

FMS conveyor belt scales / Electronics

## **BMGZ700-Series** Robust electronics for conveyor belt scales with optimal operation via FMS-beltSCALE™ app

- **Robust design, IP65**  
Heavy aluminium housing with resistant display and controls
- **Intuitive operation and configuration, best visibility**  
Graphical display, auto tare function and calibration via integrated calculation or via toll-free app
- **Simple system integration via ethernet**  
Optional PROFINET RT interface
- **Legal-for-trade version**  
Basis for direct billing to customers



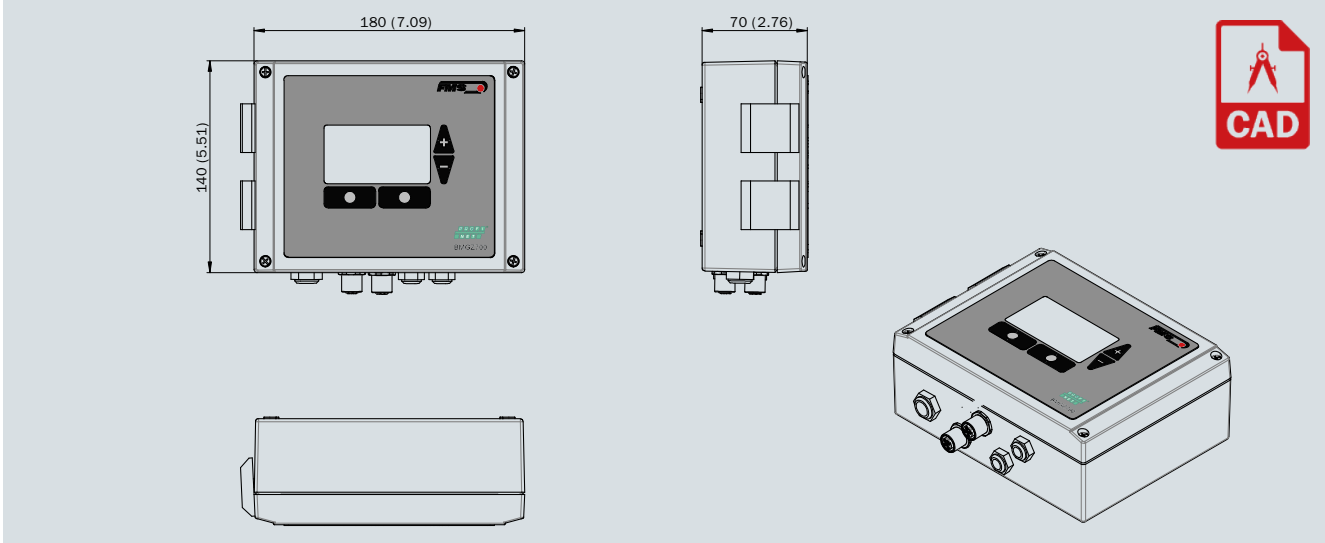
### **BMGZ700-Series**

The electronics of the BMGZ700-series has been designed for the demanding applications of mobile and stationary conveying systems. The illuminated, graphical display indicates the actual performance, daily amount, total amount and belt speed. Configurable analog and digital outputs are available to connect additional displays or controllers. The electronics can be operated via the free FMS-beltSCALE app. All data is also provided via the integrated PROFINET RT interface for easy system integration and data management. The integrated web browser allows for quick configuration of the electronics via a regular laptop or pc and can even grant remote access to the system. A legal-for-trade version allows for direct billing to the customers.

