

# MB858

Load Pin

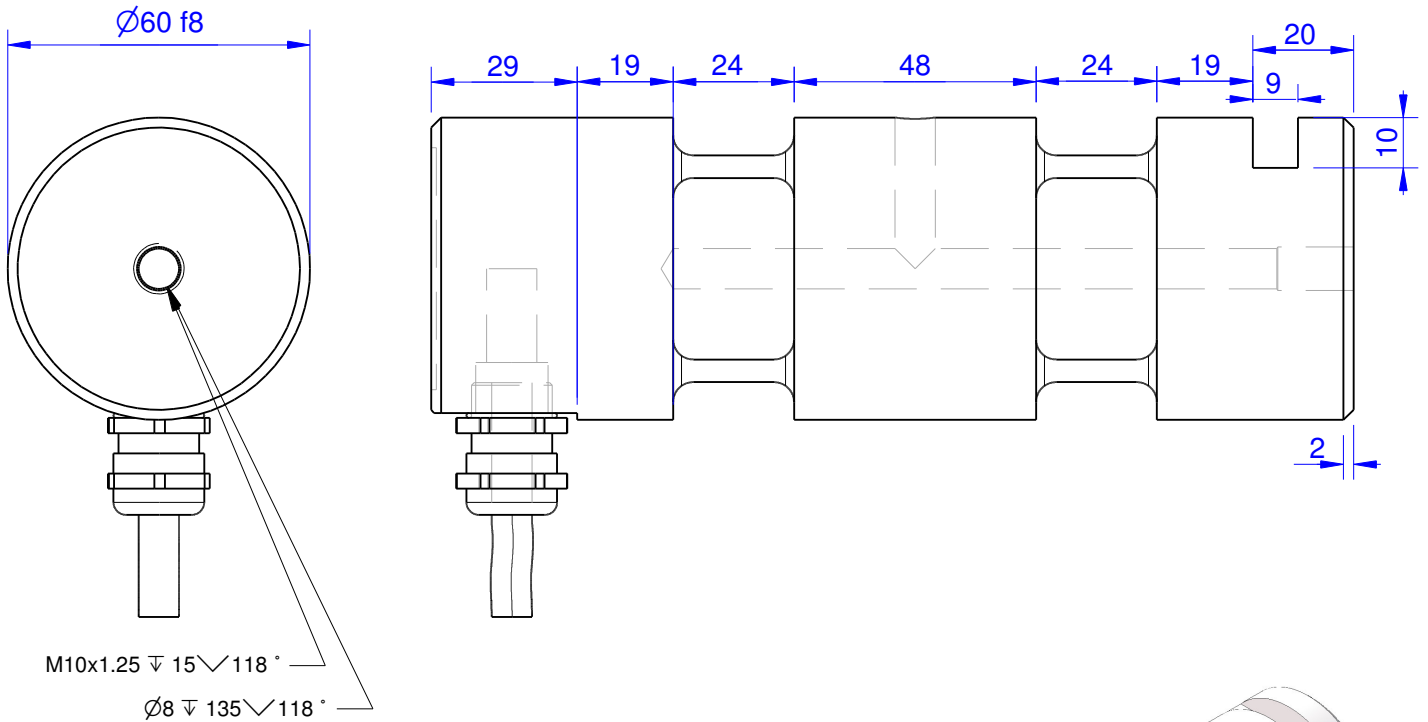
## Content of Loadpin Datasheet

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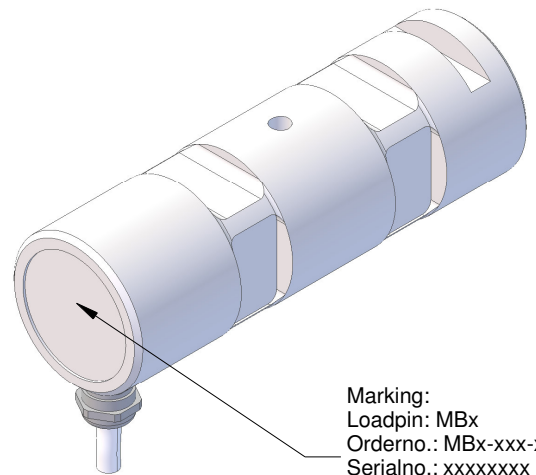
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M10x1.25  $\nabla$  15  $\nabla$  118°  
 $\varnothing$ 8  $\nabla$  135  $\nabla$  118°

Order-number	Capacity (F.S.)	Uncertainty (k=2)	Review
MBxxx-10-x-A	10 kN	±0,05kN	A
MBxxx-20-x-A	20 kN	±0,10 kN	A
MBxxx-50-x-A	50 kN	±0,20 kN	A
MBxxx-100-x-A	100 kN	±0,50 kN	A
MBxxx-200-x-A	200 kN	±1,00 kN	A

