

Designed for Automation in Hazardous Environment, Zone 2



High Precision

Designed to meet the most demanding customer specifications. The WMS is a high speed high accuracy weigh module with a readability up to 0.1 mg



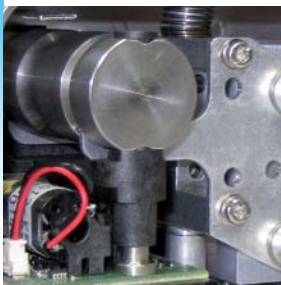
Rugged Design

The 316L (1.4404) stainless steel housing with FDA-compliant seal and the rugged industrial plug connector with IP67 protection ensure high levels of reliability.



Hazardous Environments

When working in a hazardous environment, safety is key. The WMS Ex weigh modules (cat. 3) are approved for the use in zone 2 (gas environment).



Functionality Test

The module can be checked at any time with the internal calibration weight. Adapters on weighing pan don't have to be removed for calibration if they weigh less than 50% of full load.



WMS Ex Zone 2 Precision Weigh Modules

Automated processes with their demanding standards and quality requirements ask more and more for high-resolution weigh modules.

These modules must be easily integrated into plants, machines and instruments.

The WMS precision weigh modules meet these customer demands simply and effectively.

Model Specific Weighing Data

Type information	WMS104C-LX	WMS404C-LX	WMS1203C-LX	WMS6002C-LX
Nominal capacity (nominal load)	100 g	400 g	1200 g	6000 g
Maximum capacity	120 g	410 g	1220 g	6200 g
Maximum preload ^{M1)}	18 g	68 g	150 g	150 g
Readability	0.1 mg	0.1 mg	1 mg	10 mg
Internal adjustment	✓	✓	✓	✓

Limit values ^{M2)}

Repeatability (σ) (nominal load) \leq ^{M3)}	0.12 mg	0.1 mg	1 mg	10 mg
Linearity deviation \leq	0.25 mg	0.4 mg	3 mg	30 mg
Eccentric load deviation (test load) \leq	0.5 mg (50 g)	1 mg (200 g)	5 mg (500 g)	50 mg (2000 g)
Sensitivity temperature drift \leq ^{M4)}	0.15 mg/°C	0.6 mg/°C	1.8 mg/°C	9 mg/°C

Typical values ^{M5)}

Repeatability (σ) (nominal load) \leq	0.08 mg	0.08 mg	0.8 mg	6 mg
Settling time \leq	0.8 s	0.8 s	0.8 s	0.8 s

Ambient conditions

Compensated temperature range ^{M6)}	10 °C to 30 °C
Operating temperature range	5 °C to 40 °C
Storage temperature range	-20 °C to 70 °C
Relative air humidity range ^{M6)}	20% to 80%
Warm-up time after power-on ^{M6)}	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 $\pm 3 \sigma$). ^{M4)} Weighing tests according to OIML R76 A.5.3 at stationary conditions. ^{M5)} Applicable for stable environmental conditions and optimal filter settings. ^{M6)} Condition to meet the specified limit values.

General Data

Electrical connection

Power supply	10–29 V DC
Electrical connection	Binder series 423 connector, 19 pins, male
Communication interface	RS232, full-duplex, 2.4 to 38.4 kBaud RS422 full-duplex, 2.4 to 38.4 kBaud, bus capable
Maximum weight update rate	92 values/s

IP protection

Module during weighing	IP44
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Materials