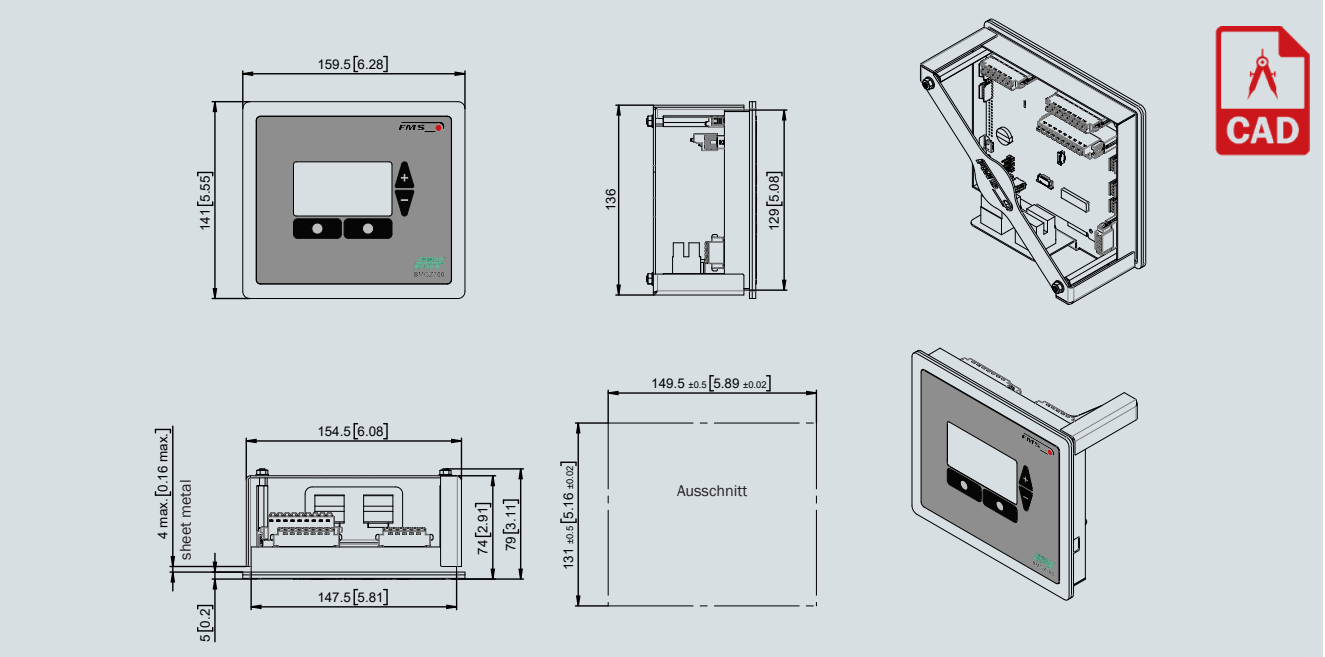
### **Functional description**

The electronics of the BMGZ700-series converts and digitalizes the signals of the measuring roller. The electronics subtracts the weight of the measuring roller and the belt (tare) from the actual reading and multiplies the result with the belt speed. The BMGZ750-series features an auto tare function which allows automatic evaluation of the tare value during two turns of the belt.

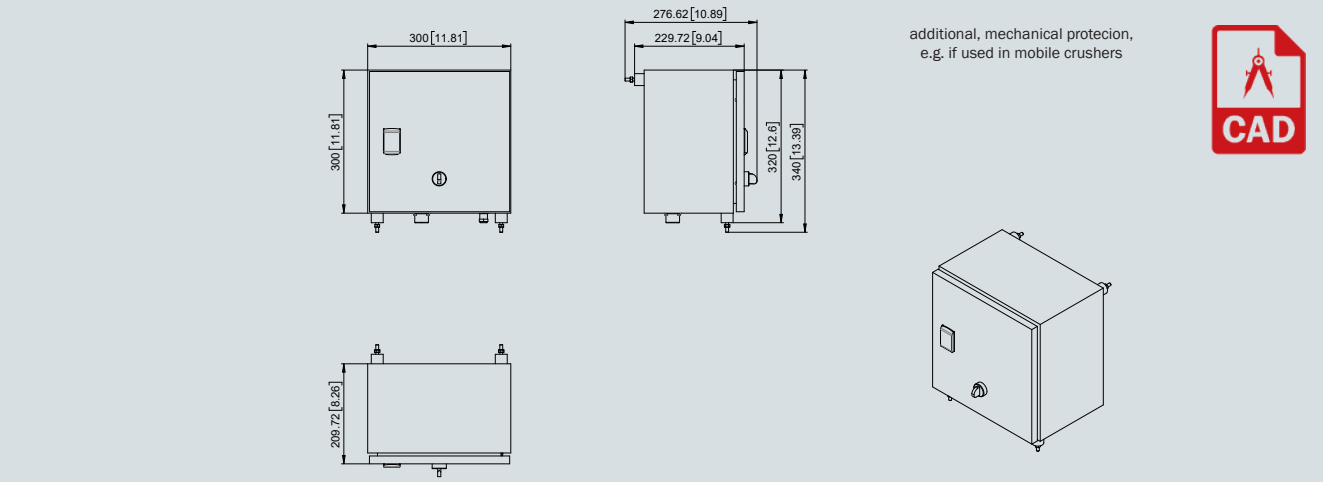
**BMGZ700.W** housing for wall mount (IP42) : Dimensions in mm (in.)