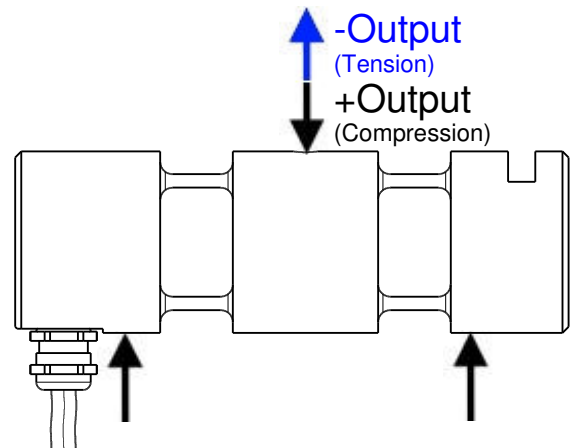
\* above showed version  
 The fixed dimensions don't change at the other capacity.



Marking:  
 Loadpin: MBx  
 Orderno.: MBx-xxx-x-x  
 Serialno.: xxxxxxxx  
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## Specifications:

Dimension / Material		
Material		Stainless Steel
Protection class		IP 66
Hardness (load area)	HRC	38
<b>Mechanical Data</b>		
Safe Load Limit	% of F.S.	150
Breaking Load	% of F.S.	300
<b>Precision</b>		
Nonlinearity	% of F.S.	±0,5
Nonrepeatability	% of F.S.	±0,25
Hysteresis	% of F.S.	±0,2
Temp. Shift Zero	% of F.S./K.	±0,05
Temp. Shift Span	% of F.S./K.	±0,05
<b>Temperature</b>		
Compensated Temp.	°C	-10...+60
Operating Temp.	°C	-20...+70



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# Mounting Situation

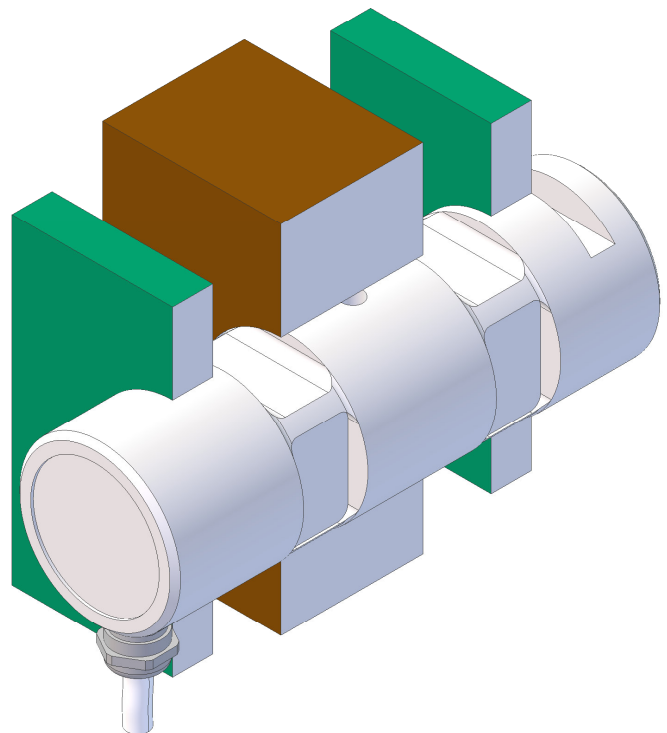
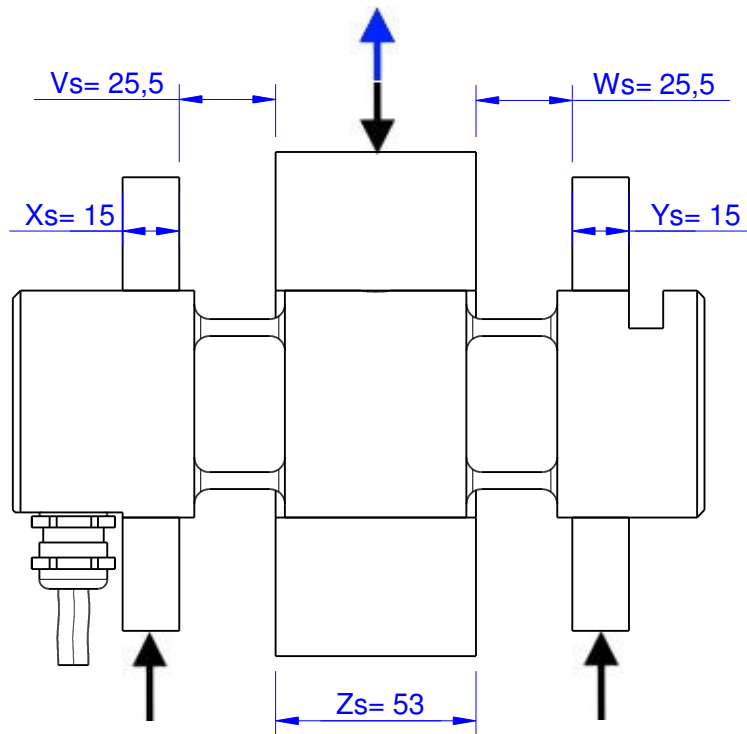
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Bore fit of mounting situation: H7

