

# WMF Weigh Modules



## **WMF Weigh Modules**

Industrial Ethernet

High-Resolution

Integrated Electronics

Robust Design

**Designed for Automation**  
Enabling Multi-Line Weighing

**METTLER TOLEDO**

# High Resolution Weighing

## Enabling Maximum Productivity

**The very high resolution of up to 2 million digits of the weigh module enables weighing different container sizes on the same weigh module. Its very compact design includes power over Ethernet connectivity requiring no additional space at all in the control cabinet.**

The WMF weigh module can be used as a single weigh module or in an array with multiple units. Either deeply integrated inside a machine or instrument, but also inside glove boxes where easy to clean and robust equipment is mandatory. Its small size is ideal to build

arrays with a minimal pitch. This facilitates arranging numerous weigh modules in a small space such that multi line filling or check weighing applications can be realized. This speeds up the entire process if multiples of vials, ampoules, syringes, tablets or

capsules are weighed simultaneously and in parallel within fractions of a second. With this arrangement, it is possible to accurately weigh several tens of thousands of samples in an hour.



**EtherNet/IP™**

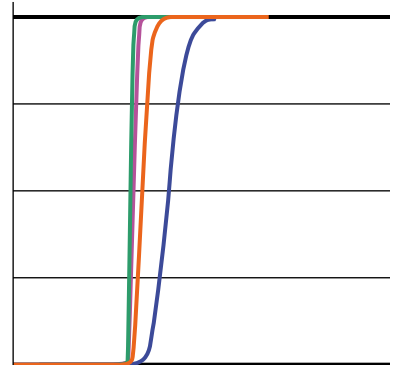
### Plug & Communicate with most common PLC systems

WMF is dedicated for use in automation. Connectivity via EtherNet/IP or PROFINET IO RT is incorporated in the space saving, compact unit. Fully engineered and comprehensive Device Description Files make integration into PLC easy.



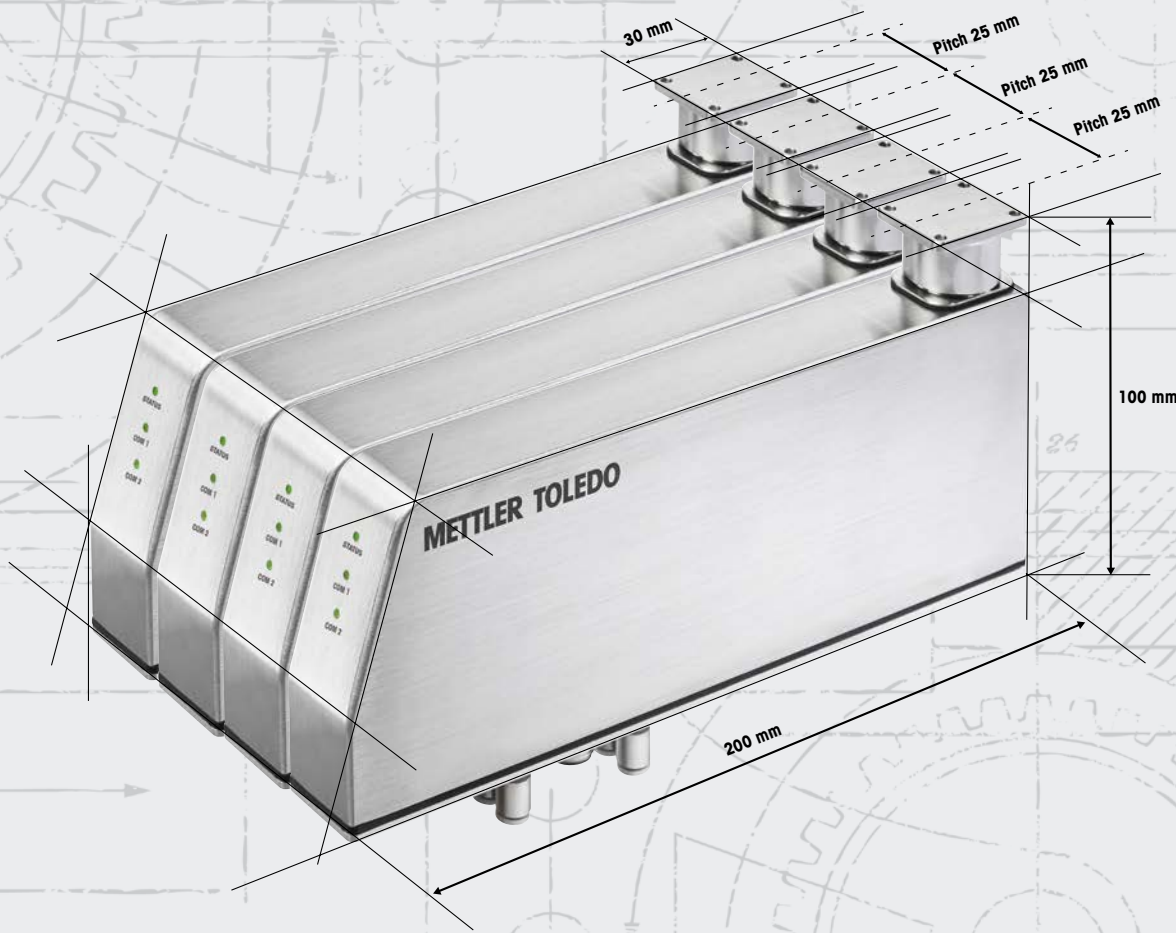
### Comprehensive overload protection assures high uptime