**BMGZ700.S** housing for panel integration (IP65 when installed) : Dimensions in mm (in.)



**BMGZ700.K** cabinet (with .W housing) (IP65) : Dimensions in mm (in.)



Electronics	BMGZ710	BMGZ750
<b>General technical data</b>		
Legal-for-trade version I	no	yes
Accuracy	0.05 %	
Number of measuring rollers	1	
Cycle time	1 ms	
Temperature range	-10 to +50 °C (14 to 122 F)	
Power supply	24 (18 to 36) VDC	
Power consumption	5 W	
Weight	1.5 kg	
Protection class	.W housing: IP42; .S housing: IP20; .K housing: IP65	
<b>Operation and display</b>		
App connectivity via bluetooth	●	●
Displayed values	Total flow rate [t], daily flow rate or badge [t], current capacity [t/h], belt speed [m/s] as absolute value or graphically in diagram	
Daily counter, badge counter	0 to 1'000 t (resolution 5 kg); 1'000 to 10'000 t (resolution 10 kg); 10'000 to 100'000 t (resolution 100 kg); 100'000 bis 1'000'000 t (resolution 1'000 kg)	
Display	4 buttons, graphical, back-lite display, optional via web interface or mobile device (free app)	
Totalizer	0 to 1 Mio. t (resolution 1'000 kg)	
<b>In- and outputs</b>		
Digital outputs	Taring ready, 24 VDC, max. 100 mA; belt scale ok, 24 VDC, max. 100 mA; remote counter impulse, impulse duration 1 to 1'000 ms, 24 VDC, max. 100 mA; remote counter reset, 24 VDC, max. 100 mA	
Digital inputs	Start taring, badge active, belt speed, 24 VDC	
Analogue outputs	Actual capacity: current output: 0/4 to 20 mA, min. 500 Ω or power output: 1 to 10 VDC, min. 1'000 Ω	
<b>Options</b>		
.W housing for wall mount	●	●
.S housing for panel integration	●	●
.K cabinet (with .W housing)	●	●
<b>Ethernet interface</b>		
PROFINET RT (optional)	●	●
Others on request	●	●

BMGZ700 : PROFINET features (optional)	
Cycle time	1 ms für RT_CLASS_3, 1 ms für RT_CLASS_1
Media redundancy	Media Redundancy Protocol (MRP) - Client
IRT Support	Ja, RT_CLASS_3, synchronous with network clock
Integrated Switch	2 Port
PROFINET IO specification	V 2.3, legacy startup of specification V 2.2 is supported
Certification	PNIO version V 2.35, net load class: CLASS III, conformance class (CC-C)

BMGZ700 : Order code	
<b>BMGZ7</b>	PROFINET interface (option)
<b>5</b>	Housing (.W wall mount; .S. panel integrated; K. cabinet)
<b>0</b>	Design revision status
<b>A</b>	Additional functionality (0 = none)
<b>.W</b>	Variation (1: Single-channel; 5: legal-for-trade)
<b>.PNET</b>	Series

BMGZ700 : Scope of supply
● electronics unit ● 15 m (49 ft) connecting cable to measuring roll (other lengths on request) ● Measuring roller (separate order code)

**BMGZ750.PNET** : Typical application



**Other products** : Construction and recycling

**BMGZ041 Troughed measuring roller**



**BMGZ021 Flat measuring roller**



**About us**

FMS Force Measuring Systems AG has been manufacturing conveyor belt scales since 1995. Our measuring roller has earned a legendary reputation on the market over the last few decades. The compact dimensions, the completely encapsulated

housing with non-contact speed detection, the direct measurement on the roller and the compact design are just the most important points that are repeatedly emphasized by customers.

Since 1993 FMS Force Measuring Systems AG has been a worldwide market leader in the fields of tension control and web guiding, and the only manufacturer that covers a complete range of measurement, control and telemetry technologies.

Its customized solutions are applied in the converting, metals, paper, textile and the wire & cable industries.

With industry leading technology, high quality construction, and a wide array of products FMS serves customers worldwide to help them maximize their production performance.

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