## Configuration

possible mounting situation / customer mounting could vary

(Please describe mounting situation with Vs, Ws, Xs, Ys and Zs for best possible calibration)



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# Output Signal & Wiring

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## Analog Output mV/V (S1)

Electrical Data		
Rated Output	mV/V@F.S.	1
Zero Balance	mV/V	±0,05
Excitation (Maximum)	Volt	10
Input Resistance	Ohm	450±100
Output Resistance	Ohm	352±2
Insulating Resistance	GOhm	>5

Wiringcode: WC52		Cabletype: 2x2x0,25 PUR		
Cable Length	Excitation (+)	Excitation (-)	Bridge (+)	Bridge (-)
15 m	brown	white	green	yellow

Ordernumber Add-On:  
MBxxx-x-S1-x

## Analog Output 1V..10V (U1)\*

Electrical Data U1		
Output @ 0kN	V	1±0,2
Output @ F.S.	V	9±0,2
Supply Voltage	V	24±2
Current Consumption	mA	25 (@ 24V)
Bandwidth	kHz	2,2±0,2

Wiringcode: WC23			
Cabeling: 15 m 2x2x0,25 PUR			
Supply(+)	Ground (-)	Output	n.c.
brown	white	green	yellow

Ordernumber Add-On:  
MBxxx-x-U1-x

## Analog Output 4..20mA (I1)\*

Electrical Data I1		
Output @ 0kN	mA	4±0,5
Output @ F.S.	mA	20±0,5
Supply Voltage	V	24±2
Current Consumption	mA	45 (@ 24V)
Bandwidth	kHz	2,2±0,2

Wiringcode: WC23			
Cabeling: 15 m 2x2x0,25 PUR			
Supply(+)	Ground (-)	Output	n.c.
brown	white	green	yellow

Ordernumber Add-On:  
MBxxx-x-I1-x

## Analog & Switch Output 0V..10V (U20)\*

Electrical Data U20		
Output @ 0kN	V	1
Output @ F.S.	V	9
Supply Voltage	V	11..30
Current Consumption	mA	15 (@ 24V)
Bandwidth	Hz	105
Switching Output		Open Collector
max. Switching current	mA	100

Wiringcode: WC33			
Integrated Amplifier: GSV-15L			
Cabeling: 15m 4x2x0,25 PUR			
Supply(+)	brown	Scale	grey
Ground (-)	white	Threshold	pink
Output	green	Output Ground	blue
Tare	yellow		

Ordernumber Add-On:  
MBxxx-x-U20-x

## Analog & Switch Output 4..20mA (I20)\*

Electrical Data I20		
Output @ 0kN	mA	4
Output @ F.S.	mA	20
Supply Voltage	V	11..30
Current Consumption	mA	15 (@ 24V)
Bandwidth	Hz	105
Switching Output		Open Collector
max. Switching current	mA	100

Wiringcode: WC33			
Integrated Amplifier: GSV-15L			
Cabeling: 15m 4x2x0,25 PUR			
Supply(+)	brown	Scale	grey
Ground (-)	white	Threshold	pink
Output	green	Output Ground	blue
Tare	yellow		

Ordernumber Add-On:  
MBxxx-x-I20-x

## Threshold point at U20 and I20:

The threshold is preset at 10V or 20mA.  
The threshold is an opener.

Attention: Nipple orientation of connector is not fixed. In case of 90° connector - it is necessary to set by customer.

\*Attention: With this output configuration is no negative signal (Tension) possible. Please ask our engineering for 4..12..20mA; 1..5..9V or ±10V versions.

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# Performance Level

MB858 Review: A

## 1. Identification:

ISO 13849-1: 2008 Category 1 PL c

## 2. Classification:

Used standard: DIN EN ISO 13849-1: 2008

Performance Level: Plc

Category: 1

Diagnostic coverage: Low

MTTFd-value: 59 years

## 3. Limits for the operation:

All technical information from datasheet have to be considered.

Deviations lead to loss of safety functions: Attention

Only use the loadpin within the temperature limits of  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$

Use the right range of supply voltage

Protect the loadpin of mechanical overload

## 4. Lifetime

The calculations are based on a lifetime of 30 years in continuous operation with a maximum duty cycles of from 260,000 cycles per year.

## 5. Error display:

The error display is performed by the undershoot and overshoot of the signal.

### Voltage output:

Error 1: the output voltage is less 0,5V

Error 2: the output voltage is greater 9.5V

### Current output:

Error 1: the output current is less 3.5mA

Error 2: the output current is greater 20.5mA