh Cells extensive command set enables easy control engineering integration. Supplemented with a large number of options, the Weigh Cells can also meet very specific requirements.

Alternatively, the sensor can also be used as a Modular Multilane System MMS with or without AVC technology (Active Vibration Compensation).

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling and packaging machines
- Special machine manufacturing
- Multilane weighing systems
- In-Process control applications
- CIP (Cleaning In Place)

/ FEATURES

- Weighing range up to 1,000 g, covered by 6 models
- Additive dead load range up to 600 g
- Very slim construction in aluminum or stainless steel housing with separate electronic box
- Multilane applications starting from 30 mm centerline distance
- Wash Down mode (optional)
- Interface 1: CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP, EtherCAT
- Interface 2: RS 232 for service and configuration
- Sampling rate: 1 ms
- Self Check (internal test weight)
- Upside down operation
- MMS capable (Modular Multilane System)

WEIGH CELL TYPE	SL-M 20/50-FS	SL-M 50/50-FS	SL-M 100/150-FS	SL-M 250/300-FS	SL-M 500/300-FS	SL-M 1000/600-FS
Weighing range	20 g	50 g	100 g	250 g	500 g	1,000 g
Electrically adjustable dead load range	50 g	50 g	150 g	300 g	300 g	600 g
Display value (d)	0.0002 g	0.0005 g	0.001 g	0.002 g	0.005 g	0.01 g
Display value (d) with higher resolution (Option) [3]	0.00005 g	0.0001 g	0.0002 g	0.0005 g	0.001 g	0.002 g
Higher display value (d) in combination with MMS and AVC [3]	0.0001 g	0.0002 g	0.0005 g	0.001 g	0.002 g	0.005 g
Linearity ≤	± 0.0001 g	± 0.0002 g	± 0.0004 g	± 0.001 g	± 0.002 g	± 0.004 g
Repeatability (s) ≤ [1]	0.00005 g	0.0001 g	0.0002 g	0.0005 g	0.001 g	0.002 g
Repeatability (s) ≤ [1] in combination with MMS and AVC	0.0001 g	0.0002 g	0.0005 g	0.001 g	0.002 g	0.005 g
Maximum diameter of weighing platform	40 mm	40 mm	40 mm	40 mm	80 mm	80 mm
Settling time [1][2] (on 1‰ of final weighing range value)	< 120 ms					
Protection class of the Weigh Cell	IP44 / IP65 [4]					
Temperature range	+5 °C to +40 °C					
Power supply [5]	24 V DC, ± 5%, 0.5 A					
Weight	approx. 1,000 g					
Interface 1	CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP, EtherCAT					
Interface 2	RS 232, 115200/8/1/odd					
Housing material	Aluminum hard coated with stainless steel side cover AISI 304 Option: Stainless steel AISI 316L					

[1] Depends on the preference settings and on setup and ambient conditions of the system |
   The absolute repeatability is +/- 3 s
[2] Weighing time = settling time plus (adjustable) measuring time
[3] Temperature range: +10 °C to +30 °C
[4] Protection class IP65 in combination with option Wash Down mode
[5] 5 m cable connection between electronic box and sensor

/ OPTIONS

- **Option 9:** Stainless steel housing
- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation (standard)
- **Option 12:** Higher display resolution
- **Option 13:** Binary I/O channels (standard)
- **Option 14:** Filling algorithm
- **Option 25:** Dead load compensation
- **Option 29:** Wash Down mode IP65 (with aluminum version only in combination with customers provided housing/stainless steel cover)

- **Option 34:** Interface connection at the bottom for separate electronic (standard with stainless steel housing)
- **Option 35:** Profibus DP instead of CAN interface
- **Option 36:** Ethernet/IP instead of CAN interface
- **Option 37:** Profinet IO instead of CAN interface
- **Option 38:** EtherCAT instead of CAN interface
- **Option 39:** Powerlink (only for MMS)
- **Option 40:** Mounting flange bottom (only with aluminum version)
- **Option 41:** Mounting flange top (only with aluminum version)
- **Option 42:** Upside down operation
- **Option 44:** Self Check (internal test weight)
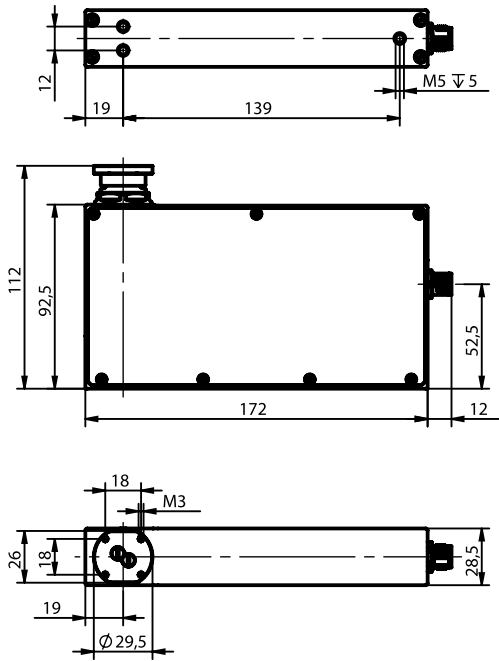
Housing: Aluminum hard coated with Wash Down mode IP65
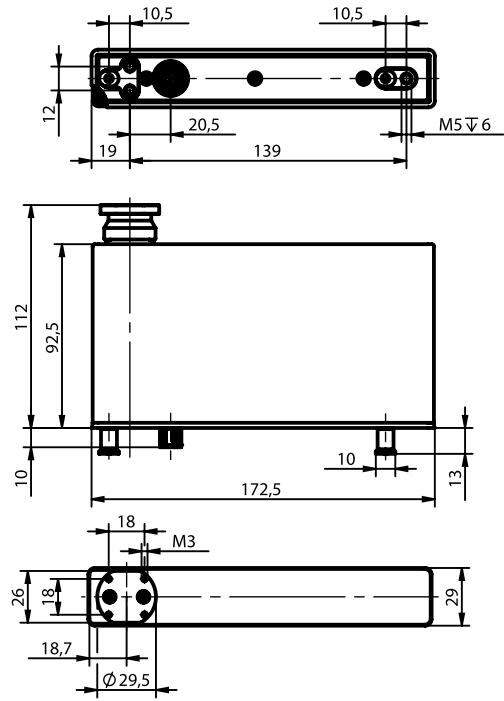
Housing: Stainless steel AISI 316L
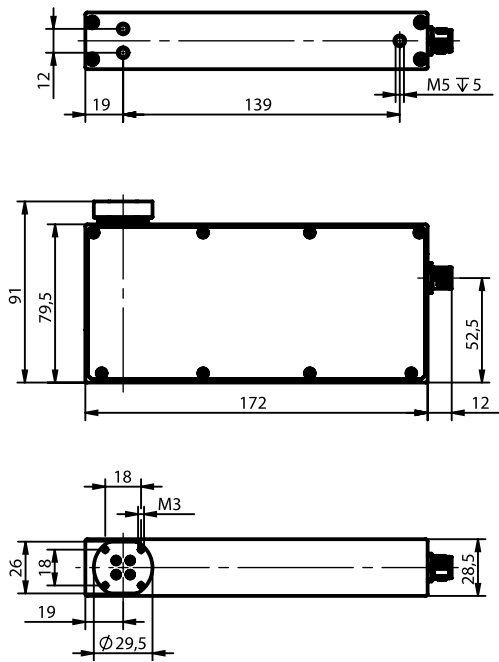
Housing: Aluminum hard coated

Selectable versions

1 Load output
   housing options

2 Electrical connection
   plug position
   cable versions

3 Installation
   housing bottom
   mounting flange bottom

All measurements in mm   Subject to technical modifications

/SW-M-FS

WEIGHING RANGE 0 - 2,000 g

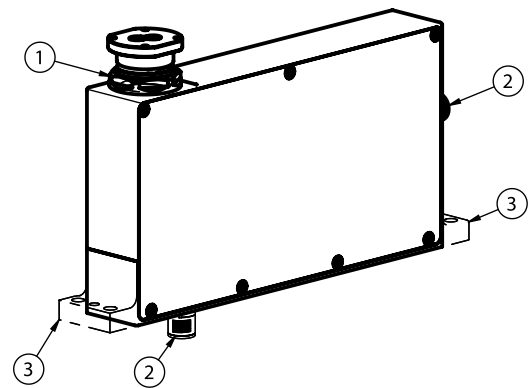The series SW-M-FS Weigh Cells cover a weighing range up to 2,000 g. They have been specifically designed as a compact sensor component and are especially suited for installation in multilane applications or anywhere that small sizes are in demand. Due to the GMP-compliant design, the Weigh Cells are also suited for use in the pharmaceutical industry. System-induced active self-damping guarantees the shortest possible measuring times while maintaining the highest resolution.

The Weigh Cell sensor is connected to the separate electronics via a 5 m long cable. The electronics are prepared for rail mounting in the control cabinet in accordance with DIN 60715. The system already supplies final weight values as standard via a CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP or EtherCAT interface. The integrated software filters can be configured in many ways and thus allow optimum adaptation of the weighing system to the relevant local conditions. The Weigh Cells extensive command set enables easy control engineering integration. Supplemented with a large number of options, the Weigh Cells can also meet very specific requirements.

Alternatively, the sensor can also be used as a Modular Multilane System MMS with or without AVC technology (Active Vibration Compensation).

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling and packaging machines
- Special machine manufacturing
- Multilane weighing systems
- In-Process-Control applications
- CIP (Cleaning In Place)

/ FEATURES

- Weighing range up to 2,000 g, covered by 2 models
- Additive dead load range up to 600 g
- Slim construction in stainless steel housing with separate electronic box
- Multilane applications starting from 50 mm centerline distance
- Wash Down mode (optional)
- Interface 1: CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP, EtherCAT
- Interface 2: RS 232 for service and configuration
- Sampling rate 1 ms
- Self check (internal test weight)
- MMS capable (Modular Multilane System)

WEIGH CELL TYPE	SW-M 1000/600-FS	SW-M 2000/600-FS
Weighing range	1,000 g	2,000 g
Electrically adjustable dead load range	600 g	600 g
Display value (d)	0.01 g	0.02 g
Display value (d) with higher resolution (Option) [3]	0.002 g	0.005 g
Higher display value (d) in combination with MMS and AVC [3]	0.005 g	0.01 g
Linearity ≤	± 0.004 g	± 0.01 g
Repeatability (S) ≤ [1]	0.002 g	0.005 g
Repeatability (S) ≤ [1] in combination with MMS and AVC	0.005 g	0.01 g
Maximum dimension of weighing platform	80 x 80 mm	
Settling time [1] [2] (on 1‰ of final weighing range value)	< 120 ms	
Protection class of the Weigh Cell	IP44 / IP65 [4]	
Temperature range	+5 °C to +40 °C	
Power supply [5]	24 V DC, ± 5%, 0.5 A	
Weight	approx. 1,000 g	
Interface 1	CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP, EtherCAT	
Interface 2	RS 232, 115200/8/1/odd	
Housing material	Stainless steel AISI 316L	

[1] Depends on the preference settings and on setup and ambient conditions of the system |
   The absolute repeatability is +/- 3 s
[2] Weighing time = settling time plus (adjustable) measuring time
[3] Temperature range: +10 °C to +30 °C
[4] Protection class IP65 in combination with Option Wash Down mode
[5] 5 m cable connection between electronic box and sensor

/ OPTIONS

- **Option 9:** Stainless steel housing (standard)
- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation (standard)
- **Option 12:** Higher display resolution
- **Option 13:** Binary I/O channels (standard)
- **Option 14:** Filling algorithm
- **Option 25:** Dead load compensation
- **Option 29:** Wash Down mode IP65

- **Option 34:** Interface connection at the bottom for separate electronic (standard with stainless steel housing)
- **Option 35:** Profibus DP instead of CAN interface
- **Option 36:** Ethernet/IP instead of CAN interface
- **Option 37:** Profinet IO instead of CAN interface
- **Option 38:** EtherCAT instead of CAN interface
- **Option 39:** Powerlink (only for MMS)
- **Option 44:** Self Check (internal test weight)
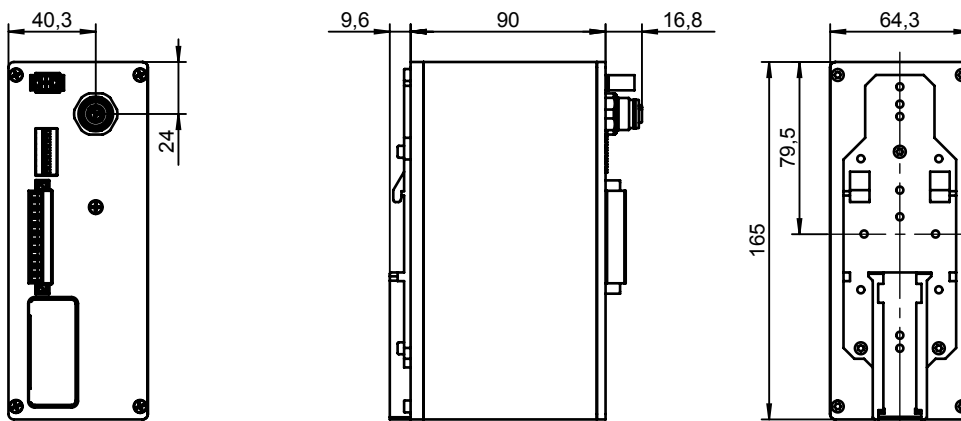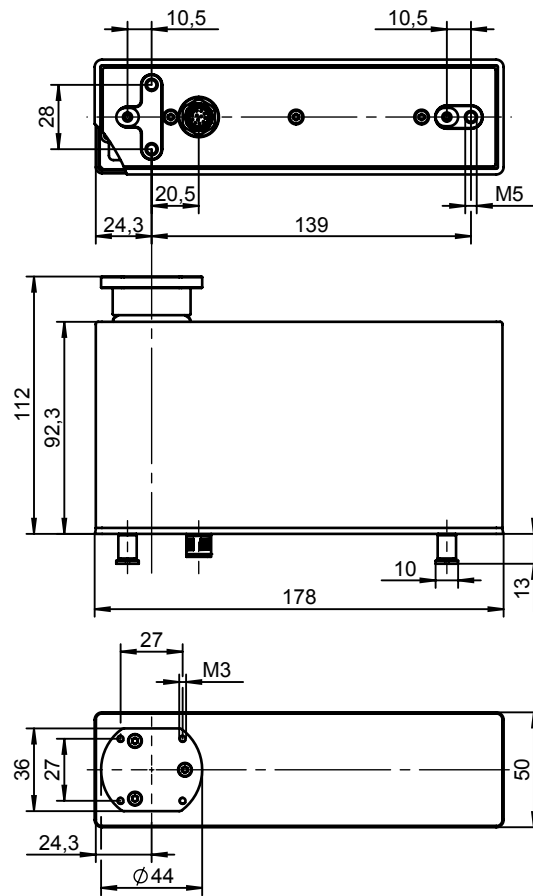
Separate electronics

/ SL-E
WEIGHING RANGE 0 - 70 g

The SL-E Weigh Cell covers the weighing range up to 70 g. It has been specifically designed as a compact sensor component and is especially suited for installation in multilane applications with centreline distance of 29 mm or more.

The SL-E Weigh Cell is ideal for integration into production machines for tea and coffee capsules. It can be raised in time with the machine cycle to ensure that the capsule is discharged as necessary from the transport plate for weighing. System-induced active self-damping guarantees the shortest possible measuring times while maintaining the highest resolution.

All the necessary functional elements are integrated in a compact housing. No other external components are necessary. The Weigh Cell is connected using customary standard cables.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Tea and coffee capsule machines
- Multilane weighing systems
- In-Process-Control applications
- Special machine manufacturing
- Filling and packaging machines

/ FEATURES

- Weighing range up to 70 g
- Minimum dead load 25 g
- Very slim construction in aluminum housing with integrated electronics
- Multilane applications starting from 29 mm centerline distance
- Interface 1: CAN
- Interface 2: RS 232 for service and configuration
- Sampling rate: 1 ms

WEIGH CELL TYPE	SL 70/25-E
Weighing range	70 g
Electrically adjustable dead load range [1]	25 g
Display value (d)	0,001 g
Linearity ≤	± 0.002 g
Repeatability (S) ≤ [2]	0.001 g
Maximum dimensions of weighing platform	24 x 24 mm
Settling time [2][3] (on 1‰ of final weighing range value)	< 120 ms
Protection class of the Weigh Cell	IP40 [4]
Temperature range	+10 °C to +30 °C
Power supply	24 V DC, ± 5%, 0.5 A
Weight	approx. 600 g
Interface 1	CAN
Interface 2	RS 232 , 115200/8/1/odd
Housing material	Aluminum hard coated with side cover in stainless steel AISI 304

[1] From top edge of the factory-set load bolt. With 60 g load on the factory-set load bolt, the system is in a balanced state and most resistant to floor vibrations. In this case, the weighing range is reduced to 35 g

[2] Depends on the preference settings and on setup and ambient conditions of the system |
   The absolute repeatability is +/- 3 s

[3] Weighing time = settling time plus (adjustable) measuring time

[4] IP44 possible with load plate with double labyrinth seal

/ OPTIONS

- **Option 11:** Bus operation
- **Option 13:** Binary I/O channels (1 input/2 outputs)
- **Option 34:** Interface connection at the bottom

With the optional CFI (CAN-Fieldbus-Interface) it is possible to connect to a variety of industrial fieldbus systems.

