Automated Precision Weighing

Designed for Automation

High-Precision Load Cells

Smart Load Cell Technology

The load cell, with Monobloc technology, is at the core of the SLF6-Series load cells and guarantees the highest precision and reliability. A robust load cell housing features integrated overload protection and durable mechanical interfaces. This ensures stable weight values for many years of intensive use.

High Resolution

SLF6 load cells have a resolution up to 750'000 points. With this high precision, it is possible to measure even the slightest change in the weight; thus unnecessary waste can be minimized and cost savings realized by optimizing the material quantity.

Connect to PLC

All load cells can easily be connected to popular fieldbus systems. Add-on software modules facilitate seamless integration into automated environment. This allows machine builders to standardize on SLF6-Series load cells for weighing connected to PLC systems.

Hazardous Environments

When working in a hazardous environment, safety is key. The SLF6-Series load cells are approved for the use in hazardous areas for category 2 and category 3 and FM division 1 and 2 for top performance in gaseous and dusty environments.

SLF6-Series Load Cells

Accurate – Reliable – Robust – Versatile

With capacities of 6, 15, 32 and 64 kilograms, it is suitable for a variety of applications and industries. These load cells form a compact solution for integration into machines or instruments, and can support various applications with an industry-leading accuracy.

The SLF6-Series load cells provide benefits such as:

- 750'000 points of resolution
- Directly connects to control systems
- Increases speed of filling processes with up to 92 updates per second
- For safe as well as hazardous areas (category 2 and category 3 for zones 1/21, 2/22 as well as FM division 1 and 2)
- IP66/IP68 ingress protection
- Minimizes downtimes by checking the platform periodically with the internal weight

METTLER TOLEDO

Model Specific Weighing Data

Type information	**SLF606**	**SLF615**	**SLF630**	**SLF660**
Nominal capacity (nominal load)	6 kg	15 kg	30 kg	60 kg
Maximum capacity	6.2 kg	15.2 kg	32.2 kg	64.2 kg
Maximum preload [M1)]	1.1 kg	2.7 kg	5.8 kg	10.8 kg
Readability	0.01 g	0.02 g	0.05 g	0.1 g
Internal adjustment	✓	✓	✓	✓
Limit values [M2)]				
Repeatability (σ) (nominal load) ≤ [M3)]	0.01 g	0.02 g	0.05 g	0.1 g
Linearity deviation ≤	0.04 g	0.08 g	0.2 g	0.4 g
Eccentric load deviation (test load) ≤	-	-	-	-
Ambient conditions				
Compensated temperature range [M4)]	0 °C to 40 °C			
Operating temperature range	-20 °C to 60 °C			
Storage temperature range	-20 °C to 70 °C			
Relative air humidity range [M4)]	20% to 80%			
Warm-up time after power-on [M4)]	30 minutes			

[M1)] Maximum preload on top of "preload reference" weighing pan to maintain maximum capacity. [M2)] Applicable for stationary conditions within compensated temperature and relative air humidity range. [M3)] σ = standard deviation (99.7% of weighing results within ± 3 σ). [M4)] Condition to meet the specified limit values.