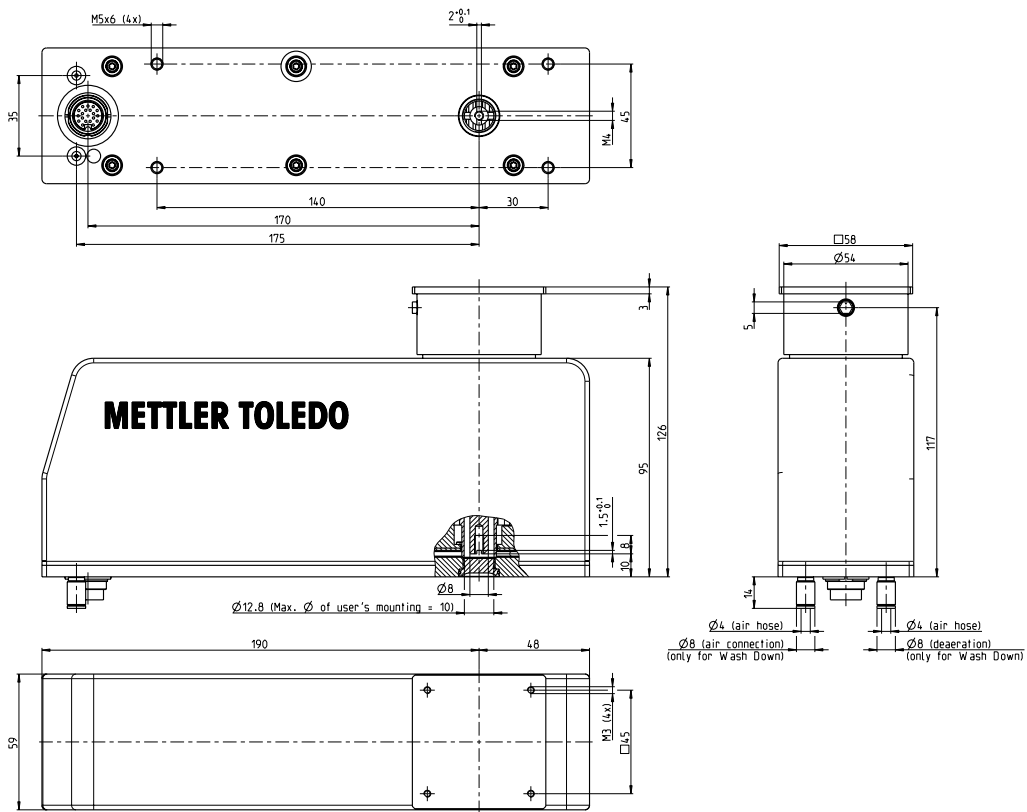
Weighing pan/platform	Chrome plated aluminum
Weigh module housing	Stainless steel (1.4404 / 316L)
Cable	SABIX®
Seals	FPM, FDA compliant
Typical service life of seals	2 years

Scope of Delivery

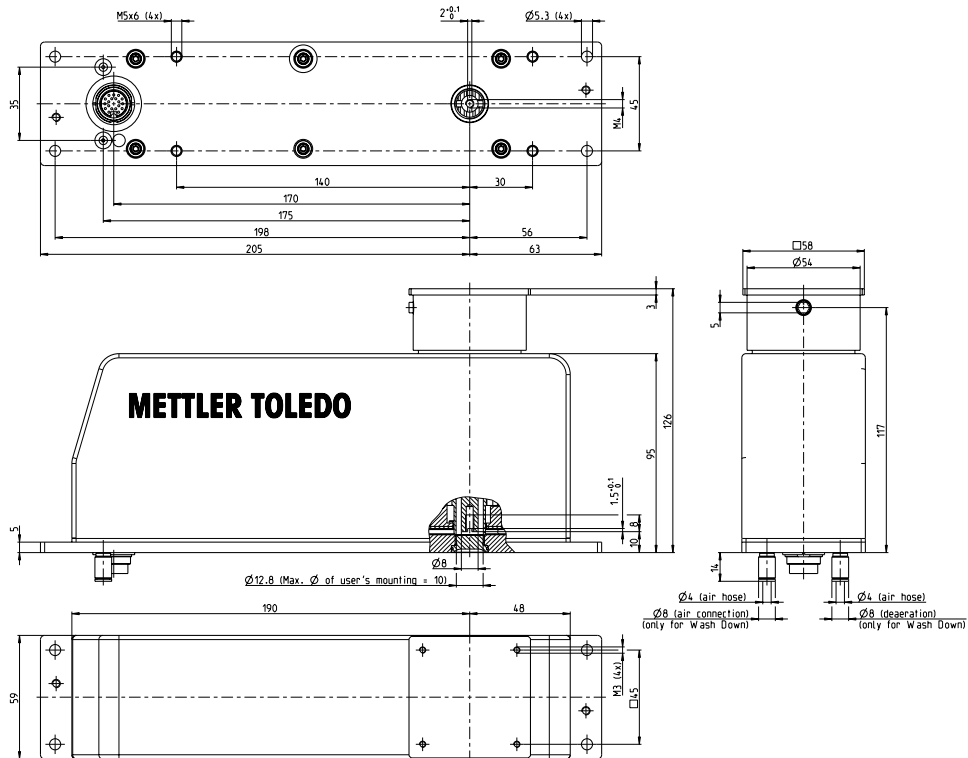
Item	Description	Item number
WMS Ex	Weigh module II 3G (for zone 2)	
Adapter weighing pan (pin connector) (preload reference)	Square 58 x 58 mm, with threaded holes, chrome plated aluminum	300 077 31
Production certificate		
Declaration of conformity		
User manual		