Please see specifications on page 80.
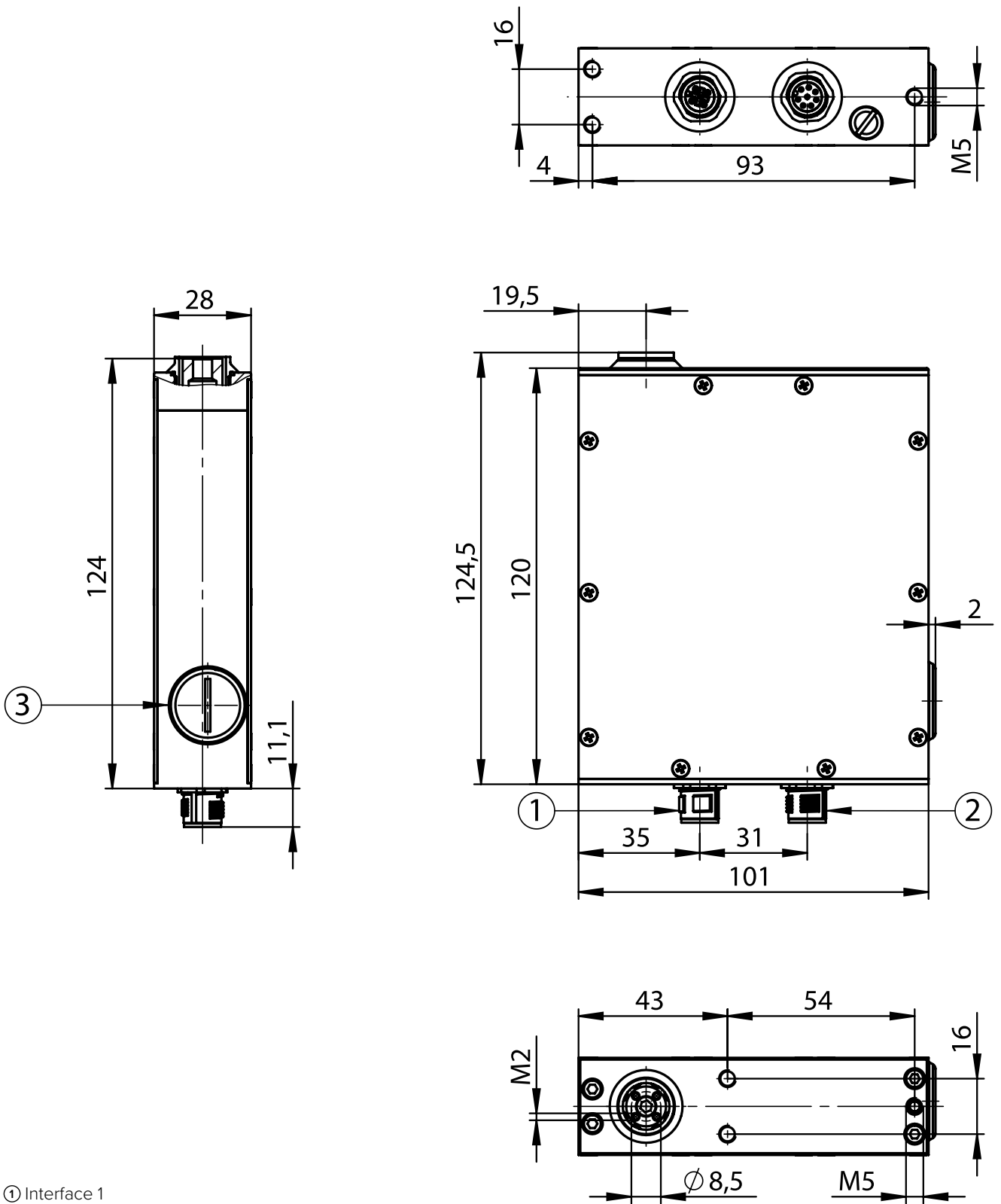
① Interface 1
② Interface 2
③ Access address settings,
   CAN bus terminator

/SL-FS
WEIGHING RANGE 0-1,000 g

The series SL-FS Weigh Cells cover a weighing range up to 1,000 g. They have been specifically designed as a compact sensor component and are especially suited for installation in multilane applications or anywhere that small sizes are in demand. Due to the GMP-compliant design, the Weigh Cells are also suited for use in the pharmaceutical industry.

As a ready-for-connection installation component, the Weigh Cell already supplies final weight values via a CAN interface as standard. The integrated software filters can be configured in many ways and thus allow optimal adaptation of the weighing system to the relevant local conditions. The Weigh Cells extensive command set enables easy control engineering integration. Supplemented with a large number of options, the Weigh Cells can also meet very specific requirements.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling machines for vials, syringes, coffee pods, etc.
- Packaging machines

/ FEATURES

- Weighing range up to 1,000 g, covered by 2 models
- Additive dead load range up to 350 g
- Slim construction
- Multilane applications starting from 30 mm centerline distance
- Binary I/O channels with customer-specific functions
- Interface 1: CAN , RS 422
- Interface 2: RS 232 for service and configuration
- Sampling rate 1 ms
- Wash Down mode
- Self Check (internal test weight)

WEIGH CELL TYPE	SL 250/150-FS	SL 1000/350-FS
Weighing range	250 g	1,000 g
Electrically adjustable dead load range	50 - 150 g	50 - 350 g
Display value (d)	0.002 g	0.01 g
Display value (d) with higher resolution (Option) [3]	0.001 g	0.005 g
Linearity ≤	± 0.002 g	± 0.01 g
Repeatability (S) ≤ [1]	0.001 g	0.005 g
Maximum diameter of weighing platform	40 mm	80 mm
Settling time [1] [2] (on 1‰ of final weighing range value)	< 150 ms	
Protection class of the Weigh Cell	IP44	
Temperature range	+5 °C to +30 °C	
Power supply	24 V DC, ± 5%, 0.5 A	
Weight	approx. 1,800 g	
Interface 1	CAN, RS 422	
Interface 2	RS 232, 115200/8/1/odd	
Housing material	Aluminum hard coated with stainless steel side cover AISI 304	

[1] Depends on the preference settings and on setup and ambient conditions of the system |
   The absolute repeatability is +/- 3 s
[2] Weighing time = settling time plus (adjustable) measuring time
[3] Temperature range: +10 °C to +30 °C

/ OPTIONS

- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation
- **Option 12:** Higher display resolution
- **Option 13:** Binary I/O channels (4-fold)
- **Option 14:** Filling algorithm
- **Option 25:** Dead load compensation
- **Option 29:** Wash Down mode IP65 (with aluminum version only in conjunction with customers provided housing/stainless steel cover)
- **Option 44:** Self Check (internal test weight)

With the optional CFI (CAN-Fieldbus-Interface) it is possible to connect to a variety of industrial fieldbus systems.

Please see specifications on page 80.

M5 ▽ 5

18

12,5

235

30

①

150,5

128

105

25

②

②

260

Ø 29,5

18

26

18

29,5

M3 ▽ 6
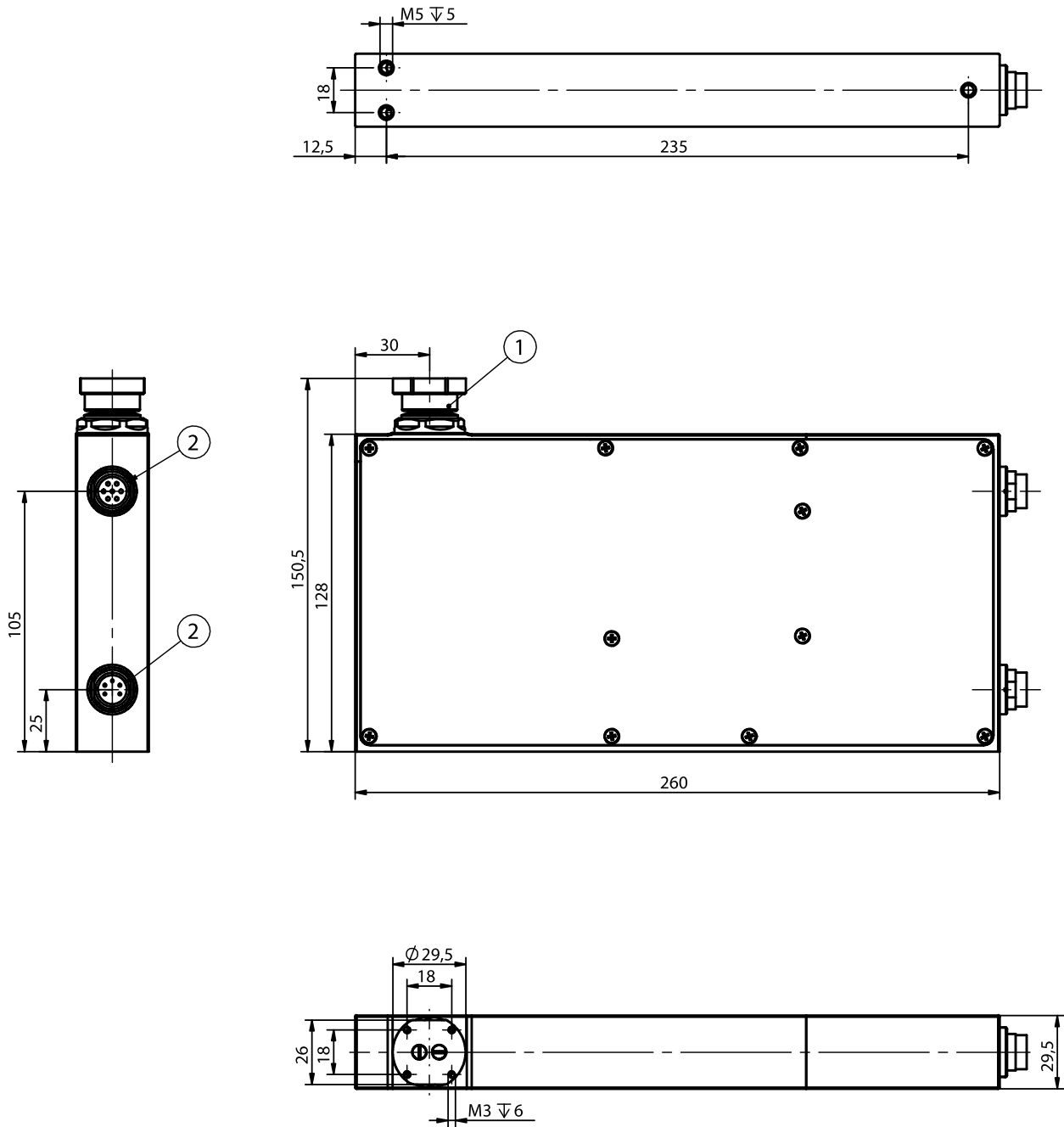
Selectable versions

① Load output
housing options

② Electrical connection
cable versions

/SW-FS

WEIGHING RANGE 0 - 2,000 g

The series SW-FS Weigh Cells cover a weighing range up to 2,000 g. They have been specifically designed as a compact sensor component and are especially suited for installation in multilane applications or anywhere that small sizes are in demand. Due to the GMP-compliant design, the Weigh Cells are also suited for use in the pharmaceutical industry.

As a ready-for-connection installation component, the Weigh Cell already supplies final weight values via a CAN interface as standard. The integrated software filters can be configured in many ways and thus allow optimal adaptation of the weighing system to the relevant local conditions. The Weigh Cells extensive command set enables easy control engineering integration. Supplemented with a large number of options, the Weigh Cells can also meet very specific requirements.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling and packaging machines
- Checkweighers (for different branches like food, pharmaceuticals, chemical and cosmetics)

/ FEATURES

- Weighing range up to 2,000 g, covered by 7 models
- Additive dead load range up to 2,000 g
- Slim construction
- Multilane applications starting from 60 mm centerline distance
- Binary I/O channels with customer-specific functions
- Interface 1: CAN , RS 422
- Interface 2: RS 232 for service and configuration
- Sampling rate: 1 ms

WEIGH CELL TYPE	SW 20/150-FS	SW 50/300-FS	SW 100/400-FS	SW 200/600-FS	SW 500/1000-FS	SW 1000/1000-FS	SW 2000/2000-FS
Weighing range	20 g	50 g	100 g	200 g	500 g	1,000 g	2,000 g
Electrical adjustable dead load range	150 g	300 g	400 g	600 g	1,000 g	1,000 g	2,000 g
Verification scale interval (e)	0.002 g [3]	0.005 g [3]	0.01 g	0.02 g	0.05 g	0.1 g	0.2 g
Display value (d)	0.0002 g	0.0005 g	0.001 g	0.002 g	0.005 g	0.01 g	0.02 g
Display value (d) with higher resolution (Option) [3]	0.00005 g	0.0001 g	0.0002 g	0.0005 g	0.001 g	0.002 g	0.005 g
Linearity ≤	± 0.0001 g	± 0.0002 g	± 0.0004 g	± 0.001 g	± 0.002 g	± 0.004 g	± 0.01 g
Repeatability (S) ≤ [1]	0.00005 g	0.0001 g	0.0002 g	0.0005 g	0.001 g	0.002 g	0.005 g
Maximum dimensions of weighing platform	80 x 60 mm	80 x 60 mm	100 x 80 mm	150 x 100 mm	150 x 100 mm	150 x 100 mm	200 x 100 mm
Settling time [1] [2] (on 1‰ of final weighing range value)	< 120 ms						
Protection class of the Weigh Cell	IP44						
Temperature range	+5 °C to +40 °C						
Power supply	24 V DC, ± 5%, 0.5 A						
Weight	approx. 2,500 g						
Interface 1	CAN, RS 422						
Interface 2	RS 232, 115200/8/1/odd						
Housing material	Aluminum hard coated						

[1] Depends on the preference settings and on setup and ambient conditions of the system |
   The absolute repeatability is +/- 3 s
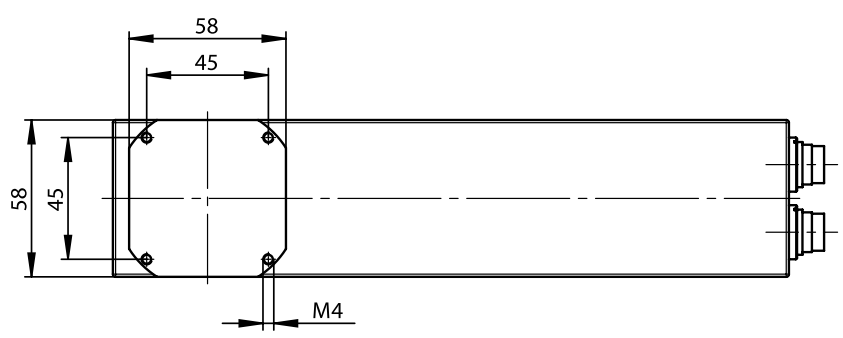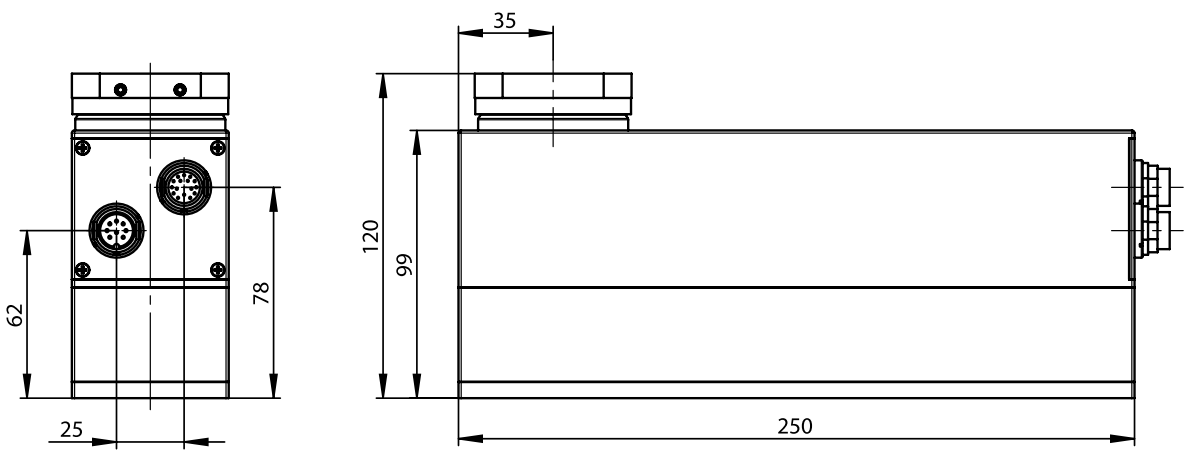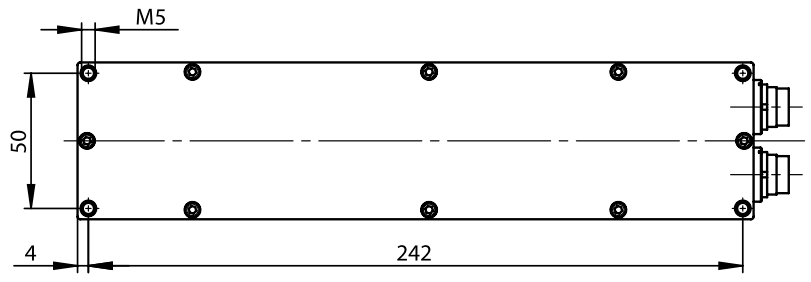[2] Weighing time = settling time plus (adjustable) measuring time
[3] Temperature range: +10 °C to +30 °C

/ OPTIONS

- **Option 2:** Forceless connection of electrical aggregates
- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation
- **Option 12:** Higher display resolution
- **Option 13:** Binary I/O channels (4-fold)
- **Option 14:** Filling algorithm
- **Option 25:** Dead load compensation
- **Option 34:** Interface connection at the bottom

With the optional CFI (CAN-Fieldbus-Interface) it is possible to connect to a variety of industrial fieldbus systems.

Please see specifications on page 80.