WMF weigh modules are designed to have a long service life because of their innovative overload protection against forces from all directions. This protects accuracy of the weigh module during normal operation but also in the event of malfunction.



### Fast weighing enables High Throughput Rates

Thanks to fully integrated electronics inside the WMF with customized microprocessor, the final weight value can be processed much quicker. In addition, intelligent adaptive filters suppress disturbing effects from vibrations in the shortest time possible.



**Fast format change with easy to replace weighing platform**  
 The weighing platform with threaded holes allows for the installation of custom specific sample holding adapters. The weighing pan can be changed very quickly, thus adjusting to a new sample or product type in the shortest time possible. This helps to minimize downtime.



**Quick functionality and accuracy test at any time**  
 The production process doesn't need to be interrupted for calibration with an external reference weight, since the weight inside the weigh module can be used to check the correct functionality. Adapters mounted don't have to be removed for calibration.



**Protection allows rinsing with liquid for clean-in-place**  
 Stainless steel housing (316L), FDA compliant sealing and the optional IP65 wash-down feature allow cleaning procedures in place with water or liquid chemicals. This eliminates the need to disassemble the weigh module for cleaning.

# WMF Model Specific Data

Parameter		WMF204C	WMF303C
Maximum capacity	nominal	220 g	320 g
Readability	nominal	0.1 mg	1 mg

### Measurement properties (properties apply to environmental conditions)

Specification temperatures		10 ... 30 °C	
Specification humidity		20 ... 80 % rH	

### Limit values

Repeatability (at nominal load)	standard deviation	0.13 mg	1 mg
Linearity deviation	standard deviation	0.4 mg	2 mg
Eccentricity deviation (test load) OIML R76	standard deviation	1 mg	2 mg
Sensitivity offset (test load) <sup>1)</sup>		0.8 mg (150 g)	2.0 mg (300g)
Sensitivity temperature drift		0.00015 %/°C x Rnt	0.00015 %/°C x Rnt
Sensitivity stability		0.00025 %/a x Rnt	0.00025 %/a x Rnt

### Typical values

Repeatability	typical	0.08 mg	0.4 mg
Eccentric load deviation (test load)	typical	0.4 mg (200 g)	1 mg (300g)
Sensitivity offset <sup>1)</sup> (test load)	typical	0.5 mg (150 g)	0.8 mg (300g)
Minimum weight (according to USP)		160 mg	800 mg
Minimum weight (@ U=1%, 2 sd)		16 mg	80 mg

### Dynamics

Signal processing output rate	max.	92/s	92/s
Settling time <sup>2)</sup> (under good conditions)	typical	0.15s	0.15s
Settling time <sup>2)</sup>		0.8s	0.8s

Rnt = net weight (of sample); sd = standard deviation; a = year (annum); <sup>1)</sup> Applies only after adjustment at nominal capacity with an OIML E2 weight; <sup>2)</sup> The time between placing the weighed object on the weigh module and indication of a stable weighing result under optimal environmental conditions

### Convenient Service Tool

Speeds up Commissioning

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

The following operations can be performed:

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

[www.mt.com/apw-link](http://www.mt.com/apw-link)



[www.mt.com/WMF](http://www.mt.com/WMF)

For more information

### Mettler-Toledo GmbH

CH-8606 Greifensee  
Switzerland

Tel. + 41 44 944 22 11  
Fax + 41 44 944 30 60

Subject to technical changes  
© 01/2016 Mettler-Toledo GmbH  
30282036 / MarCom Industrial



**Quality certificate.** Development, production and testing according to ISO 9001.



**Environmental management system** according to ISO 14001.



**“European conformity”.** The CE conformity mark provides you with the assurance that our products comply with the EU directives.