

Designed for Automation

Tailored for Multi-Line Weighing



Compact Size

The small width of 25 mm enables to build arrays with a minimal pitch to allow parallel multi-line weighing on small space to achieve highest throughput in production and research.



All Inclusive

Fieldbus connectivity, power over Ethernet, calibration weight and electronics. All parts are incorporated in the rugged stainless steel housing with optional IP65 protection for cleaning.



Overload Protection

The weigh module benefits from comprehensive overload protection. This protects the weigh module in the event of malfunction of handling devices or mistakes during installation.



Functionality Test

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



PROFINET
EtherNet/IP

WMF

High-Precision Weigh Modules

Industrial automation applications require multiple lines connected to a single control system, which makes it necessary to have sensors that can support that requirement.

WMF weigh modules are designed with that in mind and are tailored for multi-line automation systems. Fully integrated Industrial Ethernet interface (EtherNet/IP and PROFINET) allows integration into a real-time automation network.

Model Specific Weighing Data

Type information	WMF204C	WMF303C
Nominal capacity / nominal load	200 g	300 g
Maximum capacity	220 g	320 g
Maximum preload ^{M1)}	50 g	25 g
Maximum preload for internal adjustment	100 g	150 g
Readability	0.1 mg	1 mg
Internal adjustment	✓	✓

Limit values ^{M2)}

Repeatability (σ) (@nominal load) \leq ^{M3)}	0.13 mg	1 mg
Linearity deviation \leq	0.4 mg	2 mg
Eccentric load deviation (@test load) \leq	1 mg (100 g)	2 mg (100 g)
Sensitivity temperature drift \leq ^{M4)}	0.3 mg/°C	0.45 mg/°C

Typical values ^{M5)}

Repeatability (σ) (@nominal load) \leq	0.08 mg	0.4 mg
Settling time \leq	0.4 s	0.4 s

Ambient conditions

Compensated temperature range ^{M6)}	10 °C to 30 °C (50 °F to 86 °F)
Operating temperature range	5 °C to 40 °C (41 °F to 104 °F)
Storage temperature range	-20 °C to 70 °C (-4 °F to 158 °F)
Relative air humidity range ^{M6)}	20 % to 80 %
Warm-up time after power-on ^{M6)}	45 minutes

^{M1)} Maximum preload on top of adapter weighing pan to maintain maximum capacity.

^{M2)} Applicable for stationary conditions within compensated temperature and relative air humidity range.

^{M3)} σ = standard deviation (68% of weighing results within $\pm \sigma$).

^{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	Power over Ethernet (PoE) Class 1 PD (< 3.84 W) Mode/Alternative A (Phantom Power)
Electrical connection	M12, 4 pins, D-coded, male
Communication interface	EtherNet/IP PROFINET
Maximum weight update rate	92 values/s and 366 values/s ⁶¹⁾

IP protection

Module during weighing	IP44
Module during cleaning ⁶²⁾	IP65

Materials

Weighing pan/platform	Stainless steel (1.4404 / 316L)
Weigh module housing	Stainless steel (1.4404 / 316L)
Cable	-
Seals	FPM, FDA compliant
Typical service life of seals	2 years
Washdown bellows ⁶²⁾	Silicone, FDA compliant

Air connection

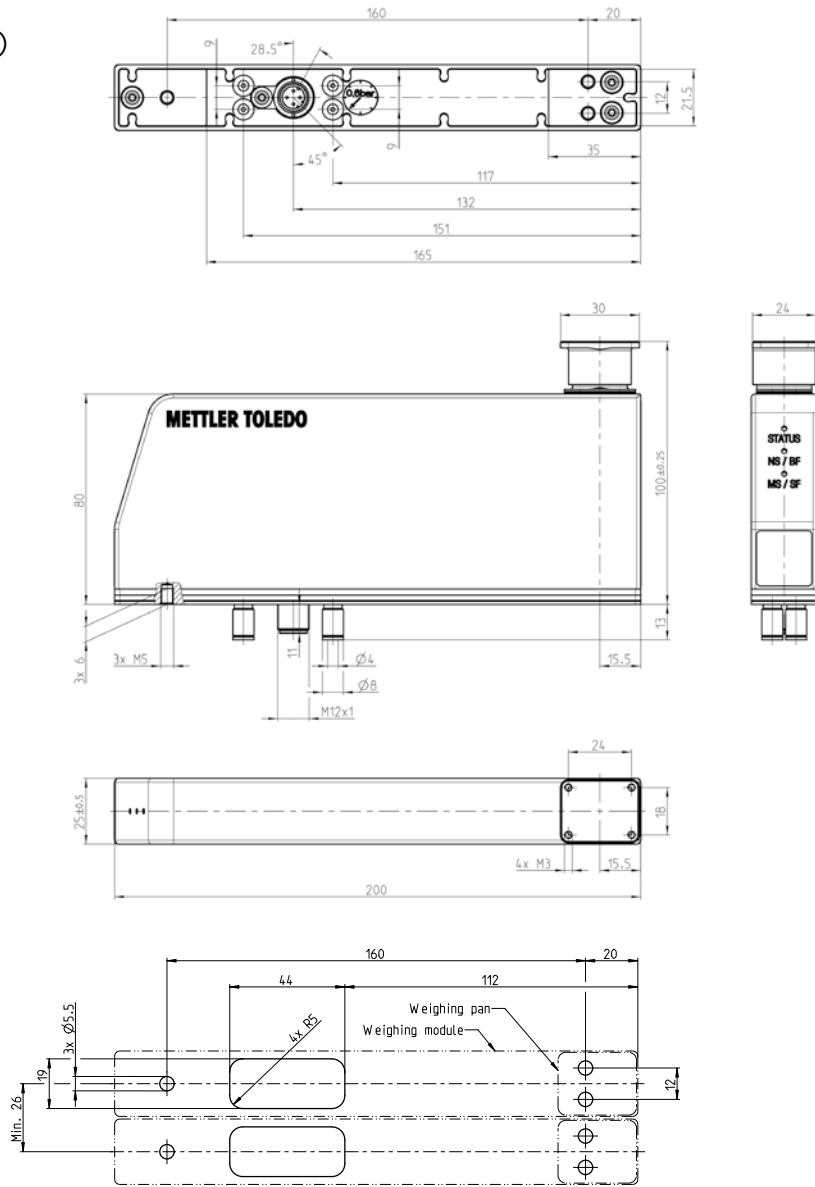
Tube diameter external	4 mm (5/32 inch)
Air pressure for washdown ⁶²⁾	0.6 +/-0.1 bar(g)
Air pressure for cooling ⁶³⁾	max. 1 bar(g)