M5

50

4

242

35

120

99

62

78

25

250

58

45

58

45

M4

All measurements in mm   Subject to technical modifications

/SW-D-FS

WEIGHING RANGE 0 - 2,000 g

The series SW-D-FS Weigh Cells cover a weighing range up to 2,000 g. They have been specifically designed as a compact sensor component and are especially suited for installation in multilane applications or anywhere that small sizes are in demand. Due to the GMP-compliant design, the Weigh Cells are also suited for use in the pharmaceutical industry. The docking station enables tool-free replacement of the Weigh Cell for cleaning or servicing purposes.

As a ready-for-connection installation component, the Weigh Cell already supplies final weight values via a CAN interface as standard. The integrated software filters can be configured in many ways and thus allow optimal adaptation of the weighing system to the relevant local conditions. The Weigh Cells extensive command set enables easy control engineering integration. Supplemented with a large number of options, the Weigh Cells can also meet very specific requirements.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling and packaging machines
- Checkweighers (for different branches like food, pharmaceuticals, chemical and cosmetics)

/ FEATURES

- Weighing range up to 2,000 g, covered by 7 models
- Additive dead load range up to 2,000 g
- Docking station
- Slim construction
- Multilane applications starting from 72 mm centerline distance
- Binary I/O channels with customer-specific functions
- Interface 1: CAN, RS 422
- Interface 2: RS 232 for service and configuration
- Sampling rate 1 ms

WEIGH CELL TYPE	SW 20/ 150-D-FS	SW 50/ 300-D-FS	SW 100/ 400-D-FS	SW 200/ 600-D-FS	SW 500/ 1000-D-FS	SW 1000/ 1000-D-FS	SW 2000/ 2000-D-FS
Weighing range	20 g	50 g	100 g	200 g	500 g	1,000 g	2,000 g
Electrical adjustable dead load range	150 g	300 g	400 g	600 g	1,000 g	1,000 g	2,000 g
Verification scale interval (e)	0.002 g [3]	0.005 g [3]	0.01 g	0.02 g	0.05 g	0.1 g	0.2 g
Display value (d)	0.0002 g	0.0005 g	0.001 g	0.002 g	0.005 g	0.01 g	0.02 g
Display value (d) with higher resolution (Option) [3]	0.00005 g	0.0001 g	0.0002 g	0.0005 g	0.001 g	0.002 g	0.005 g
Linearity ≤	± 0.0001 g	± 0.0002 g	± 0.0004 g	± 0.001 g	± 0.002 g	± 0.004 g	± 0.01 g
Repeatability (S) ≤ [1]	0.00005 g	0.0001 g	0.0002 g	0.0005 g	0.001 g	0.002 g	0.005 g
Maximum dimension of weighing platform	80 x 60 mm	80 x 60 mm	100 x 80 mm	150 x 100 mm	150 x 100 mm	150 x 100 mm	200 x 100 mm
Settling time [1][2] (on 1‰ of final weighing range value)	< 120 ms						
Protection class of the Weigh Cell	IP44						
Temperature range	+5 °C to +40 °C						
Power supply	24 V DC, ± 5%, 0.5 A						
Weight	approx. 5,000 g						
Interface 1	CAN, RS 422						
Interface 2	RS 232, 115200/8/1/odd						
Housing material	Aluminum hard coated						

1| Depends on the preference settings and on setup and ambient conditions of the system |
  The absolute repeatability is +/- 3 s
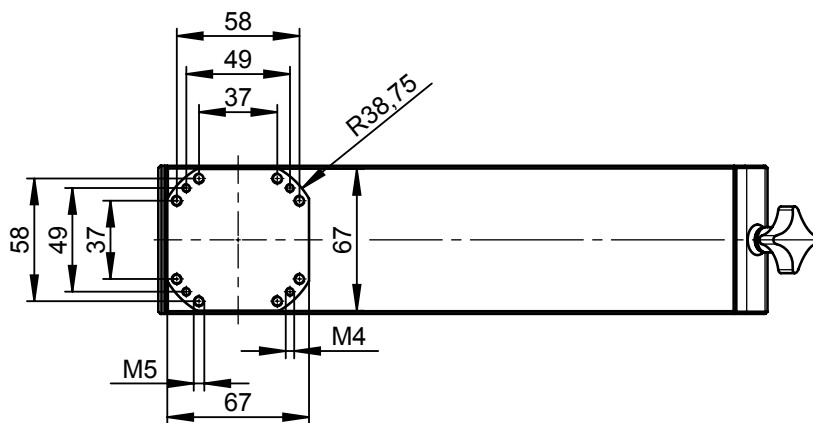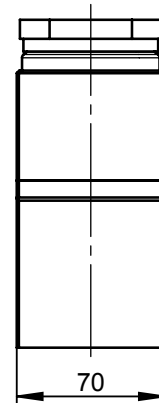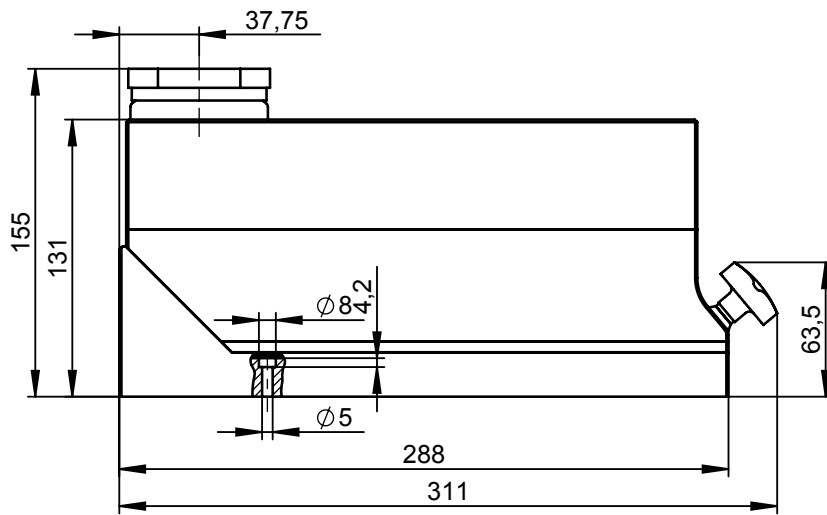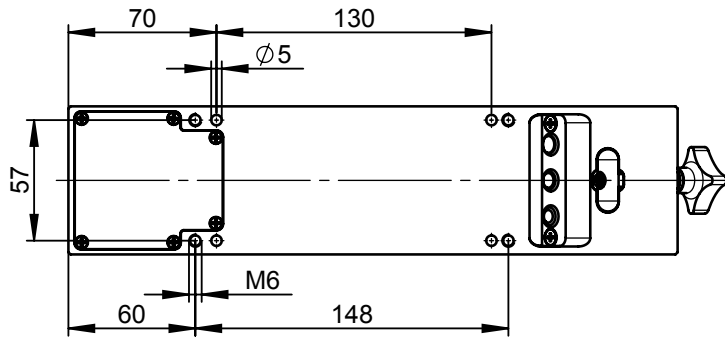2| Weighing time = settling time plus (adjustable) measuring time
3| Temperature range: +10 °C to +30 °C

/ OPTIONS

- **Option 2:** Forceless connection of electrical aggregates
- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation
- **Option 12:** Higher display resolution
- **Option 13:** Binary I/O channels (4-fold)
- **Option 14:** Filling algorithm
- **Option 25:** Dead load compensation

With the optional CFI (CAN-Fieldbus-Interface) it is possible to connect to a variety of industrial fieldbus systems.

Please see specifications on page 80.

/SW-D-FS-EX
WEIGHING RANGE 0 - 2,000 g

The series SW-D-FS-EX Weigh Cells cover a weighing range up to 2,000 g. They have been specifically designed as a compact sensor component and are especially suited for installation in multilane applications or anywhere that small sizes are in demand. Due to the special design, the Weigh Cells are also suited for use in areas at risk of explosion.

They comply with the type of protection II 3 G Ex nA IIB T4 and II 3 D Ex tD IP54 100 °C and can be used in zone 2 (gas) and zone 22 in environments with non-conductive dust. The docking station enables easy replacement of the Weigh Cell for cleaning or servicing purposes.

System-induced active self-damping guarantees the shortest possible measuring times while maintaining the highest resolution.

As a ready-for-connection installation component, the Weigh Cell already supplies final weight values via a CAN interface as standard. The integrated software filters can be configured in many ways and thus allow optimal adaptation of the weighing system to the relevant local conditions. The Weigh Cells extensive command set enables easy control engineering integration. Supplemented with a large number of options, the Weigh Cells can also meet very specific requirements.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling machines
- Packaging machines
- Checkweighers (for different branches like food, pharmaceuticals, chemical and cosmetics)

/ FEATURES

- Weighing range up to 2,000 g, covered by 5 models
- Additive dead load range up to 2,000 g
- Docking station
- Slim construction
- Multilane applications starting from 72 mm centerline distance
- Binary I/O channels with customer-specific functions
- Interface 1: CAN, RS 422
- Interface 2: RS 232 for service and configuration
- Sampling rate 1 ms^

WEIGH CELL TYPE	SW 100/400-D-FS-EX	SW 200/600-D-FS-EX	SW 500/1000-D-FS-EX	SW 1000/1000-D-FS-EX	SW 2000/2000-D-FS-EX
Weighing range	100 g	200 g	500 g	1,000 g	2,000 g
Electrical adjustable dead load range	400 g	600 g	1,000 g	1,000 g	2,000 g
Verification scale interval (e)	0.01 g	0.02 g	0.05 g	0.1 g	0.2 g
Display value (d)	0.001 g	0.002 g	0.005 g	0.01 g	0.02 g
Display value (d) with higher resolution (Option) [3]	-	0.001 g	0.001 g	0.002 g	0.005 g
Linearity ≤	± 0.002 g	± 0.002 g	± 0.002 g	± 0.004 g	± 0.01 g
Repeatability (S) ≤ [1]	0.001 g	0.001 g	0.001 g	0.002 g	0.005 g
Maximum dimension of weighing platform	100 x 80 mm	150 x 100 mm	150 x 100 mm	150 x 100 mm	200 x 100 mm
Settling time [1][2] (on 1‰ of final weighing range value)	< 120 ms				
Protection class of the Weigh Cell	IP54				
Temperature range	+5 °C to +40 °C				
Power supply	24 V DC, ± 5%, 0.5 A				
Weight	approx. 5,000 g				
Interface 1	CAN, RS 422				
Interface 2	RS 232, 115200/8/1/odd				
Housing material	Aluminum hard coated				

[1] Depends on the preference settings and on setup and ambient conditions of the system |
   The absolute repeatability is +/- 3 s

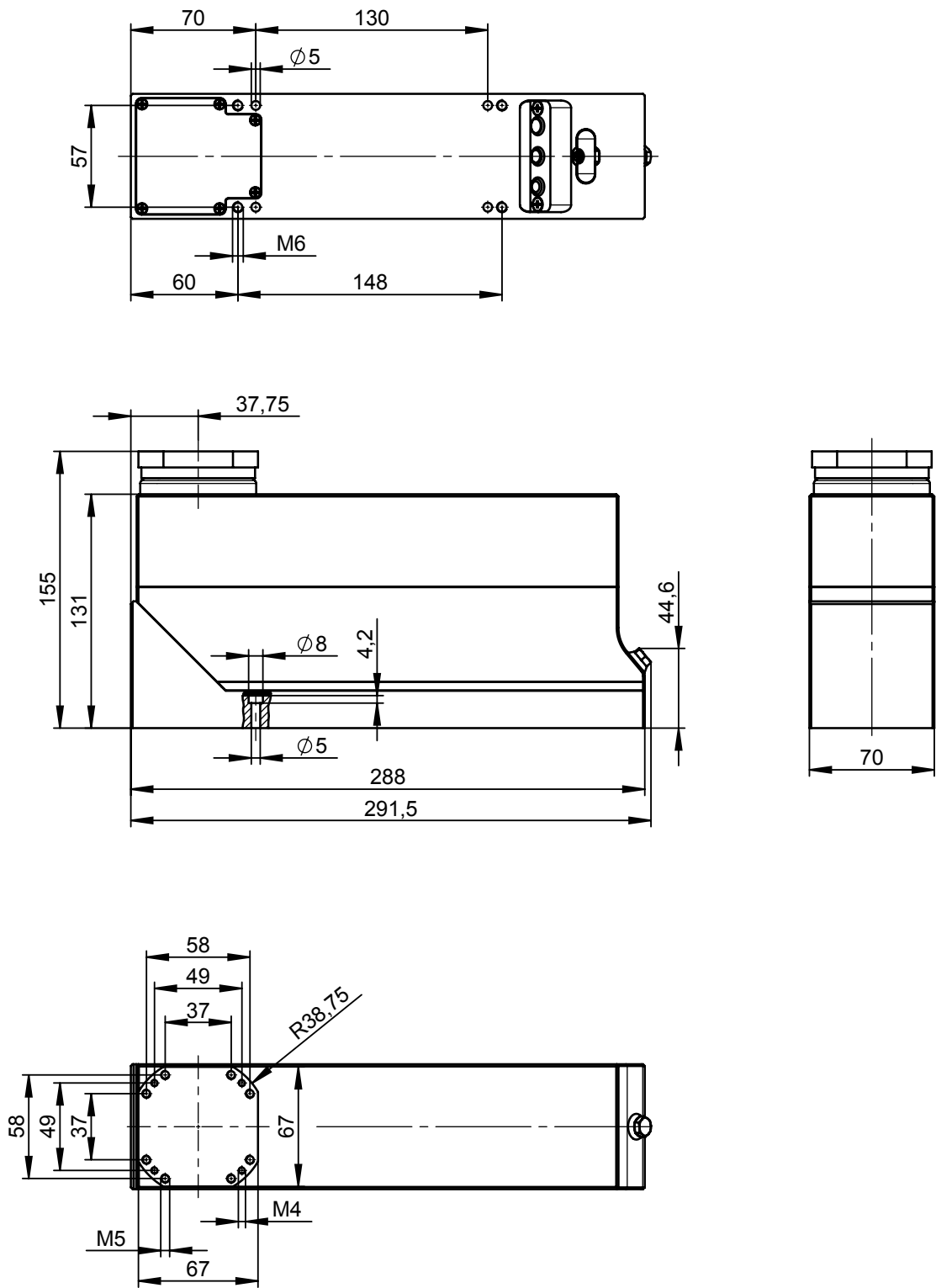[2] Weighing time = settling time plus (adjustable) measuring time

[3] Temperature range: +10 °C to +30 °C

/ OPTIONS

- **Option 2:** Forceless connection of electrical aggregates
- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation
- **Option 12:** Higher display resolution
- **Option 13:** Binary I/O channels (4-fold)
- **Option 14:** Filling algorithm
- **Option 25:** Dead load compensation

With the optional CFI (CAN-Fieldbus-Interface) it is possible to connect to a variety of industrial fieldbus systems.

Please see specifications on page 80.

/SW-WD-FS
WEIGHING RANGE 0 - 2,000 g

The series SW-WD-FS Weigh Cells cover the weighing range up to 2,000 g. They have been specifically designed as compact sensor components, meaning they are especially suited for installation into multilane applications and everywhere where small frame sizes are demanded.

By using a special construction, all Weigh Cells are suitable for Wash Down applications IP69K.

The Weigh Cell comes standard equipped - in connection with a separate electronic box - to supply final weighing values via a CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP or EtherCAT interface as ready to connect modular components. The integrated software filters can be configured in many ways, enabling optimal adaptation of the weighing system to the respective ambient conditions. The Weigh Cells extensive command set facilitates simplified control engineering integration. Complemented by a variety of options, the Weigh Cell can also fulfill very specific requirements.