General Data

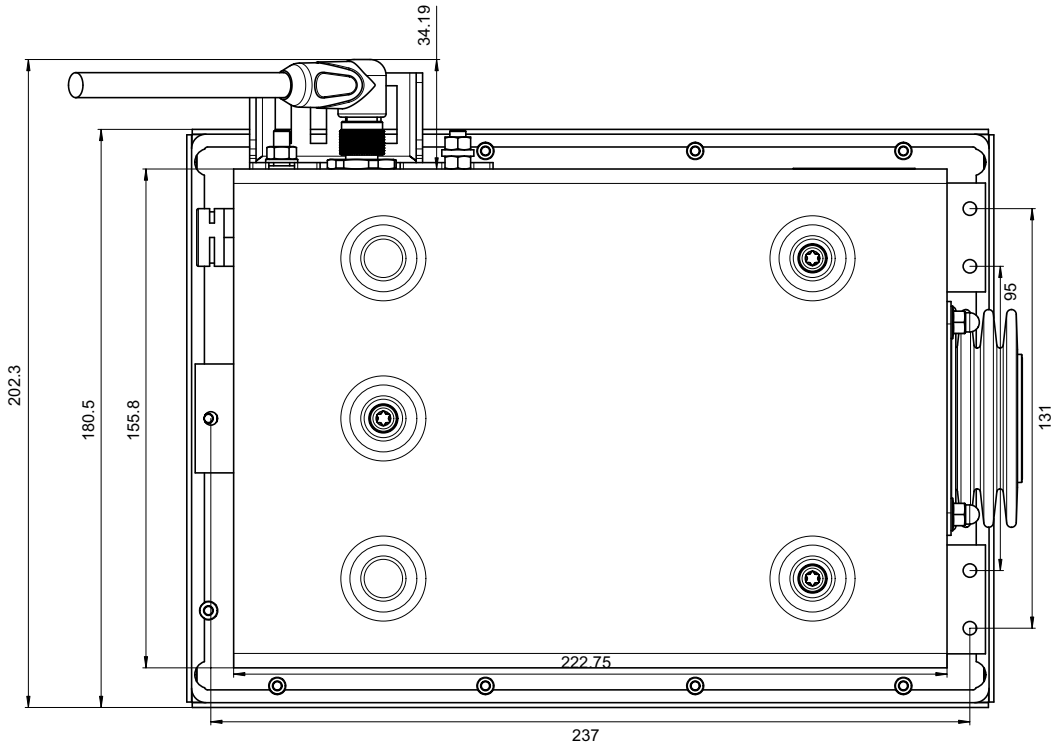
Electrical connection	
Power supply	10–30 V DC
Electrical connection	M12, 12 pins, A-coded, male
Communication interface	RS232, full-duplex, 2.4 to 38.4 kBaud RS422 full-duplex, 2.4 to 38.4 kBaud
Maximum weight update rate	92 values/s
IP protection	
Module during weighing	IP66 / IP68
Materials	
Weigh module housing	Stainless steel (1.4301 / 304)

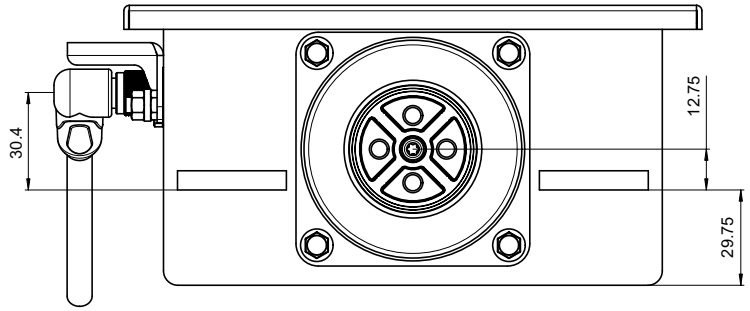
Hazardous zone	**Approval type**	**Approval**
Zone 1/21	ATEX	II 2 G Ex ib IIC T4 Gb II 2 D Ex ib IIIC T55 °C Db -10 °C ≤ Tamb ≤ +40 °C
	IECEx	Ex ib IIC T4 Gb Ex ib IIIC T55 °C Db -10 °C ≤ Tamb ≤ +40 °C
Division 1	FM	IS / I / 1 /ABCD / T4 -10 °C ≤ Ta ≤ 40 °C; IS / II, III / 1 / EFG / T6 -10 °C ≤ Ta ≤ 40 °C; I / 1 / AEx ib /IIC / T4 -10 °C ≤ Ta ≤ 40 °C; 21 / AEx ib /IIIC / T50 °C -10 °C ≤ Ta ≤ 40 °C; IP66.
Zone 2/22	ATEX	II 3G Ex nA IIC T6 Gc II 3D Ex tc IIIC T60 °C Dc -10 °C ≤ Ta ≤ +40 °C
	IECEx	Ex nA IIC T6 Gc Ex tc IIIC T60 °C Dc -10 °C ≤ Ta ≤ +40 °C
Division 2	FM	Nonincendive for Class I, II, III, division 2 Groups A, B, C, D, E, F, G Temperature class T6 Class I, zone 2, GP IIC T6 Zone 22, GP IIIC, T60 °C Ambient temperature range -10 °C ≤ Ta ≤ 40 °C