⁶¹⁾ Fast Weight Update Channel

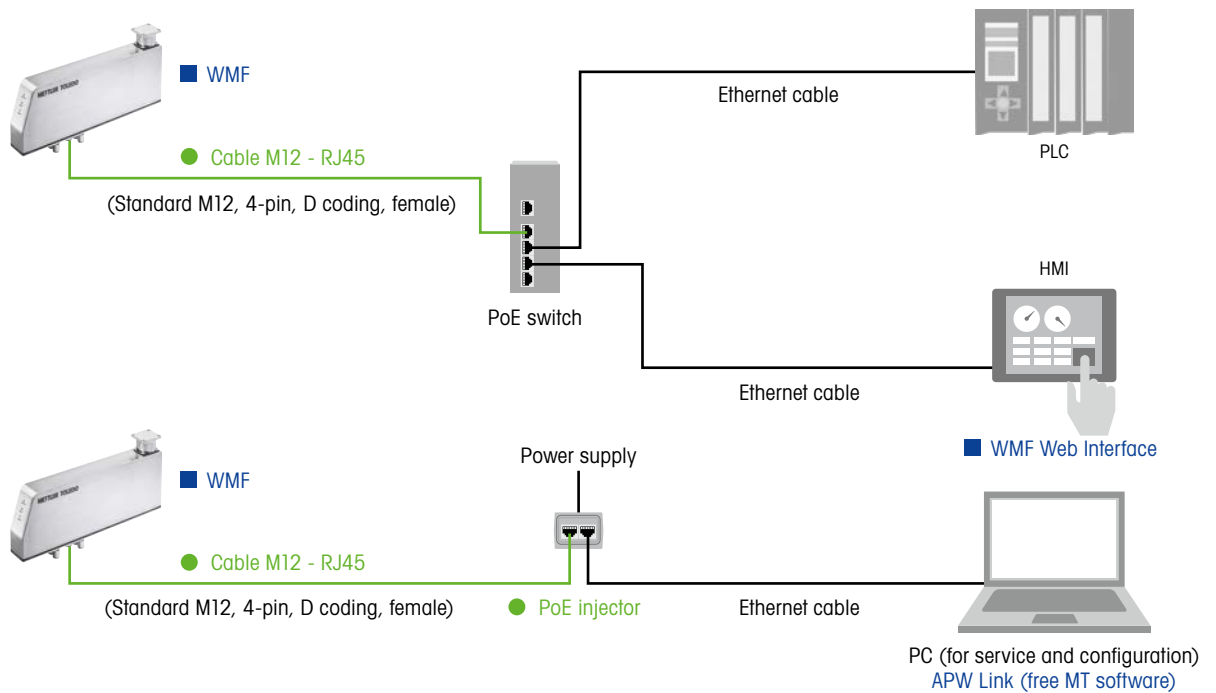
⁶²⁾ Only with optional washdown configuration.

⁶³⁾ Refer to engineering note "Active Cooling Function" for more information.

Drawings (mm)



Typical Configurations




Scope of Delivery

Item	Description
WMF	Weigh module
Adapter weighing pan (preload reference)	24 x 30 mm, with threaded holes
Gasket	Bottom
User manual	
Production certificate	
Declaration of conformity	
Air connectors ⁵¹⁾	For washdown function (2x) ⁵¹⁾

⁵¹⁾ Only with optional washdown configuration.

Accessories

Item	Description	Item number	Picture
Weighing pan	24 x 30 mm, without threaded holes	303 001 73	
Cable	4p 2.0 m (M12f 180° – RJ45)	303 261 12	
Cable	4p 5.0 m (M12f 180° – RJ45)	304 019 00	
Cable	4p 10.0 m (M12f 180° – RJ45)	304 019 20	
Cable ^{A1)}	4p 2.0 m (M12f 90° – RJ45)	306 153 96	
Cable ^{A1)}	4p 5.0 m (M12f 90° – RJ45)	306 153 97	
Cable ^{A1)}	4p 10.0 m (M12f 90° – RJ45)	306 156 18	
Air connectors	for cooling or washdown function (2x)	303 071 94	
PoE injector	Power supply for the weigh module	303 261 11	
Ethernet/USB converter	To connect a service PC	303 261 10	

^{A1)} Note: If air cooling is used in combination with the 90° cable, install a 90° air connector from an external supplier (connection thread: M3 x 0.5) to avoid collision.

Order Information

Module	Capacity/Resolution	Washdown	Interface type	
			EtherNet/IP	PROFINET
WMF204C	220 g / 0.1 mg	Yes	302 822 30	302 822 32
	220 g / 0.1 mg	No	302 822 19	302 822 31
WMF303C	320 g / 1 mg	Yes	302 822 34	302 822 36
	320 g / 1 mg	No	302 822 33	302 822 35



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Subject to technical changes

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