The Active Vibration Compensation (AVC) can be added as an option.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling and closing machines for dairy, food and beverage industry
- Wash Down applications
- Special machine manufacturing
- Multilane weighing systems
- In-Process-Control applications

/ FEATURES

- Weighing range up to 2,000 g
- Additive dead load range up to 1,000 g
- Slim construction in stainless steel housing IP69K Wash Down with separate electronic box
- Integrated Active Vibration Compensation, AVC (optional)
- Interface 1: CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP, EtherCAT
- Interface 2: RS 232 for service and configuration
- Sampling rate 1 ms

WEIGH CELL TYPE	SW 2000/1000-WD-FS
Weighing range	2,000 g
Electrical adjustable dead load range	1,000 g
Verification scale interval (e)	0.2 g
Display value (d)	0.1 g
Display value (d) with higher resolution (Option) [3]	0.05 g
Linearity ≤	± 0.1 g
Repeatability (S) ≤ [1]	0.05 g
Maximum dimension of weighing platform	150 x 150 mm
Settling time [1][2] (on 1‰ of final weighing range value)	< 120 ms
Protection class of the Weigh Cell	IP69K
Temperature range	-5 °C to +40 °C
Power supply	24 V DC, ± 5%, 0.5 A
Weight	approx. 2,700 g
Interface 1	CAN, RS 422, Profibus DP, Profinet IO, Ethernet/IP, EtherCAT
Interface 2	RS 232, 115200/8/1/odd
Housing material	Stainless steel AISI 316L

[1] Depends on the preference settings and on setup and ambient conditions of the system |
   The absolute repeatability is +/- 3 s
[2] Weighing time = settling time plus (adjustable) measuring time
[3] Temperature range: +10 °C to +30 °C
[4] In separate electronic box with maximum 3 m cable connection

/ OPTIONS

- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation (standard)
- **Option 12:** Higher display resolution
- **Option 13:** Binary I/O channels (standard)
- **Option 14:** Filling algorithm
- **Option 19:** Active Vibration Compensation (AVC)

- **Option 25:** Dead load compensation
- **Option 35:** Profibus DP instead of CAN interface
- **Option 36:** Ethernet/IP instead of CAN interface
- **Option 37:** Profinet IO instead of CAN interface
- **Option 38:** EtherCAT instead of CAN interface
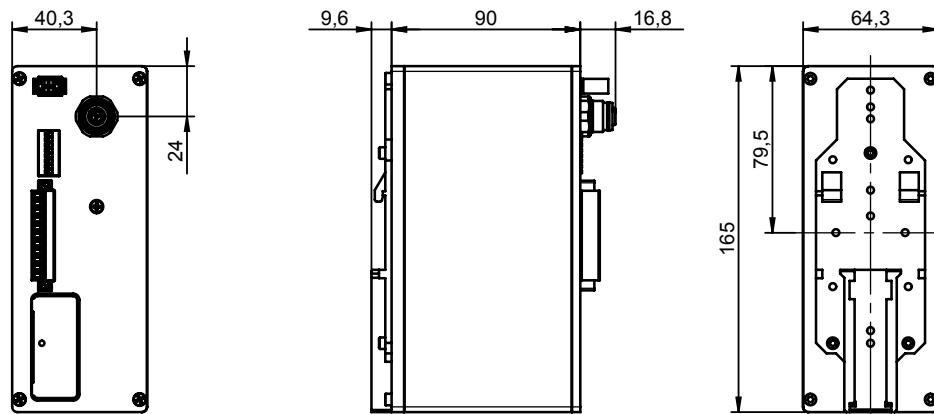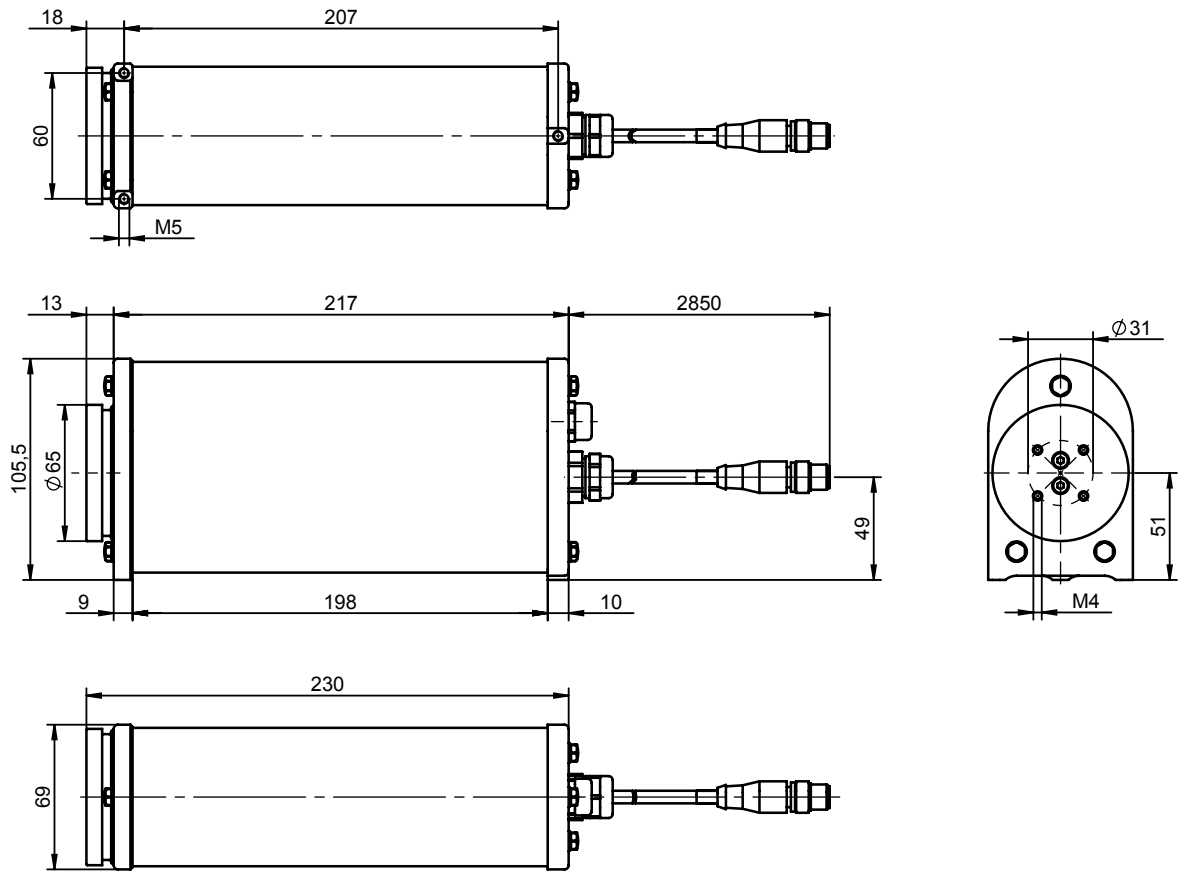
Separate electronics

/WEIGH CELLS
WEIGHING RANGE 0 - 15 kg

Highest precision when producing a monoblock

/EC-FS

WEIGHING RANGE 0 - 15 kg

The series EC-FS Weigh Cells cover a weighing range up to 15,000 g. They have been specifically designed as a compact sensor component and are especially suited for installation in checkweighers, price labellers as well as lift-up systems, filling and packaging machines, parcel and mail sorting systems. The Weigh Cells large additive dead load range favours the installation of large conveyor belts or weighing platforms without limiting the weighing range.

As a ready-for-connection installation component, the Weigh Cell already supplies final weight values via a CAN interface as standard. The integrated software filters can be configured in many ways and thus allow optimal adaptation of the weighing system to the relevant local conditions. The Weigh Cells extensive command set enables easy control engineering integration. Supplemented with a large number of options, the Weigh Cells can also meet very specific requirements.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling and packaging machines
- Lift-up systems (for cup filling machines, convenience food filling machines, etc.)
- Checkweighers (for different branches like food, pharmaceuticals, chemical and cosmetics)
- Parcel and letter sorting systems

/ FEATURES

- Weighing range up to 15 kg, covered by 5 models
- Additive dead load range up to 15 kg
- Stainless steel housing
- Protection class up to IP65
- Binary I/O channels with customer-specific functions
- Interface 1: CAN, RS 422
- Interface 2: RS 232 for service and configuration
- Sampling rate 1 ms

WEIGH CELL TYPE	EC 2000-2-FS	EC 3000-3-FS	EC 4000-3-FS	EC 4000-2-FS	EC 4000-1-FS
Weighing range	750 g	1,500 g	3,750 g	7,500 g	15,000 g
Electrical adjustable dead load range	4,000 g	8,500 g	15,000 g	15,000 g	15,000 g
Verification scale interval (e)	0.1 g	0.2 g	0.5 g	1 g	2 g
Display value (d)	0.05 g	0.1 g	0.2 g	0.5 g	1 g
Display value (d) with higher res-olution (Option) [3]	0.01 g	0.02 g	0.05 g	0.1 g	0.2 g
Linearity ≤	± 0.02 g	± 0.04 g	± 0.1 g	± 0.2 g	± 0.4 g
Repeatability (S) ≤ [1]	0.01 g	0.02 g	0.05 g	0.1 g	0.2 g
Maximum dimension of weighing platform	300 x 200 mm	500 x 300 mm	600 x 400 mm		
Settling time [1][2] (on 1‰ of final weighing range value)	< 100 ms	< 120 ms	< 200 ms		
Protection class of the Weigh Cell	IP44	IP65	IP65		
Temperature range	+5 °C to +40 °C				
Power supply	24 V DC, ± 5%, 0.5 A				
Weight	approx. 10,000 g				
Interface 1	CAN, RS 422				
Interface 2	RS 232, 115200/8/1/odd				
Housing material	Stainless steel AISI 316L				

1| Depends on the preference settings and on setup and ambient conditions of the system |
   The absolute repeatability is +/- 3 s
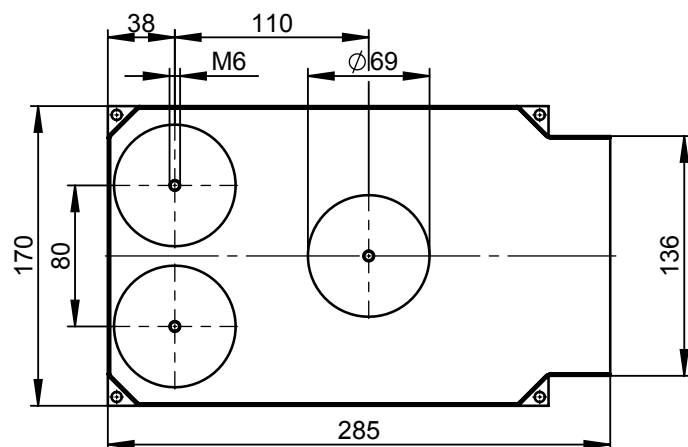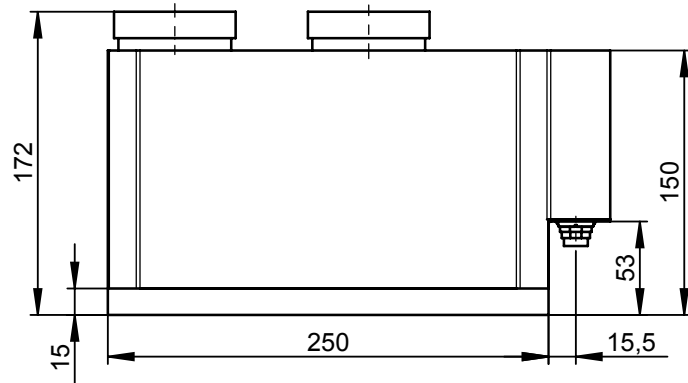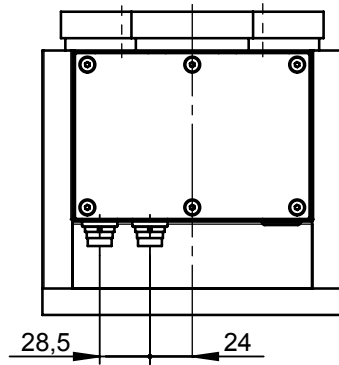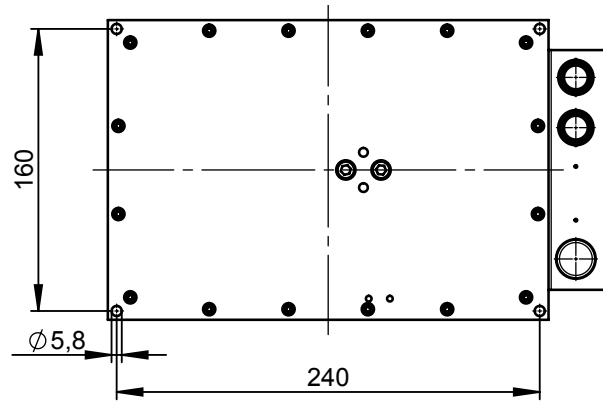2| Weighing time = settling time plus (adjustable) measuring time
3| Temperature range: +10 °C to +30 °C

/ OPTIONS

- **Option 2:** Forceless connection of electrical aggregates
- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation
- **Option 12:** Higher display resolution
- **Option 13:** Binary I/O channels (4-fold)
- **Option 14:** Filling algorithm
- **Option 25:** Dead load compensation

With the optional CFI (CAN-Fieldbus-Interface) it is possible to connect to a variety of industrial fieldbus systems.

Please see specifications on page 80.

EC-FS-AVC
WEIGHING RANGE 0 - 7.5 kg

The EC-FS-AVC series is suited to product weighing within the weighing range of 7,500 g. Their compact design and standard interfaces make them ideal for installation in machine lines and stand-alone checkweighers. The Weigh Cells large additive dead load range favours the installation of large conveyor belts or weighing platforms without limiting the weighing range.

AVC (Active Vibration Compensation), self-damping enabled by intelligent algorithms, guarantees the shortest possible measuring times while maintaining the highest resolution. As a result, the most accurate measurements can be achieved even in environments subject to vibration. These are caused by vibrations of the machine frame, floor or ceiling vibrations. As a ready-for-connection installation component, the Weigh Cell already supplies final weight values via a CAN interface as a standard feature.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling and packaging machines
- Checkweighers (for different branches like food, pharmaceuticals, chemical and cosmetics)
- Parcel and letter sorting systems

/ FEATURES

- Weighing range up to 7,500 g, covered by 4 models
- Additive dead load range up to 8,500 g
- Stainless steel housing
- Protection class up to IP65
- Binary I/O channels with customer-specific functions
- Interface 1: CAN, RS 422
- Interface 2: RS 232 for service and configuration
- Sampling rate 1 ms

WEIGH CELL TYPE	EC 2000-2-FS-AVC	EC 3000-3-FS-AVC	EC 3000-2-FS-AVC	EC 3000-1-FS-AVC
Weighing range	750 g	1,500 g	3,750 g	7,500 g
Electrical adjustable dead load range	2,500 g	5,000 g	8,500 g	7,500 g
Verification scale interval (e)	0.1 g	0.2 g	0.5 g	1 g
Display value (d)	0.05 g	0.1 g	0.2 g	0.5 g
Display value (d) with higher resolution (Option) [3]	0.01 g	0.02 g	0.05 g	0.1 g
Linearity ≤	± 0.02 g	± 0.04 g	± 0.1 g	± 0.2 g
Repeatability (S) ≤ [1]	0.01 g	0.02 g	0.05 g	0.1 g
Maximum dimension of weighing platform	300 x 200 mm	500 x 300 mm		
Settling time [1] [2] (on 1‰ of final weighing range value)	< 100 ms	< 120 ms		
Protection class of the Weigh Cell	IP44	IP65		
Temperature range	+5 °C to +40 °C			
Power supply	24 V DC, ± 5%, 0.8 A			
Weight	approx. 11,000 g			
Interface 1	CAN, RS 422			
Interface 2	RS 232, 115200/8/1/odd			
Housing material	Stainless steel AISI 316L			

[1] Depends on the preference settings and on setup and ambient conditions of the system l
     The absolute repeatability is +/- 3 s
[2] Weighing time = settling time plus (adjustable) measuring time
[3] Temperature range: +10 °C to +30 °C

/ OPTIONS

- **Option 2:** Forceless connection of electrical aggregates
- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation
- **Option 12:** Higher display resolution
- **Option 13:** Binary I/O channels (4-fold)
- **Option 14:** Filling algorithm
- **Option 19:** Active Vibration Compensation (AVC) (standard)
- **Option 25:** Dead load compensation

With the optional CFI (CAN-Fieldbus-Interface) it is possible to connect to a variety of industrial fieldbus systems.

Please see specifications on page 80.
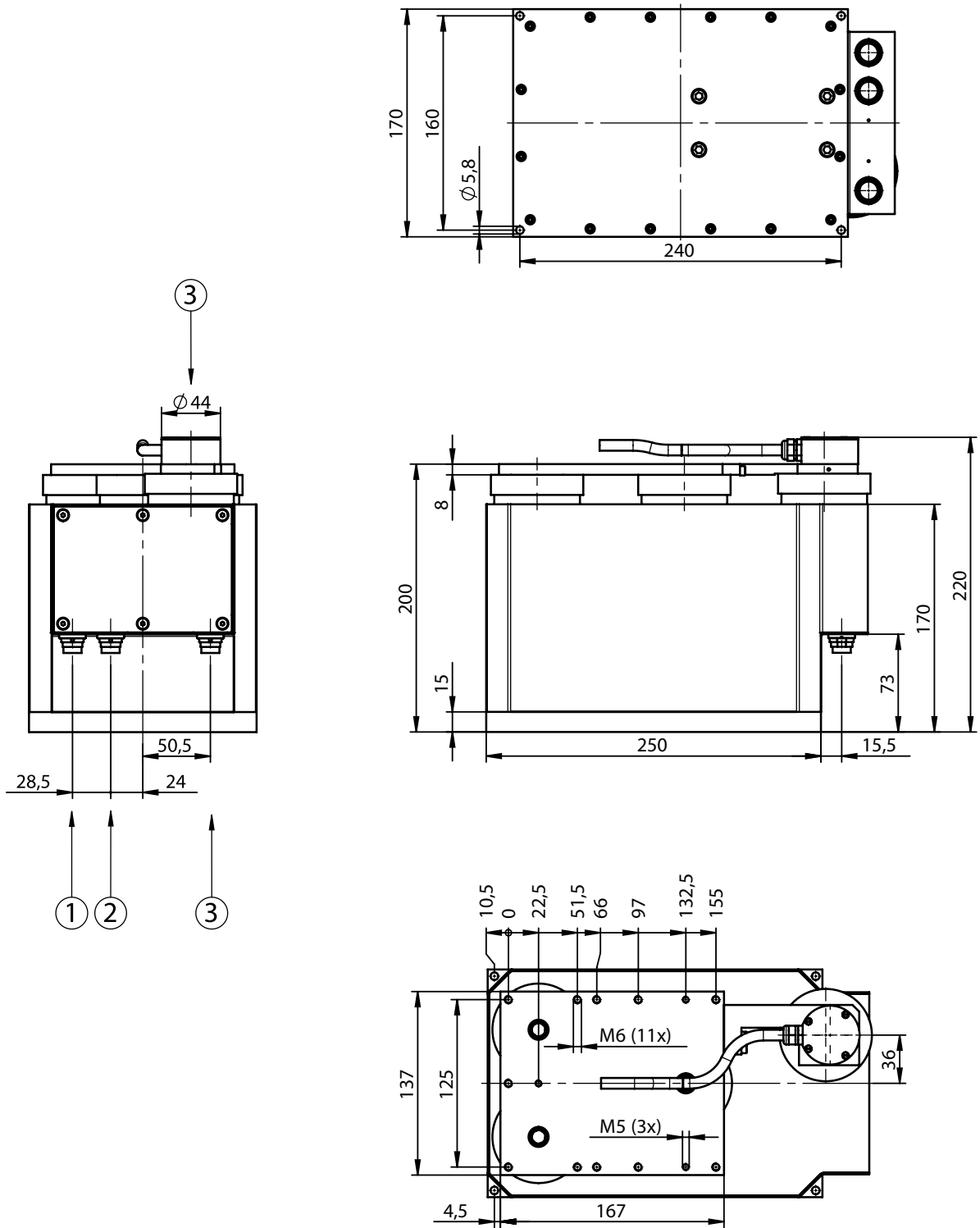
① Interface 1
② Interface 2
③ Forceless connection of electrical aggregates

/EC-ES-FS
WEIGHING RANGE 0 - 7.5 kg

The series EC-ES-FS Weigh Cells cover the weighing range up to 7,500 g. They have been specifically designed as compact sensor components, which are suited for installation into Checkweigher. By using GMP-tailored design, all Weigh Cells are especially suitable for Wash Down applications.