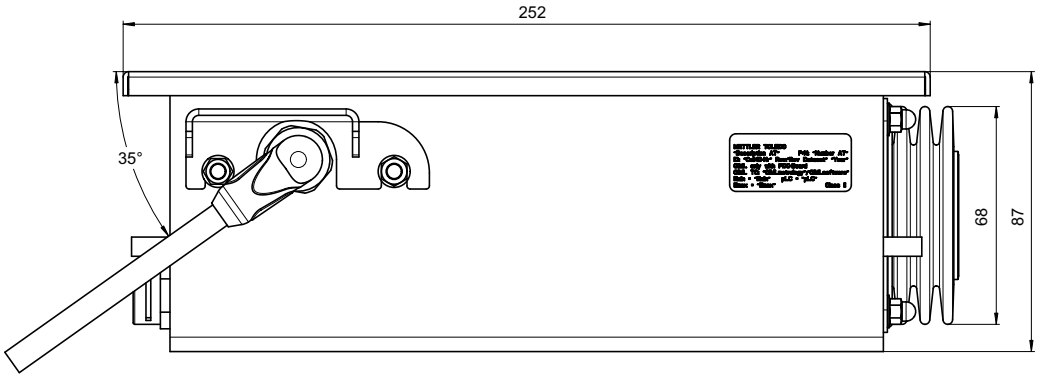
Scope of Delivery

Item	Description	Item number
SLF6	Load cell	-
User manual	-	-
Production certificate	-	-
Declaration of conformity	-	-

Drawings (mm)