Drawings (mm)

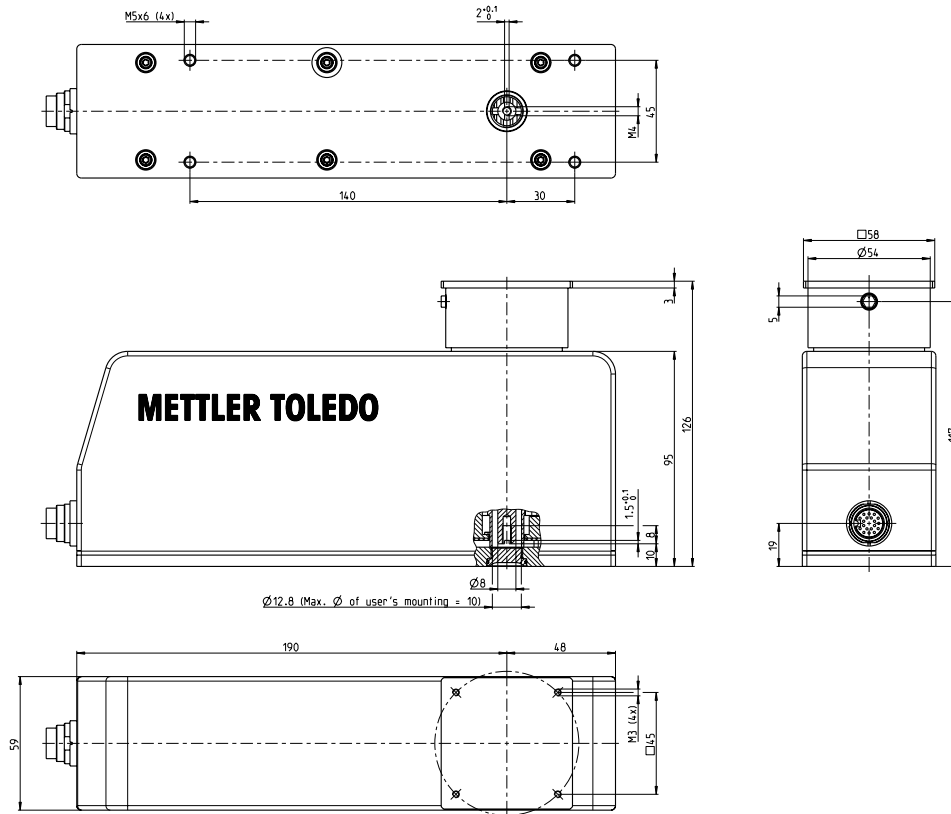
Short base plate and adapter weighing pan with bottom connector