The large additive dead load range favors the mounting of conveyor belts or weighing platforms without limiting the weighing range. The Weigh Cell comes standard equipped to supply final weighing values via a CAN interface as ready to connect modular components.

The integrated software filters can be configured in many ways, enabling optimal adaptation of the weighing system to the respective ambient conditions. The Weigh Cells extensive command set facilitates simplified control engineering integration. Complemented by a variety of options, the Weigh Cell can also fulfill very specific requirements.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Checkweighers
- Wash Down applications
- Special machine manufacturing
- In-Process-Control applications

/ FEATURES

- Weighing range up to 7,500 g, covered by 2 models
- Additive dead load range up to 15 kg
- Stainless steel housing IP69K Wash Down
- Interface 1: CAN, RS 422
- Interface 2: RS 232 for service and configuration
- Sampling rate 1 ms

WEIGH CELL TYPE	EC 4000-3-ES-FS *	EC 4000-2-ES-FS *
Weighing range	3,750 g	7,500 g
Electrical adjustable dead load range	12,000 g	15,000 g
Display value (d) with higher resolution (Option) [3]	0.05 g	0.1 g
Linearity ≤	± 0.1 g	± 0.2 g
Repeatability (S) ≤ [1]	0.05 g	0.1 g
Maximum dimension of weighing platform	400 x 250 mm	500 x 350 mm
Settling time [1] [2] (on 1‰ of final weighing range value)	< 200 ms	
Protection class of the Weigh Cell	IP69K	
Temperature range	+5 °C to +40 °C	
Power supply	24 V DC, ± 5%, 0.5 A	
Weight	approx. 12,000 g	
Interface 1	CAN, RS 422	
Interface 2	RS 232, 115200/8/1/odd	
Fixed cable length	1.7 m	
Housing material	Stainless steel AISI 316L	

[1] Depends on the preference settings and on setup and ambient conditions of the system |
The absolute repeatability is +/- 3 s
[2] Weighing time = settling time plus (adjustable) measuring time
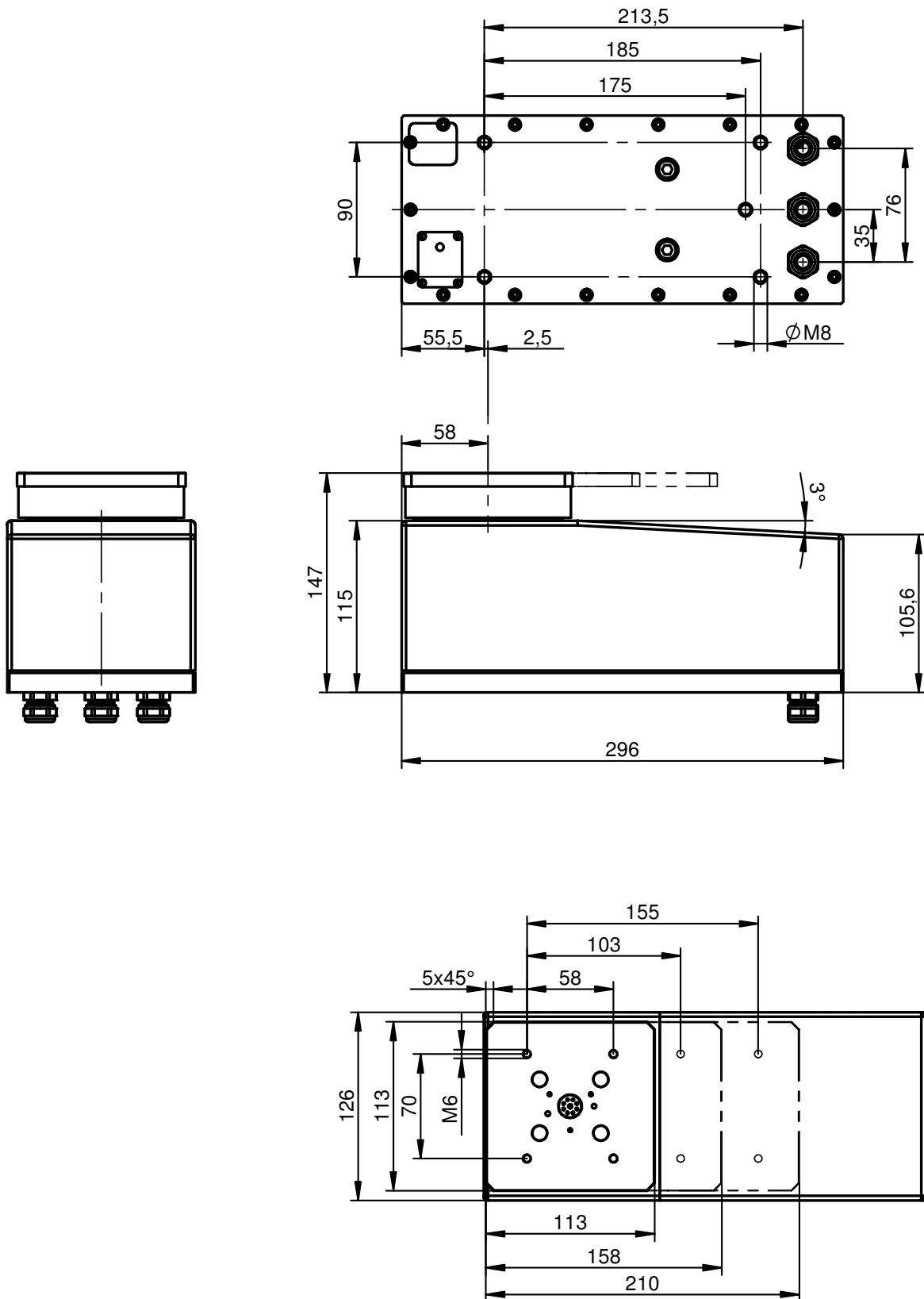[3] Temperature range: +10 °C to +30 °C
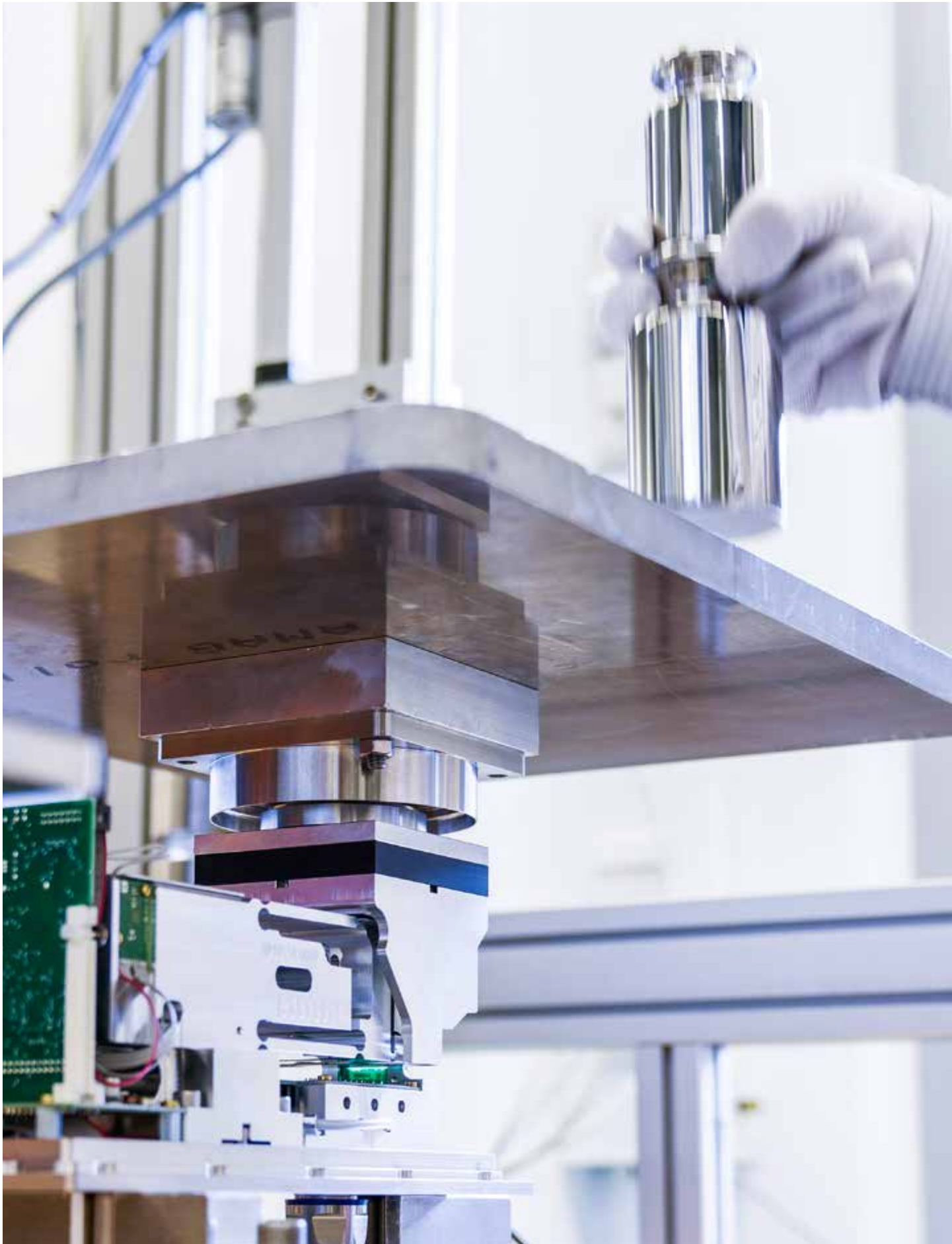
* Legal for trade capable on request

/ OPTIONS

- **Option 2:** Forceless connection of electrical aggregates
- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation
- **Option 12:** Higher display resolution (standard)

With the optional CFI (CAN-Fieldbus-Interface) it is possible to connect to a variety of industrial fieldbus systems.
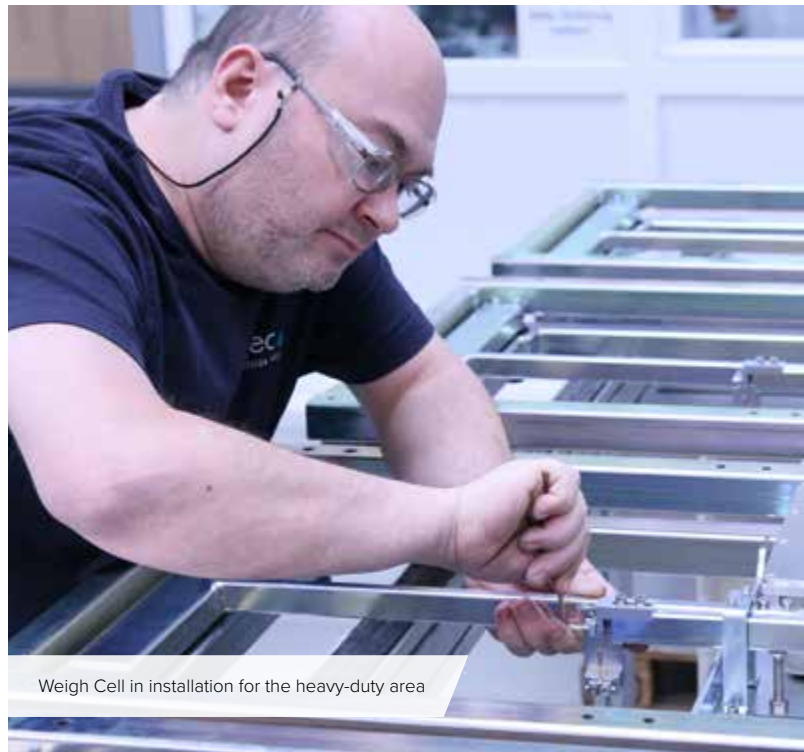
Please see specifications on page 80.

213,5

185

175

90

76

35

55,5

2,5

⌀ M8

58

147

115

3°

105,6

296

155

103

5x45°

58

126

113

70

M6

113

158

210

/ WEIGH CELLS
WEIGHING RANGE 0-120 kg

54 IW-B-FS
WEIGHING RANGE 0-120 kg

Weigh Cell in installation for the heavy-duty area

/IW-B-FS
WEIGHING RANGE 0 - 120 kg

The series IW-B-FS Weigh Cells cover the weighing range up to 120 kg. They have been specifically designed for heavy weight applications and are especially suited for installation into checkweighers, packaging and filling machines and parcel sorting systems. The large additive dead load range favours the mounting of conveyor belts or weighing platforms without limiting the weighing range.

The Weigh Cell comes standard equipped to supply final weighing values via a CAN interface as

ready to connect modular components. The integrated software filters can be configured multifunctional, enabling optimal adaptation of the weighing system to the respective ambient conditions. The Weigh Cells extensive command set facilitates simplified control engineering integration.

Complemented by a variety of options, the Weigh Cell can also fulfill very specific requirements.

Optionally the series IW-B-FS Weigh Cells with an additional terminal can also be used as a static åscale with very high resolutions.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling and packaging machines
- Checkweighers (for different branches like food, pharmaceuticals, chemical and cosmetics)
- Parcel sorting systems
- High resolution static weighing applications

/ FEATURES

- Weighing range up to 120 kg, covered by 7 models
- Additive dead load range up to 150 kg
- Stainless steel cover (option)
- Binary I/O channels with customer-specific functions
- Interface 1: CAN, RS 422
- Interface 2: RS 232 for service and configuration
- Sampling rate: 1ms

WEIGH CELL TYPE	IW-B 30k-FS		IW-B 60k-FS		IW-B 150k-FS		
Weighing range	6 kg	12 kg	30 kg	60 kg	30 kg	60 kg	120 kg
Electrical adjustable dead load range	60 kg		60 kg	30 kg	150 kg		
Verification scale interval (e)	1 g	2 g	5 g	10 g	5 g	10 g	20 g
Display value (d)	0.5 g	1 g	2 g	5 g	2 g	5 g	10 g
Display value (d) with higher resolution (Option) [3]	0.1 g	0.2 g	0.5 g	1 g	0.5 g	1 g	2 g
Linearity ≤	± 0.2 g	± 0.4 g	± 1 g	± 2 g	± 1 g	± 2 g	± 4 g
Repeatability (S) ≤ [1]	0.1 g	0.2 g	0.5 g	1 g	0.5 g	1 g	2 g
Maximum dimension of weighing platform	500 x 400 mm		500 x 400 mm		800 x 600 mm		
Settling time [1][2] (on 1‰ of final weighing range value)	< 120 ms						
Protection class of the Weigh Cell	IP65 [4]						
Temperature range	+5 °C to +40 °C						
Power supply	24 V DC, ± 5%, 0.5 A						
Weight	approx. 35 kg			approx. 65 kg			
Interface 1	CAN, RS 422						
Interface 2	RS 232, 115200/8/1/odd						
Housing material	Cover: Stainless steel AISI 304						

[1] Depends on the preference settings and on setup and ambient conditions of the system |
The absolute repeatability is +/- 3 s
[2] Weighing time = settling time plus (adjustable) measuring time
[3] Temperature range: +10 °C to +30 °C
[4] Only in combination with stainless steel cover

/ OPTIONS

- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation
- **Option 12:** Higher display resolution
- **Option 13:** Binary I/O channels (4-fold)
- **Option 14:** Filling algorithm
- **Option 25:** Dead load compensation

With the optional CFI (CAN-Fieldbus-Interface) it is possible to connect to a variety of industrial fieldbus systems.