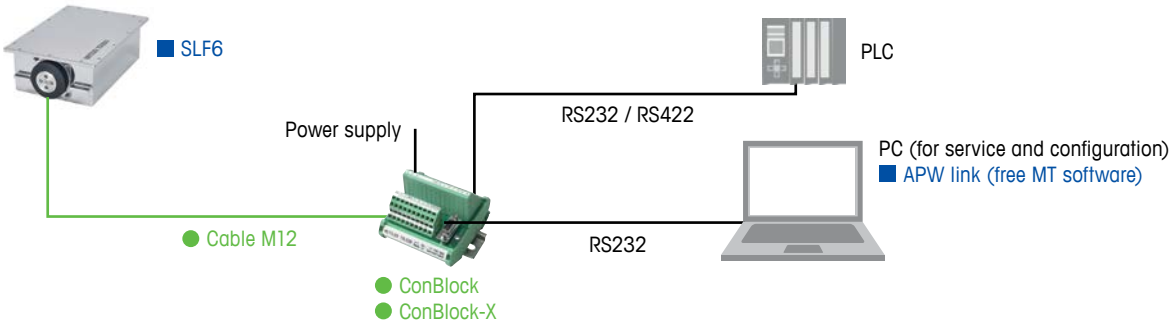




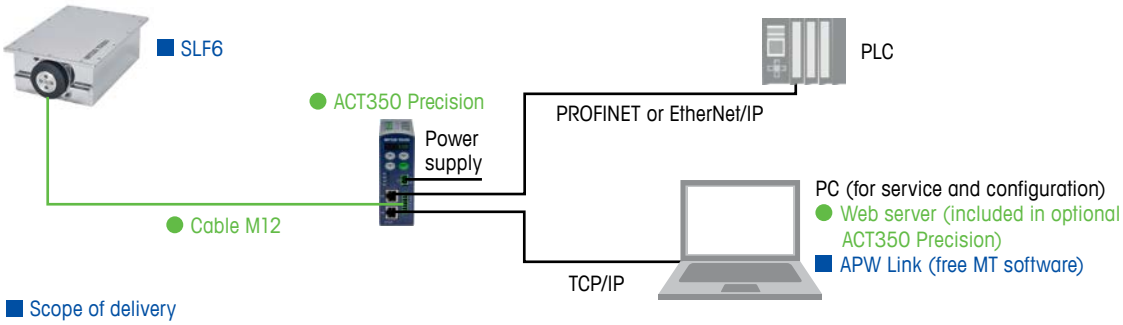
Typical Configurations

Safe area

Serial interface configuration



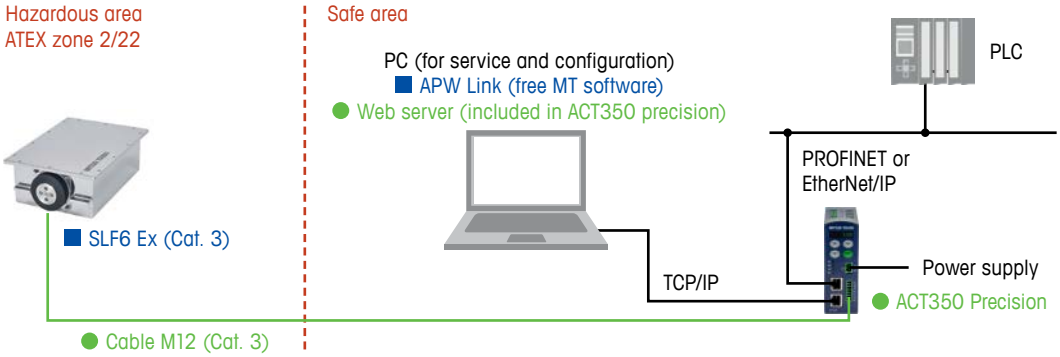
Automation network configuration



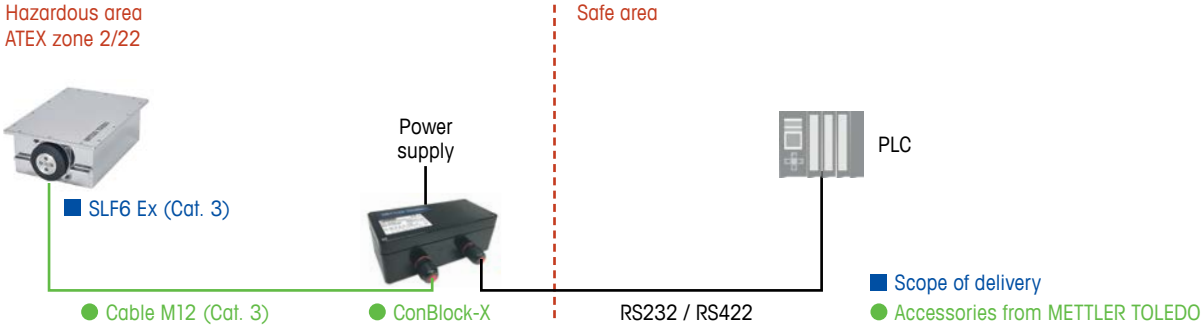
Hazardous area

Consult the applicable certificate of conformity for compliant hazardous area installation. Contact your MT representative for further information.

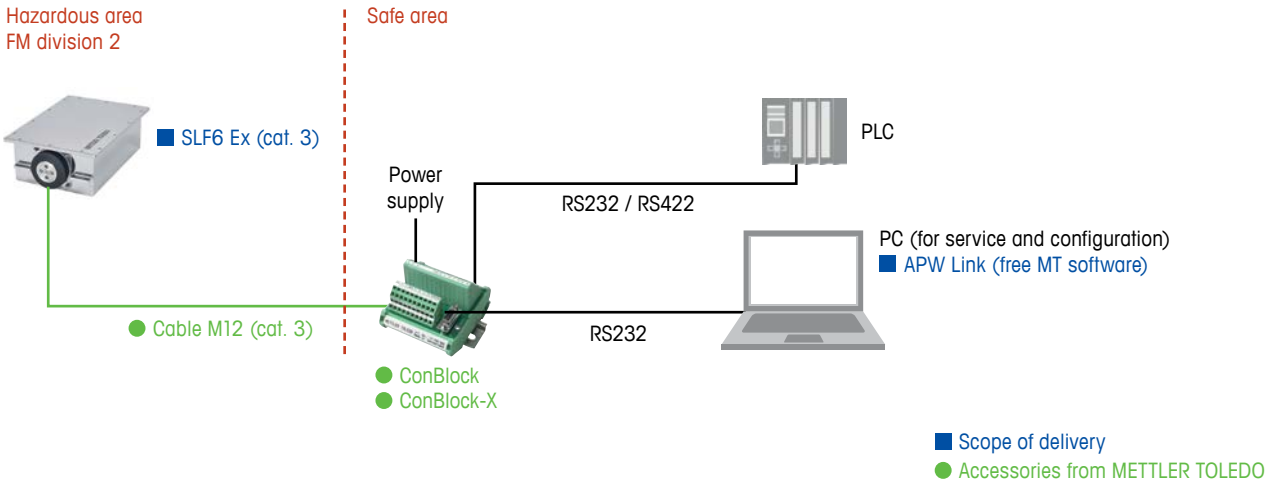
ATEX zone 2/22 automation network configuration



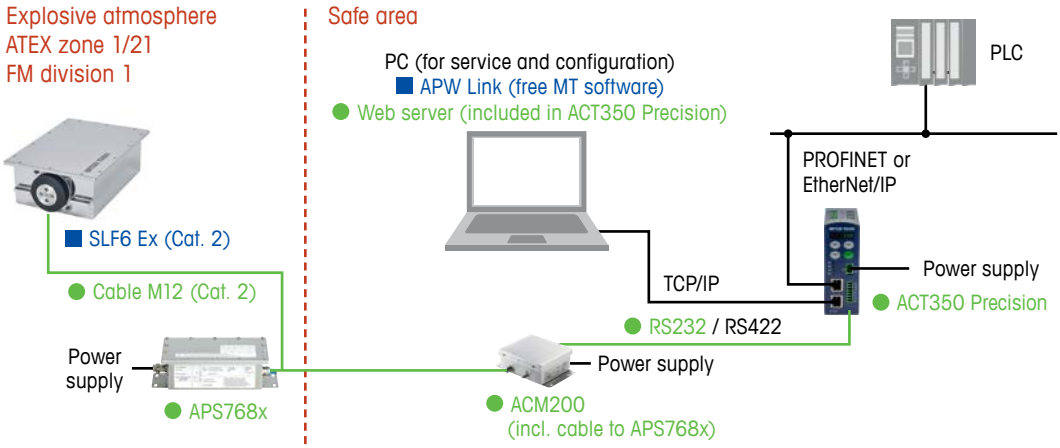
ATEX zone 2/22 serial interface configuration