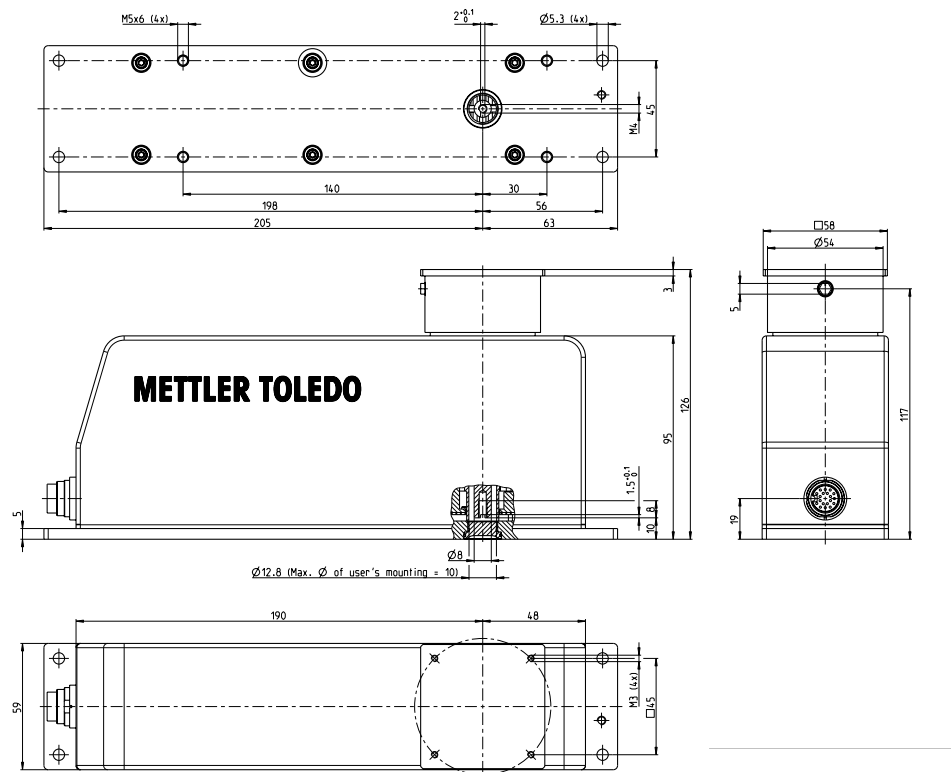
Long base plate and adapter weighing pan with bottom connector