Please see specifications on page 80.
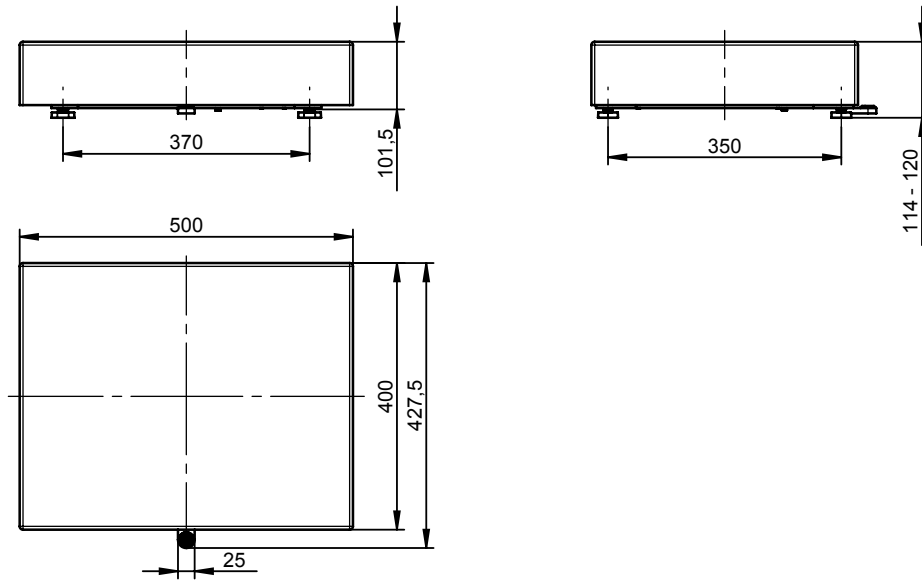
IW-B 30k-FS and IW-B 60k-FS
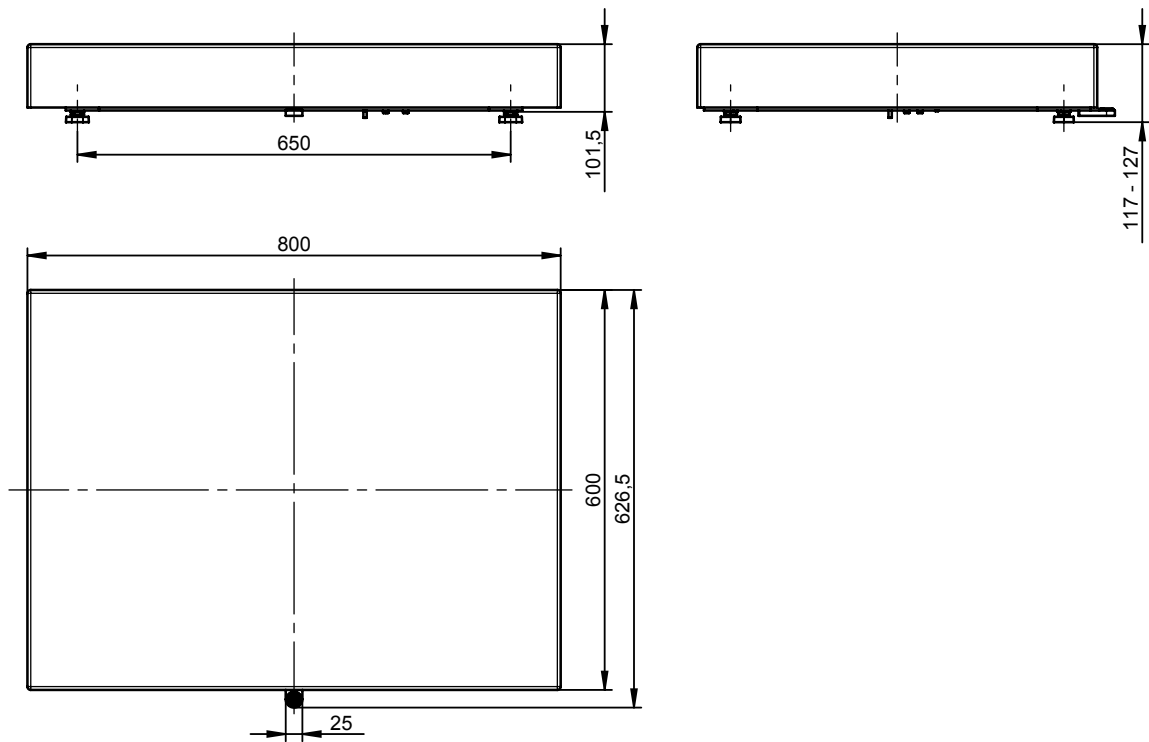
IW-B 150k-FS

MULTI-TRACK VARIANTS

MTC

60 MTC-AW-FS
WEIGHING RANGE 0 - 1 g

63 MTC-FS
WEIGHING RANGE 0 - 50 g

66 MTC-HL-FS
WEIGHING RANGE 0 - 250 g

Weigh Cell production in a clean room

/MTC-AW-FS

WEIGHING RANGE 0 - 1 g

The series MTC-AW-FS Weigh Cells cover a weighing range up to 1 g. They have been specifically designed as compact sensor components and are especially suited for applications in the pharmaceutical industry.

As a ready-for-connection installation component, the Weigh Cell already supplies final weight values via a CAN interface as a standard feature. The integrated software filters can be configured in multiple ways and thus allow optimal adaptation of the weighing system to the relevant local conditions. The Weigh Cells extensive command set enables easy control engineering integration.

Supplemented by a large number of options, as well as different weighing and dead load ranges, a wide variety of customer-specific versions can be implemented in addition to the standard design.

When it comes to the number of tracks and the centre-line distance in conjunction with the weighing range and the design, all MTC-AW-FS systems are always customer specific and individual.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling machines for vials, syringes, etc.
- Packaging machines
- Capsule and tablet weighing machines

/ FEATURES

- Weighing range up to 1 g
- Additive dead load range up to 5 g
- Active Vibration Compensation (AVC)
- High or flat type structured shape
- Protection class up to IP31
- Binary I/O channels with customer-specific functions
- Interface 1: CAN, RS 422
- Interface 2: RS 232 for service and configuration
- Sampling rate 1 ms

WEIGH CELL TYPE	MTC-AW-0.25/1-FS	MTC-AW-0.5/2.5-FS	MTC-AW-1/5-FS
Weighing range	0.25 g	0.5 g	1 g
Electrical adjustable dead load range [4]	1 g	1 - 2.5 g	1 - 5 g
Display value (d)	0.000001 g	0.000002 g	0.00002 g
Display value (d) with higher resolution (Option) [3]	0.000001 g	0.000002 g	0.00001 g
Linearity ≤	± 0.000001 g	± 0.000002 g	± 0.00002 g
Repeatability (S) ≤ [1]	0.000001 g	0.000002 g	0.00001 g
Maximum dimension of weighing platform	10 mm	10 mm	15 mm
Settling time [1] [2] (on 1‰ of final weighing range value)	< 1,500 ms	< 1,500 ms	< 200 ms
Protection class of the Weigh Cell	IP31		
Temperature range	+5 °C to +30 °C		
Power supply	24 V DC, ± 5%, 0.5 A		
Interface 1	CAN, RS 422		
Interface 2	RS 232, 115200/8/1/odd		
Housing material	Aluminum hard coated		

[1] Depends on the preference settings and on setup and ambient conditions of the system |
   The absolute repeatability is +/- 3 s
[2] Weighing time = settling time plus (adjustable) measuring time
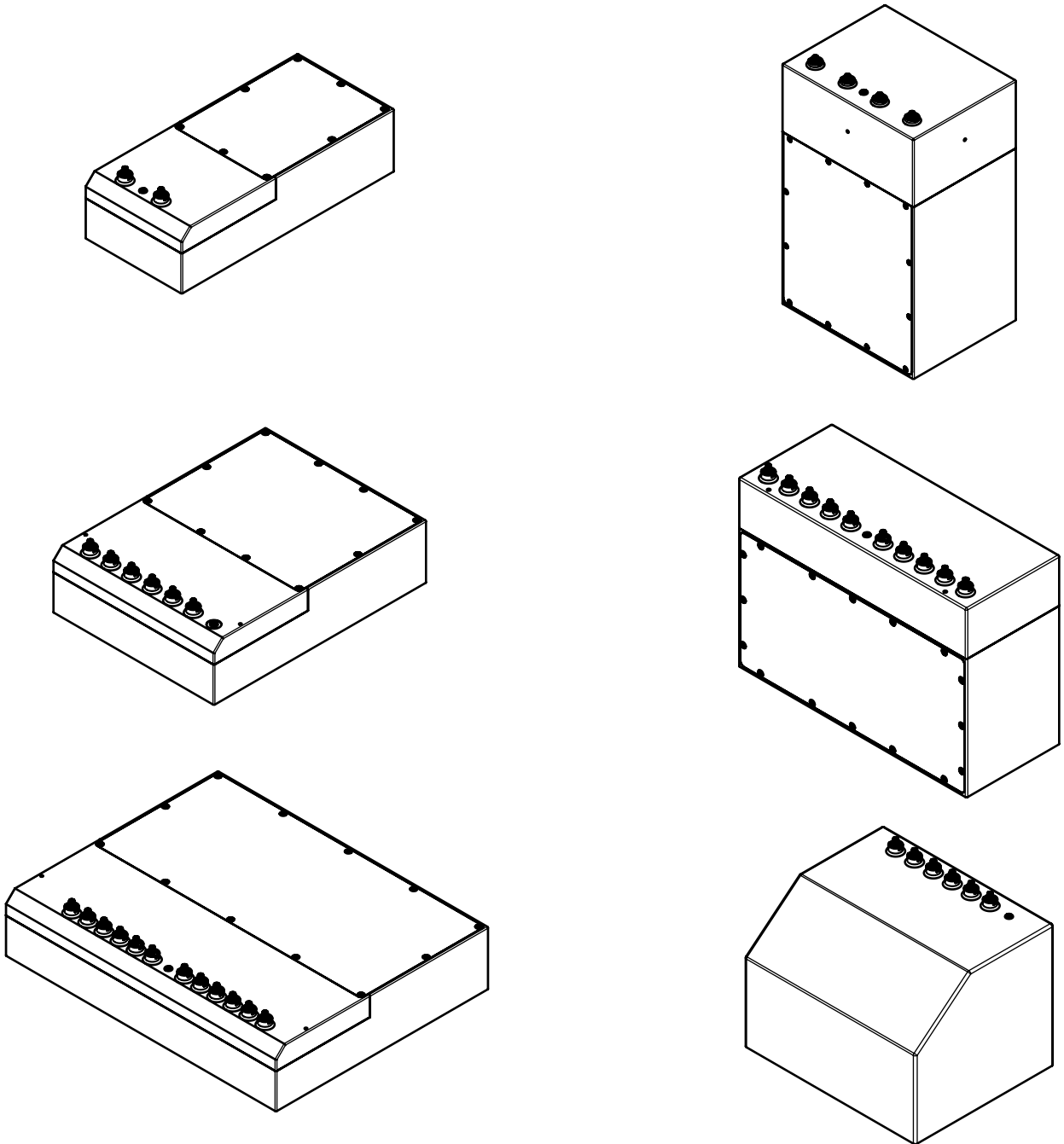[3] Temperature range: +10 °C to +30 °C
[4] From weighing platform mounting bolt

/ OPTIONS

- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation
- **Option 12:** Higher display resolution
- **Option 13:** Binary I/O channels (4-fold)
- **Option 14:** Filling algorithm
- **Option 25:** Dead load compensation
- **Option 32:** Built in test weight for high structured shape (flat structured shape on request)

With the optional CFI (CAN-Fieldbus-Interface) it is possible to connect to a variety of industrial fieldbus systems.

Please see specifications on page 80.

Design examples

/MTC-FS

WEIGHING RANGE 0 - 50 g

The series MTC-FS multilane Weigh Cells cover a weighing range up to 50 g. They have been specifically designed as a compact sensor component and are especially suited for installation in multitrack applications. Centreline distances of 15 mm or more can be implemented by installing sensors at the same time. An additionally integrated sensor eliminates low-frequency ground interference and vibrations while maintaining the Weigh Cells speed and accuracy.

As a ready-for-connection installation component, the Weigh Cell already supplies final weight values via a CAN interface as a standard feature. The integrated software filters can be configured in multiple ways and thus allow optimal adaptation of the weighing system to the relevant local conditions. The Weigh Cells extensive command set enables easy control engineering integration.

When it comes to the number of tracks and the centreline distance in conjunction with the weighing range and the design, all MTC-FS systems are always customer specific and individual.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling machines for vials, syringes, etc.
- Packaging machines
- Capsule and tablet weighing machines

/ FEATURES

- Weighing range up to 50 g
- Additive dead load range up to 30 g
- Active Vibration Compensation (AVC)
- High or flat type structured shape
- Aluminum or stainless steel housing
- Track distance from 15 mm
- Up to 18 tracks in one housing
- Protection class up to IP42
- Binary trigger input
- Interface 1: CAN, RS 422
- Interface 2: RS 232 for service and configuration
- Sampling rate 1 ms

WEIGH CELL TYPE	MTC 1/5-FS	MTC 2/10-FS	MTC 10/30-FS	MTC 50/30-FS
Weighing range	1 g	2 g	10 g	50 g
Electrical adjustable dead load range [4]	1 - 5 g	5 - 10 g	10 - 30 g	10 - 30 g
Display value (d)	0.00002 g	0.0002 g	0.0005 g	0.001 g
Display value (d) with higher resolution (Option) [3]	0.00001 g	0.0001 g	0.0002 g	0.0005 g
Linearity ≤	± 0.00002 g	± 0.0002 g	± 0.0005 g	± 0.001 g
Repeatability (S) ≤ [1]	0.00001 g	0.0001 g	0.0002 g	0.0005 g
Smallest possible track distance	25 mm	15 mm	15 mm	25 mm
Maximum dimension of weighing platform	15 mm	20 mm	20 mm	30 mm
Settling time [1] [2] (on 1‰ of final weighing range value)	< 200 ms			
Protection class of the Weigh Cell	IP42			
Temperature range	+5 °C to +30 °C			
Power supply	24 V DC, ± 5%, 0.5 A			
Interface 1	CAN, RS 422			
Interface 2	RS 232, 115200/8/1/odd			
Housing material	Aluminum hard coated			

[1] Depends on the preference settings and on setup and ambient conditions of the system |
  The absolute repeatability is +/- 3 s
[2] Weighing time = settling time plus (adjustable) measuring time
[3] Temperature range: +10 °C to +30 °C
[4] From weighing platform mounting bolt

/ OPTIONS

- **Option 9:** Stainless steel housing
- **Option 10:** RS 422 instead of CAN interface
- **Option 12:** Higher display resolution
- **Option 13:** Binary trigger input
- **Option 32:** Built in test weight

With the optional CFI (CAN-Fieldbus-Interface) it is possible to connect to a variety of industrial fieldbus systems.
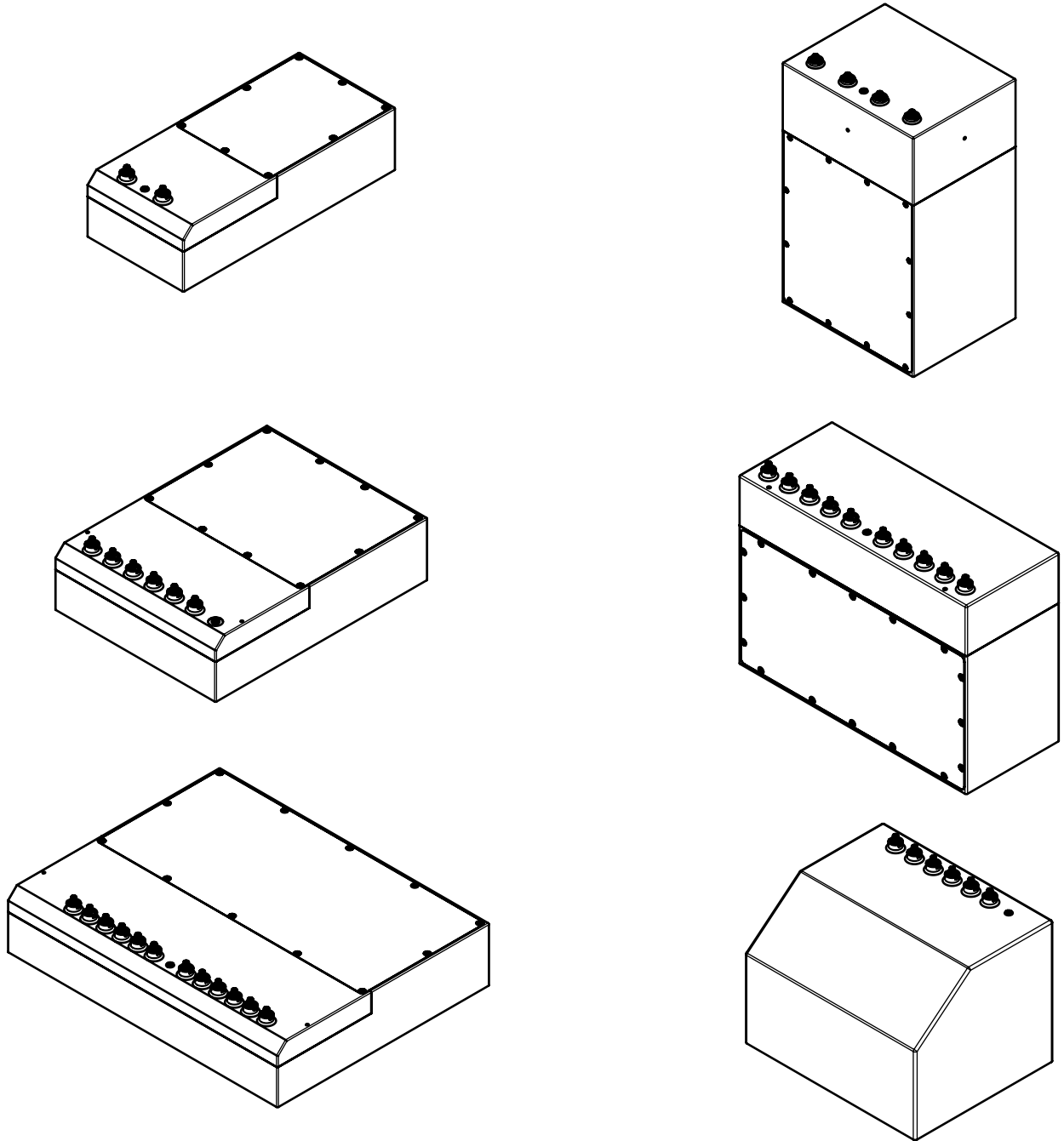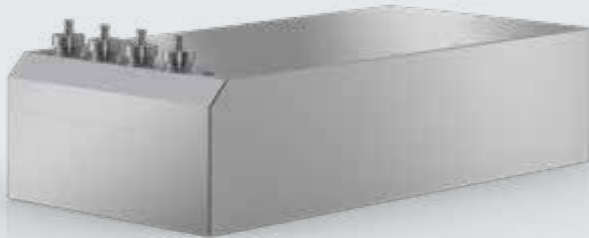
Design examples

/MTC-HL-FS
WEIGHING RANGE 0 - 250 g

The series MTC-HL-FS Weigh Cells cover a weighing range up to 250 g. They have been specifically designed as compact sensor components and are especially suited for applications in the pharmaceutical industry.

As a ready-for-connection installation component, the Weigh Cell already supplies final weight values via a CAN interface as a standard feature.. The integrated software filters can be configured in multiple ways and thus allow optimal adaptation of the weighing system to the relevant local conditions. The Weigh Cells extensive command set enables easy control engineering integration.