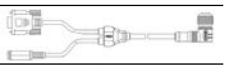
FM division 2 serial interface configuration



ATEX zone 1/21 and FM division 1 configuration



Accessories

Item	Description	Item number	Picture
Cable M12	M12, 12-pin, open leads, 10 m	302 444 46	
Cable M12	M12 - open leads, PUR/PVC (180°/3 m)	305 248 60	
Cable M12	M12 12p 0.3m A-coded (M12f90° - M12m180°)	305 248 74	
Cable M12	Y-Cable 12p 1.9m A-coded (M12f90° - DE-9 and DC Jack Ø5.5/2.5 mm), PUR/PVC	304 895 64	
Cable M12 (cat. 3)	M12, 12-pin, open leads, 10 m (zone 2/22, division 2)	302 444 47	
Cable M12 (cat. 2)	M12, 6-pin, 5 m (zone 1/21, division 1)	302 671 59	
Cable M12 (cat. 2)	M12, 6-pin, 10 m (zone 1/21, division 1)	302 671 90	
Cable M12 (cat. 2)	M12, 6-pin, 20 m (zone 1/21, division 1)	303 371 09	
ConBlock	Connection module	111 520 00	
ConBlock-X	Connection module cat. 2 (zone 1/21)	303 740 66	
APS768x	Power supply unit cat. 2 (120 V AC) (zone 1/21, division 1)	220 267 24	
APS768x	Power supply unit cat. 2 (230 V AC) (zone 1/21, division 1)	220 267 28	
ACM200	Interface converter (CL - serial) DC supply / RS232	220 266 92	
ACM200	Interface converter (CL - serial) DC supply / RS422, RS485	220 266 93	
ACM200	Interface converter (CL - serial) AC supply / RS232	220 266 95	
ACM200	Interface converter (CL - serial) AC supply / RS422, RS485	220 266 96	
Cable Ex-i	APS768x - ACM200 (up to 100 m)	220 167 91	

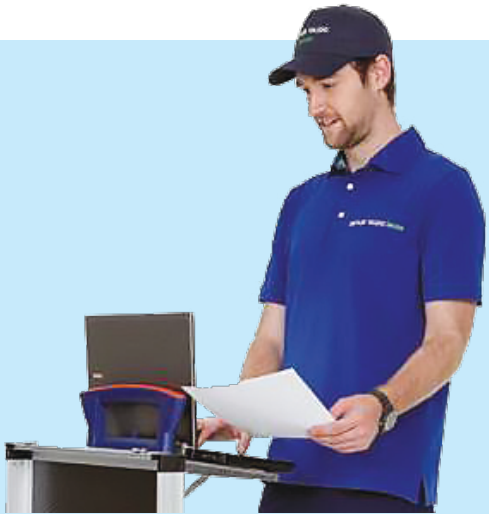
Order Information

Model	Version	Item number
SLF606	Standard	302 637 11
	Category 2 (for zone 1/21 and division 1)	303 733 39
	Category 3 (for zone 2/22 and division 2)	303 642 13
SLF615	Standard	302 637 12
	Category 2 (for zone 1/21 and division 1)	303 733 67
	Category 3 (for zone 2/22 and division 2)	303 642 14
SLF630	Standard	302 637 13
	Category 2 (for zone 1/21 and division 1)	303 733 68
	Category 3 (for zone 2/22 and division 2)	303 642 15
SLF660	Standard	302 637 14
	Category 2 (for zone 1/21 and division 1)	303 733 69
	Category 3 (for zone 2/22 and division 2)	303 642 16

Convenient Service Tool
Speeds up Commissioning

The APW-Link™ PC based software can be used for simple configuration purposes.
The following operations can be performed:
- Configuration of weighing parameters
- Optimization of filter settings
- Calibration and adjustment
- Observe weighing data on a graph and export to a spreadsheet for further processing

www.mt.com/apw-link



www.mt.com/SLF6
For more information

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Document No. 30321521 A
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