Short base plate and adapter weighing pan with rear connector

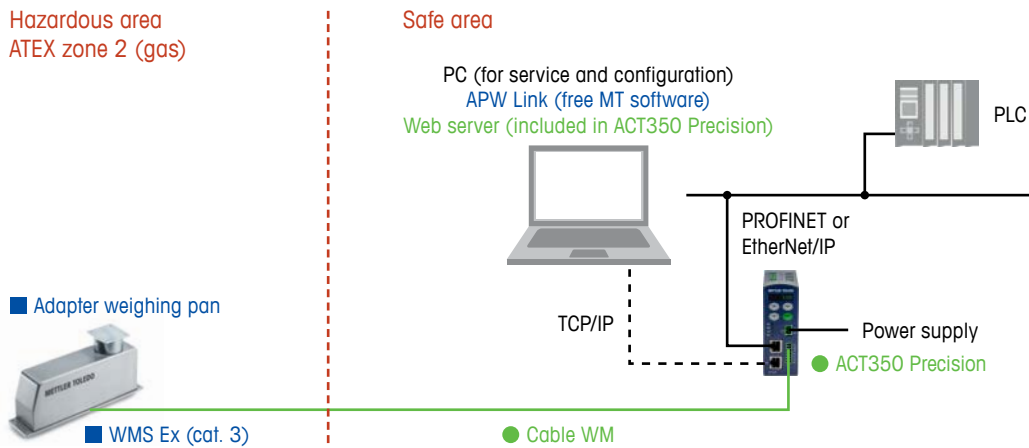


Long base plate and adapter weighing pan with rear connector

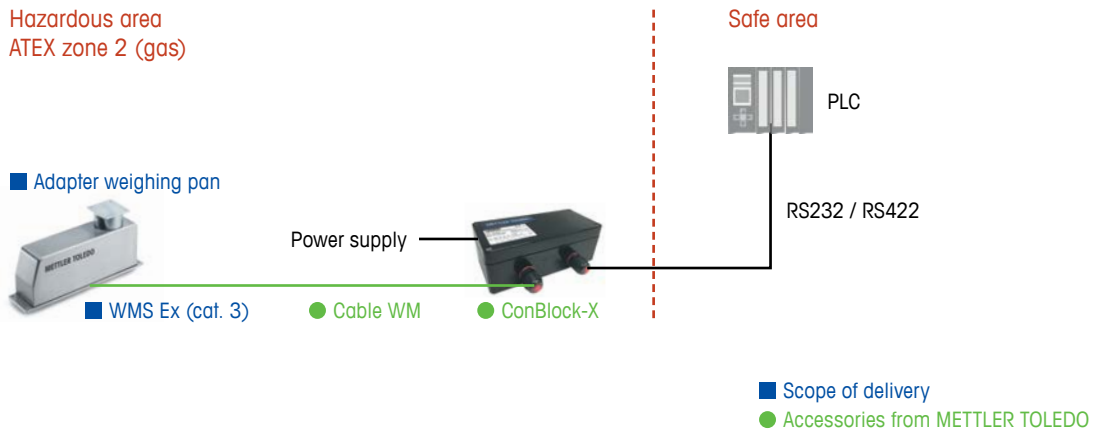


Typical Configurations

Automation network configuration



Serial interface configuration



Accessories

Item	Description	Item number	Picture
Adapter weighing pan (pin connector) ^{A1)}	Square 58 x 58 mm, with threaded holes, 1.4404 / 316L	300 905 67	
ConBlock-X	Connection module IP66 (cat. 3) (for zone 2/22 ; div. 2)	303 740 66	
Cable WM 180M/5	Connection cable weigh module (180°/5 m)	111 388 60	
Cable WM 180M/10	Connection cable weigh module (180°/10 m)	111 388 61	
Cable WM 90M/5	Connection cable weigh module (90°/5 m)	111 388 62	
Cable WM 90M/10	Connection cable weigh module (90°/10 m)	111 388 63	
Cable WM 90H/10	Connection cable weigh module (90°/10 m)	111 388 64	
Cable WM 90B/10	Connection cable weigh module (90°/10 m)	111 388 65	

^{A1)} Weighing range will be reduced in combination with WMS104.

Order Information

Module		With internal adjustment	
		Long base plate	Short base plate
Labyrinth	Bottom connector	WMS104C-LX 300 470 28	WMS104C-LX/10 300 470 70
		WMS404C-LX 300 470 72	WMS404C-LX/10 300 470 74
		WMS1203C-LX 300 470 76	WMS1203C-LX/10 300 470 78
		WMS6002C-LX 300 470 80	WMS6002C-LX/10 300 470 82
	Rear connector	WMS104C-LX/01 300 470 29	WMS104C-LX/11 300 470 71
		WMS404C-LX/01 300 470 73	WMS404C-LX/11 300 470 75
		WMS1203C-LX/01 300 470 77	WMS1203C-LX/11 300 470 79
		WMS6002C-LX/01 300 470 81	WMS6002C-LX/11 300 470 83

METTLER TOLEDO Group

Industrial Division

Local contact: www.mt.com/contacts



Subject to technical changes

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