Supplemented by a large number of options, as well as different weighing and dead load ranges, a wide variety of customer-specific versions can be implemented in addition to the standard.

When it comes to the number of tracks and the centre-line distance in conjunction with the weighing range and the design, all MTC-HL-FS systems are always customer specific and individual.

You need an individual solution?
Please contact us.

/ TO BE USED IN

- Filling machines for vials, syringes, etc.
- Packaging machines
- Capsule and tablet weighing machines

/ FEATURES

- Weighing range up to 250 g
- Additive dead load range up to 100 g
- Active Vibration Compensation (AVC)
- High or flat type structured shape
- Protection class up to IP44
- Binary I/O channels with customer-specific functions
- Interface 1: CAN, RS 422
- Interface 2: RS 232 for service and configuration
- Sampling rate 1 ms

WEIGH CELL TYPE	MTC-HL-250/100-FS
Weighing range	250 g
Electrical adjustable dead load range [4]	50 - 100 g
Display value (d)	0.002 g
Display value (d) with higher resolution (Option) [3]	0.001 g
Linearity ≤	± 0.002 g
Repeatability (S) ≤ [1]	0.001 g
Maximum dimension of weighing platform	40 mm
Settling time [1][2] (on 1‰ of final weighing range value)	< 200 ms
Protection class of the Weigh Cell	IP44
Temperature range	+5 °C to +30 °C
Power supply	24 V DC, ± 5%, 0.5 A
Interface 1	CAN, RS 422
Interface 2	RS 232, 115200/8/1/odd
Housing material	Aluminum hard coated

[1] Depends on the preference settings and on setup and ambient conditions of the system |
   The absolute repeatability is +/- 3 s
[2] Weighing time = settling time plus (adjustable) measuring time
[3] Temperature range: +10 °C to +30 °C
[4] From weighing platform mounting bolt

/ OPTIONS

- **Option 10:** RS 422 instead of CAN interface
- **Option 11:** Bus operation
- **Option 12:** Higher display resolution
- **Option 13:** Binary I/O channels (4-fold)
- **Option 14:** Filling algorithm
- **Option 25:** Dead load compensation
- **Option 32:** Built in test weight for high structured shape (flat structured shape on request)

With the optional CFI (CAN-Fieldbus-Interface) it is possible to connect to a variety of industrial fieldbus systems.

Please see specifications on page 80.

Design examples

/WEIGHING KITS

FLEXIBLE AND MODULAR
WEIGHING AND SORTING KITS

HIGH-TECH FOR CUSTOMISED USE

Customer specific requirements are a top priority when developing our product range. The Weigh Cell are at the core of an extensive range that also includes lightweight transport and weighing belts specially designed for customer specific applications easily integrated into any machines. Combining these components in a wide variety of arrangements creates weighing and sorting kits for automated special applications or dynamic weighing applications that are tailored to customer needs. Everything is possible: From simple sorting tasks to fast, dynamic weighing.

Our employees will support you with the technical detail even during the planning phase.

The following pages contain a selection of possible designs.

/ OUR EXPERTISE –
YOUR SAFETY

- A wide range of single and multilane weighing system solutions
- Tailored Weigh Cell integration in machines and systems
- Flexible connection to the customer's control systems
- Precise weighing in difficult local conditions
- Fast applications with up to 600 weighing operations per minute
- Professional, customer-specific support
- Modular product range
- High level of vertical integration from board assembly to the complete system
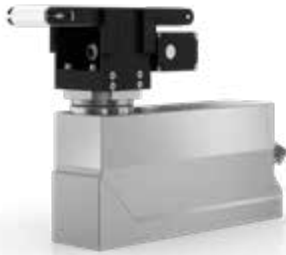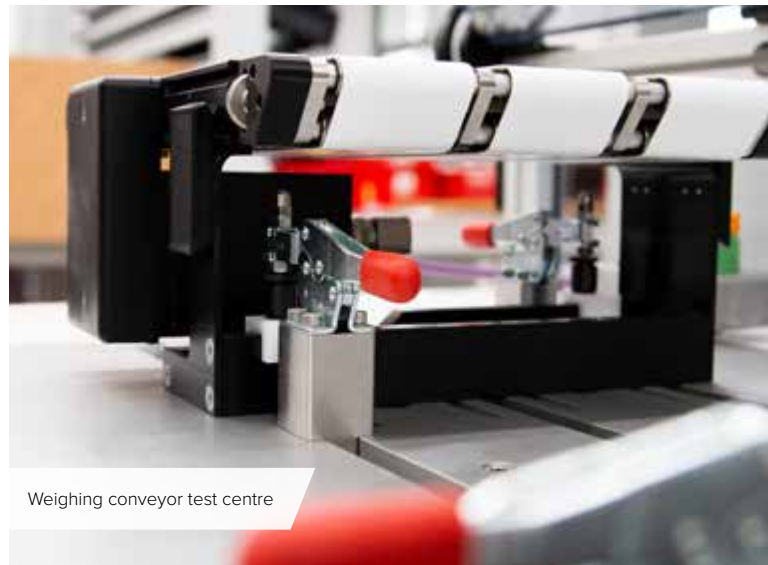
72 SW-D-FS
NT17 CONVEYOR (IP44)

73 EC-FS
NT30 CONVEYOR (IP54)

74 EC-FS
VA35E CONVEYOR (IP65)

75 EC-ES-FS
VA35WA CONVEYOR (IP69K)

Weighing conveyor test centre

76 EC-FS
SOLUTION WITH CHAIN BELT
TECHNOLOGY

77 IW-B-FS
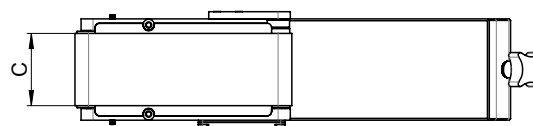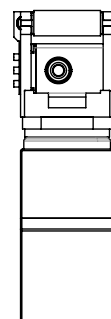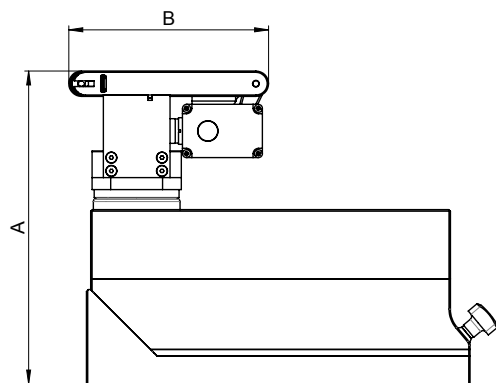SL60 CONVEYOR (IP54)

SW-D-FS
WEIGHING KIT – NT17 CONVEYOR (IP44)

WEIGHING CONVEYOR, HIGH-PRECISION BALANCED

BELT WIDTH (C)	BELT LENGTH (B)
32 mm	150 mm / 200 mm / 300 mm / 400 mm
50 mm	150 mm / 200 mm / 300 mm / 400 mm
80 mm	150 mm / 200 mm / 300 mm / 400 mm
120 mm	200 mm / 300 mm / 400 mm
150 mm	200 mm / 300 mm / 400 mm

INFEED AND OUTFEED CONVEYOR

BELT WIDTH	BELT LENGTH
32 mm	200 mm / 300 mm / 400 mm / 500 mm
50 mm	200 mm / 300 mm / 400 mm / 500 mm
80 mm	200 mm / 300 mm / 400 mm / 500 mm
120 mm	200 mm / 300 mm / 400 mm / 500 mm
150 mm	200 mm / 300 mm / 400 mm / 500 mm

A = 235 mm, B = 150 - 400 mm, C = 32 - 150 mm

Exact specifications of the Weigh Cell can be found on page 32.

All measurements in mm   Subject to technical modifications   Other dimensions on request

/EC-FS
WEIGHING KIT – NT30 CONVEYOR (IP54)

WEIGHING CONVEYOR, HIGH-PRECISION BALANCED

BELT WIDTH (C)	BELT LENGTH (B)
120 mm	200 mm / 300 mm / 400 mm
150 mm	200 mm / 300 mm / 400 mm
200 mm	200 mm* / 300 mm / 400 mm
300 mm	200 mm* / 300 mm* / 400 mm
400 mm	200 mm* / 300 mm* / 400 mm*

INFEED AND OUTFEED CONVEYOR

BELT WIDTH	BELT LENGTH
120 mm	200 mm / 300 mm / 400 mm / 500 mm
150 mm	200 mm / 300 mm / 400 mm / 500 mm
200 mm	200 mm* / 300 mm / 400 mm / 500 mm
300 mm	200 mm* / 300 mm* / 400 mm / 500 mm
400 mm	200 mm* / 300 mm* / 400 mm* / 500 mm

* only available with flat or round belt
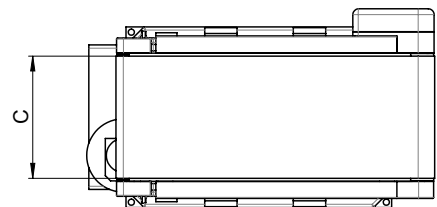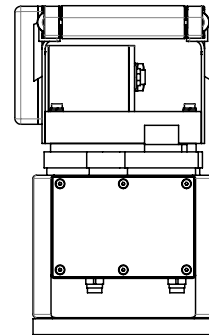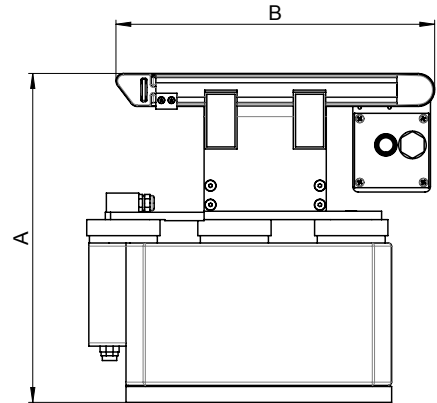
A = 310 mm, B = 200 - 400 mm, C = 120 - 400 mm

Exact specifications of the Weigh Cell can be found on page 42.

All measurements in mm　　　　　Subject to technical modifications　　　　　　　　　　Other dimensions on request

/EC-FS
WEIGHING KIT – VA35E CONVEYOR (IP65)

WEIGHING CONVEYOR, HIGH-PRECISION BALANCED

BELT WIDTH (C)	BELT LENGTH (B)
150 mm	250 mm / 300 mm / 400 mm / 500 mm / 600 mm
250 mm	300 mm / 400 mm / 500 mm / 600 mm
350 mm	400 mm / 500 mm / 600 mm

INFEED AND OUTFEED CONVEYOR

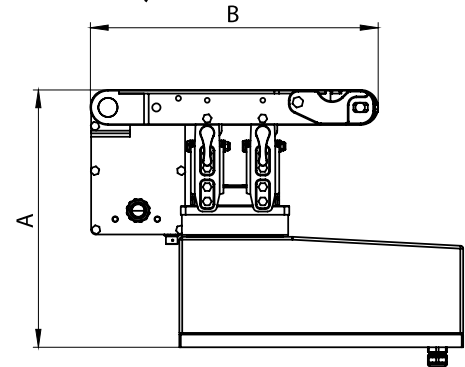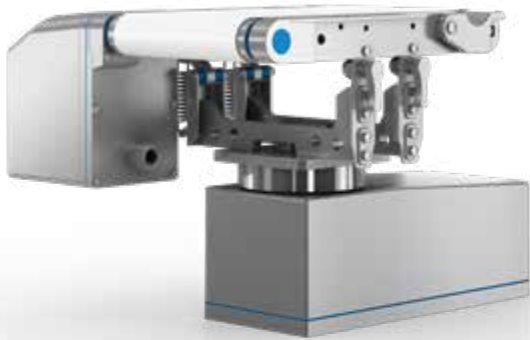| BELT WIDTH	BELT LENGTH
150 mm	250 mm / 300 mm / 400 mm / 500 mm / 600 mm
250 mm	300 mm / 400 mm / 500 mm / 600 mm
350 mm	400 mm / 500 mm / 600 mm

A = 310 mm, B = 250 - 600 mm, C = 150, 250, 350 mm

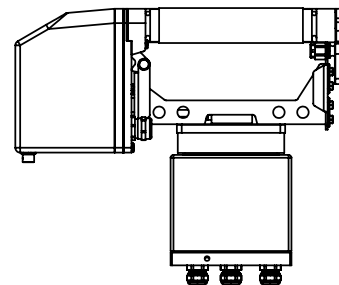**Exact specifications of the Weigh Cell can be found on page 42.**

All measurements in mm   Subject to technical modifications   Other dimensions on request

/EC-ES-FS
WEIGHING KIT –
VA35WA CONVEYOR (IP69K)

WEIGHING CONVEYOR, HIGH-PRECISION BALANCED

BELT WIDTH (C)	BELT LENGTH (B)
150 mm	250 mm / 300 mm / 400 mm
250 mm	250 mm* / 300 mm / 400 mm
350 mm	400 mm

INFEED AND OUTFEED CONVEYOR

BELT WIDTH	BELT LENGTH
150 mm	250 mm / 300 mm / 400 mm
250 mm	250 mm* / 300 mm / 400 mm
350 mm	400 mm

A = 268 mm, B = 250 - 400 mm, C = 150, 250, 350 mm

Exact specifications of the Weigh Cell can be found on page 48.

/EC-FS
WEIGHING KIT – SOLUTION WITH CHAIN BELT TECHNOLOGY
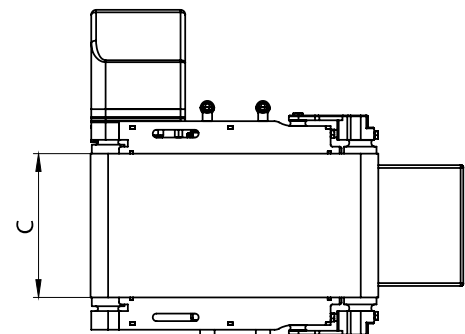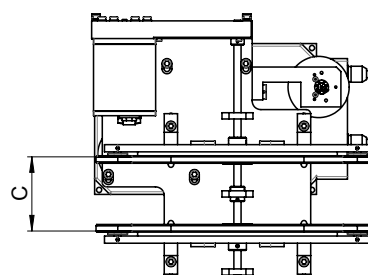

WEIGHING CONVEYOR

PRODUCT SIZE	BELT LENGTH (B)
Diameter 45-120 mm	300 mm
Diameter 60-165 mm	300 mm
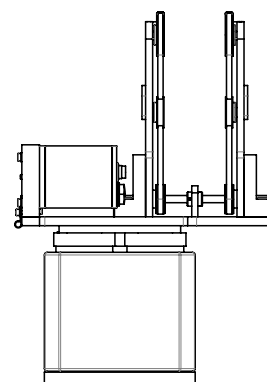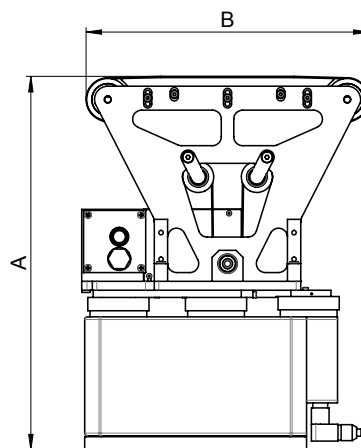
A = 421 mm, B = 300 mm, C = Ø 60 - 165 mm, Ø 45 - 120 mm

Exact specifications of the Weigh Cell can be found on page 42.

IW-B-FS
WEIGHING KIT – SL60 CONVEYOR (IP54)

WEIGHING CONVEYOR, HIGH-PRECISION BALANCED

BELT WIDTH (C)	BELT LENGTH (B)
400 mm	600 mm / 800 mm / 1,000 mm
600 mm	800 mm / 1.000 mm

INFEED AND OUTFEED CONVEYOR

BELT WIDTH	BELT LENGTH
400 mm	600 mm / 800 mm / 1,000 mm
600 mm	800 mm / 1.000 mm
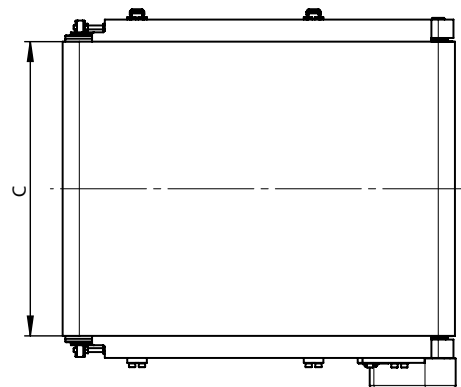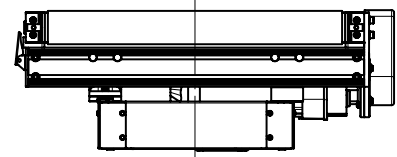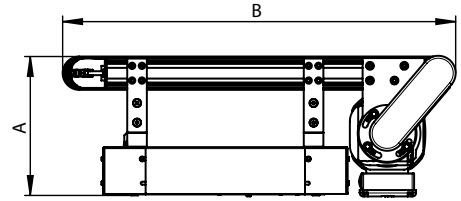
A = 285 mm, B = 600 - 1,000 mm, C = 400 - 600 mm

Exact specifications of the Weigh Cell can be found on page 54.

All measurements in mm   Subject to technical modifications   Other dimensions on request

ACCESSORIES
FLEXIBLE AND
MODULAR SOLUTIONS

Expert advice for hardware and software

/CAN-FIELDBUS INTERFACE CFI
FLEXIBLE AND MODULAR SOLUTIONS

Earthing screw

Spring-cage terminal block for connection of
CAN bus and operating voltage

Reset button and LED monitor

Option

Ethernet connection for web server

µSD card slot

Industrial fieldbus connection

The CFI (CAN-Fieldbus-Interface) is a compact gateway to connect WIPOTEC components to the most common industrial fieldbus systems. The gateway supports all Weigh Cells with a CAN interface and all motors in the IMOT series. Depending on the application, up to 8 devices can be connected.

The configuration is performed via an integrated web server, which is accessed through a standard browser. Autodetect functions, predefined standard configurations, and service functions with direct connections to the individual units facilitate the start of operations. All configuration data and parameters are stored on an external, accessible µSD card. Data backup or data recovery are supported via HTTP upload and download.

The CFI is assembled using a tension spring clamp and a standard mounting rail as per DIN 60715.

Other fieldbus systems on request!

/ SUPPORTED INDUSTRIAL FIELDBUS SYSTEMS

- **Profibus DP**
- **Profinet IO**
- **Ethernet/IP**
- **EtherCAT**
- **Powerlink**

All of the settings on the CFI are easy, thanks to installation software developed by WIPOTEC. On this page, two examples have been selected to show the individual parameters.

More details are available on our website.

Left: Network settings are provided for the specific network adapter in use.

Right: Overview of status messages.

TECHNICAL DATA	
Power supply	24 V DC, +/- 10 %, max. 1 A, spring-cage connection
Digital inputs	1 control input 24 V
System interface	CAN, master, 500 kB/s, spring-cage connection
Configuration interface	Ethernet / RJ 45
Storage medium	µSD card, max. 32 GByte, Industrial Class 4, Fat32, external accessible card slot
Operating temperature range	0 °C to +55 °C
Max. relative humidity	95 %, non-condensing
Housing	Galvanized sheet steel, for top-hat rail mounting EN50022 35 mm
Dimensions (HxWxD)	160 mm x 30 mm x 100 mm
Protection class	IP20
Weight	approx. 500 g

CONNECTION OPTIONS

APPLICATION	MAX. CONNECTABLE DEVICES	NOTE
Static weighing	8 devices	Devices may be Weigh Cells and/or motors (e.g. for left/right rejection)
Multilane systems, e.g. MTC	1 system	Maximum 12 measuring lanes
Dynamic weighing	1 Weigh Cell, 4 motors	Weighing kit

PROCESS OF STATIC WEIGHING WITH UP TO 8 DEVICES

Configuration and service

Communication by user to the machine/OEM

- Profibus DP
- Profinet IO
- Ethernet/IP
- EtherCAT
- Powerlink

CFI / supply 24 V DC

Bus distributor supply 24 V DC

Static weighing for max. 8 WIPOTEC Weigh Cells
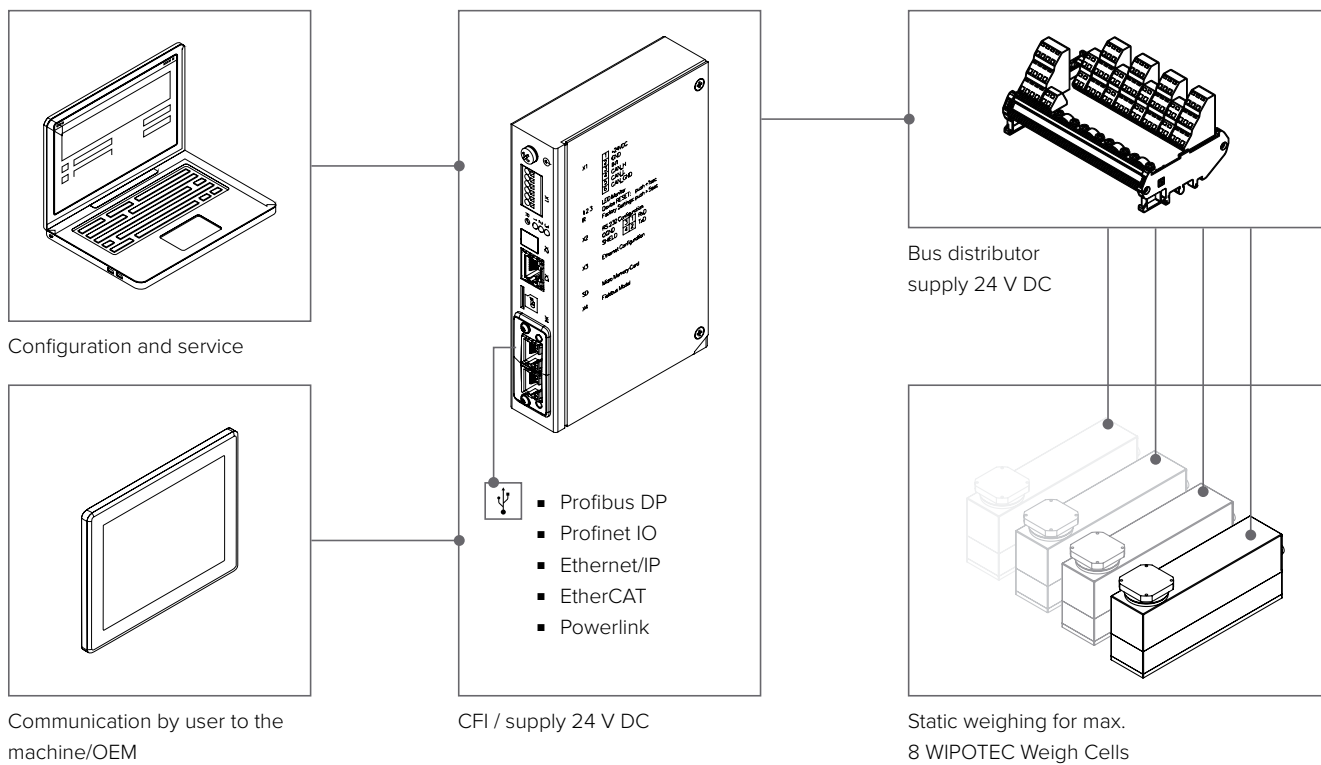
PROCESS OF STATIC WEIGHING WITH MULTITRACK SYSTEM

Configuration and service

Communication by user to the
machine/OEM

CFI / supply 24 V DC

- Profibus DP
- Profinet IO
- Ethernet/IP
- EtherCAT
- Powerlink

Bus distributor
supply 24 V DC

Static weighing for
1 WIPOTEC multitrack system (MTC)
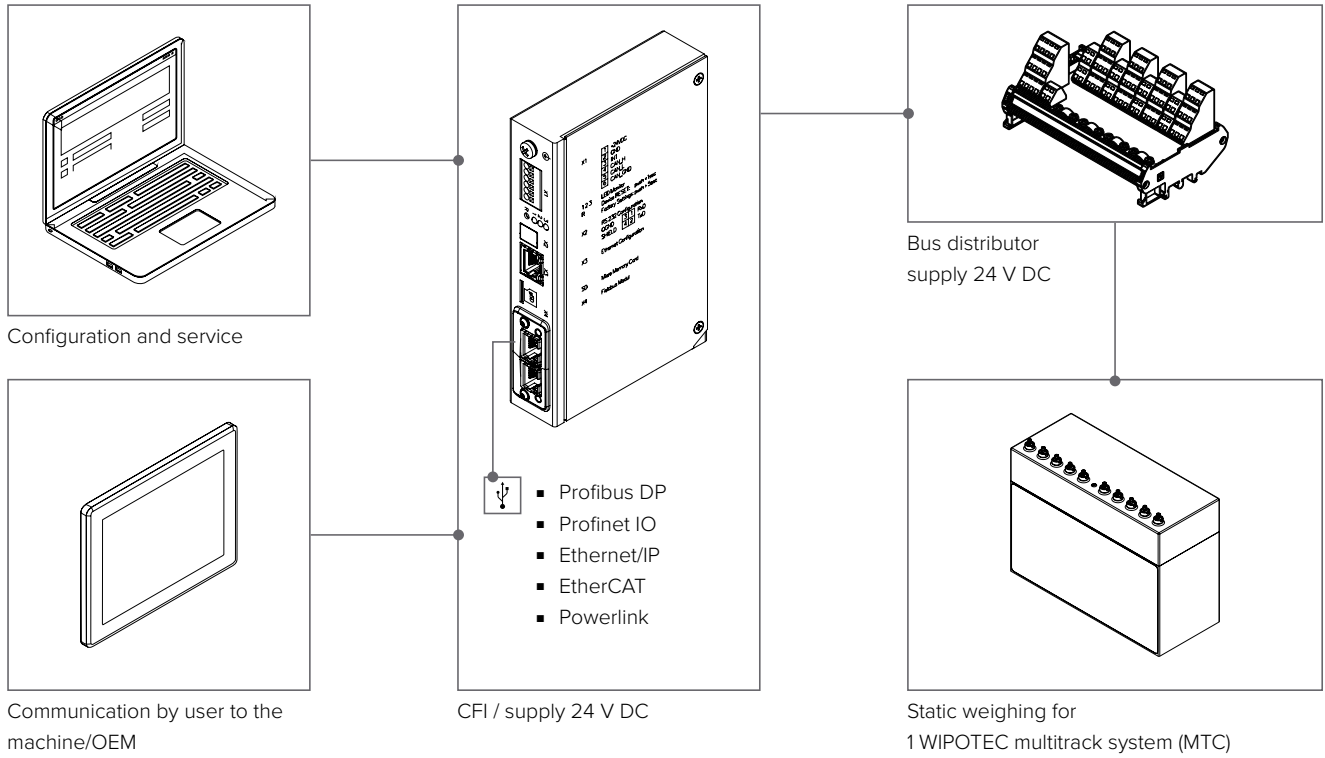
PROCESS OF DYNAMIC WEIGHING WITH WEIGHING KITS

Configuration and service

Communication by user to the
machine/OEM

CFI / supply 24 V DC

- Profibus DP
- Profinet IO
- Ethernet/IP
- EtherCAT
- Powerlink

Bus distributor
supply 24 V DC

Dynamic weighing for max.
1 WIPOTEC Weigh Cell and 4 motors
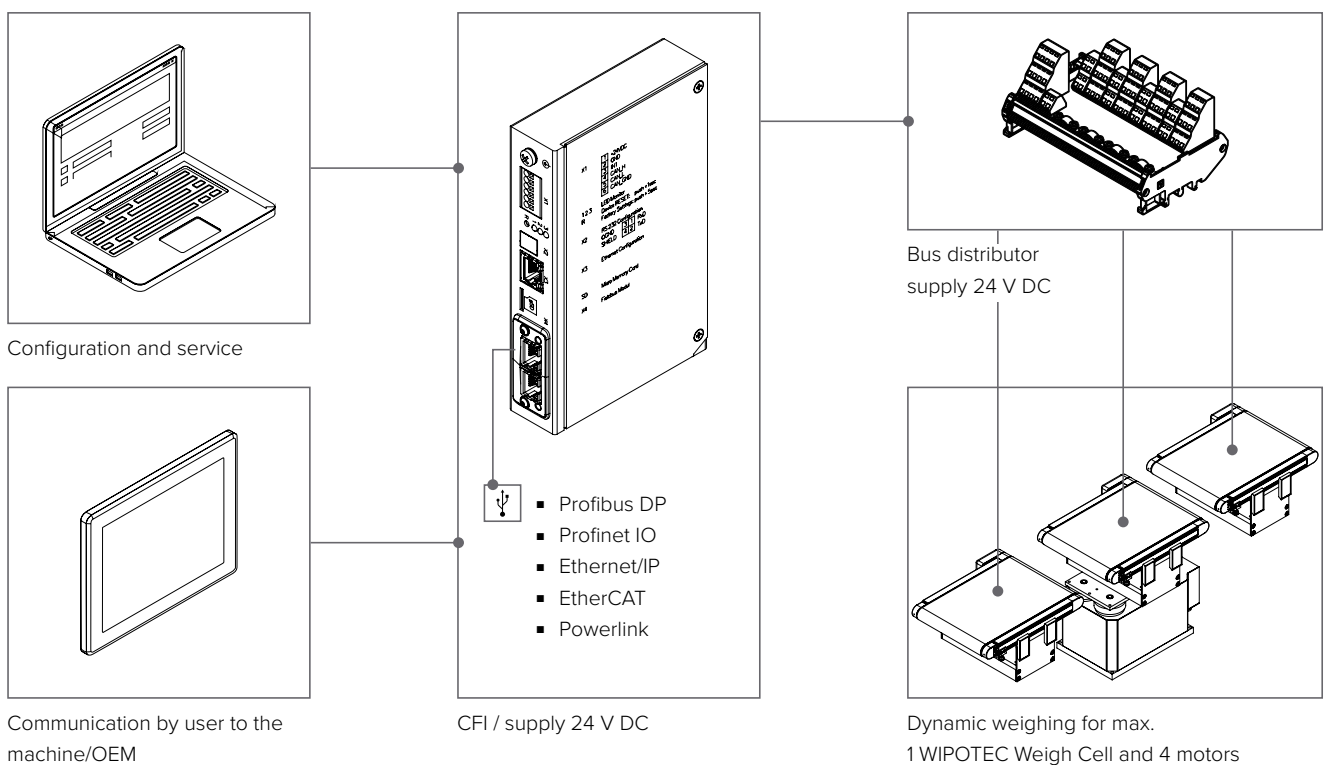
FASTMODE
ANALYSIS TOOL
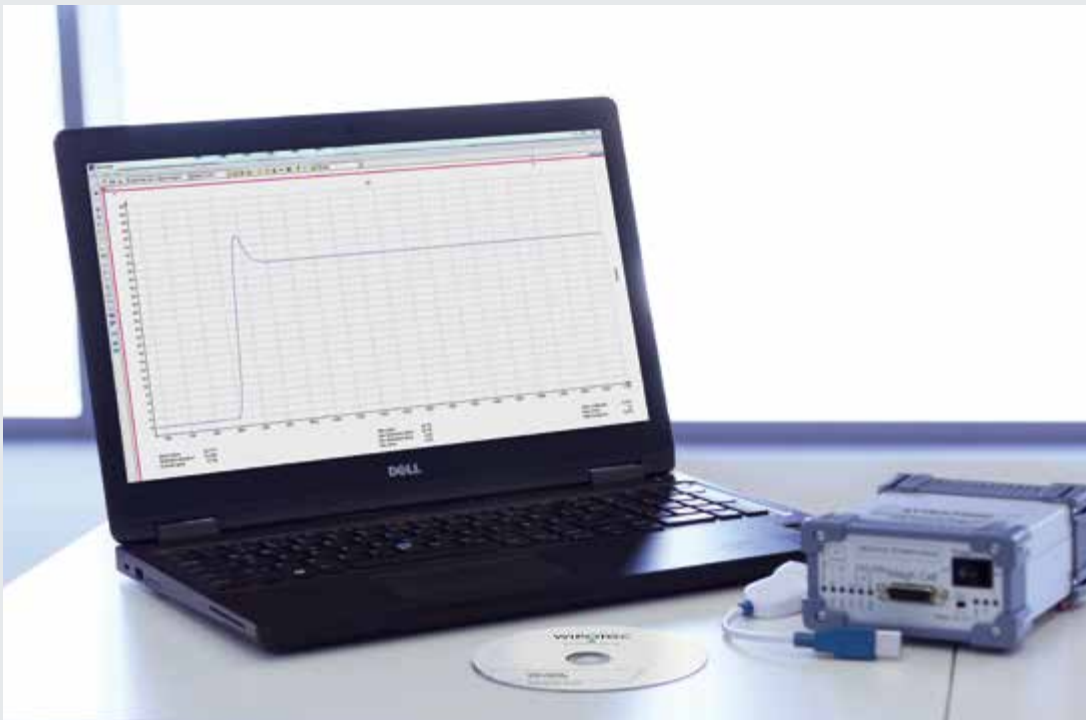
Fastmode makes possible a graphic real-time analysis of the weighing procedure for Weigh Cells of all series. The signal sequence of the Weigh Cell is recorded in x/y representation, similarly to an oscilloscope.

Saving and evaluation procedures support the analysis of the weighing signal with reference to its behavior in time and amplitude patterns. Printing, export and import functions serve to document the process. A 'terminal code' makes it possible to set the Weigh Cells manually for purpose of maintenance.

/ TECHNICAL REQUIREMENTS

- Fastmode is suitable for use with Windows 7 or higher. A USB connector for the RS232 USB adapter is included in the scope of delivery

/STARTUP KIT
WITH FASTCHECK SOFTWARE

The startup kit is used to commission, control and convert interfaces of installed or not installed Weigh Cells. It is possible to connect the Weigh Cell via Service Power Pack (SPP) to a PC or a CAN bus compatible device. The necessary voltage supply of 24 V DC is provided to operate the Weigh Cell. Furthermore, data are converted to standard interfaces (converting interfaces RS 422 to RS 232). Data transmission of Weigh Cells with CAN interface is performed over CAN bus interface. Optionally it is possible to control the recording of Weigh Cell communication with help of a trigger signal.

Fastcheck software makes it possible to monitor communication by means of the serial interface to various terminals in a comfortable way. Furthermore the Fastcheck program is equipped with an online help system. With the supplied power supply plugs it is possible to use the commissioning kit in various countries with the prevailing power supply. The LEDs show the different operating modes, data traffic and voltages.

THREE DECADES OF INNOVATION

WIPOTEC WEIGHING TECHNOLOGY WORLDWIDE

GERMANY	ITALY	USA
WIPOTEC GmbH	**WIPOTEC Italia s.r.l.**	**WIPOTEC North America**
Adam-Hoffmann-Str. 26	Via Antonio Gramsci, 18	700 Old Roswell Lakes
67657 Kaiserslautern	20016 Pero (MI)	Parkway, Suite 200
		Roswell, Georgia 30076
+49 (631) 34146-0	T +39 02 73952424	T +1 770 971 5414
+49 (631) 34146-8690	F +39 02 45508075	F +1 770 509 5524
info@wipotec.com	info.it@wipotec.com	info.wipotec.usa@wipotec.com
www.wipotec-wt.com	www.wipotec-wt.it	www.wipotec-wt.com