

# MB1642

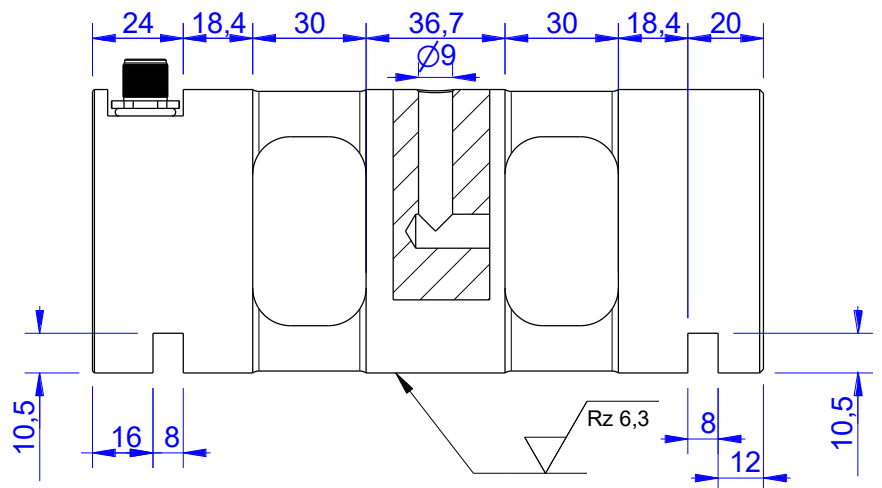
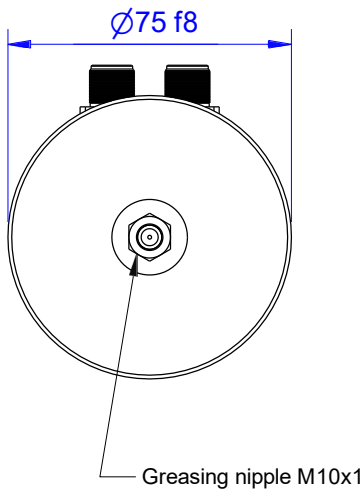
Redundant Load Pin

## Content of Loadpin Datasheet

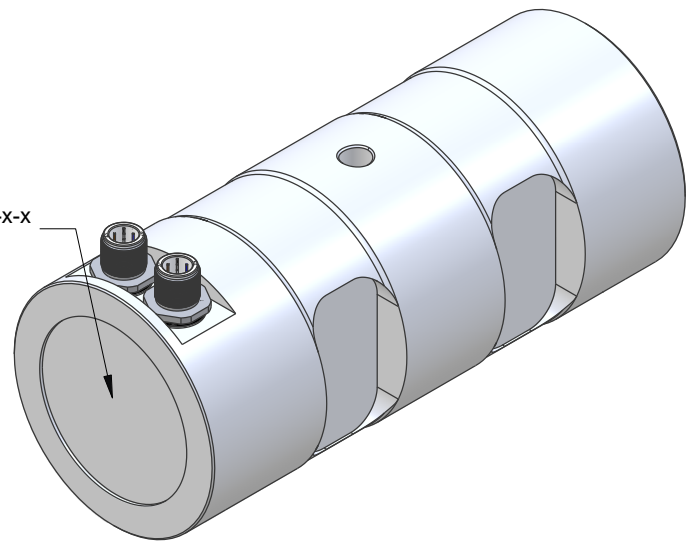
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Marking:  
Loadpin: MBx  
Orderno.: MBx-xxx-x-x  
Serialno.: xxxxxxxx  
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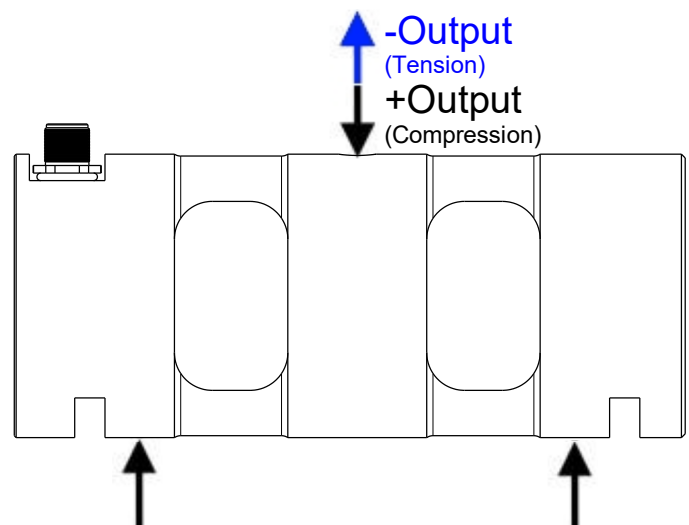


Ordernumber	Capacity [kN] (F.S.)	Uncertainty [kN] (k=2)	Review
MB1642-20-x-A	20	$\pm 0,10$	A
MB1642-50-x-A	50	$\pm 0,25$	A
MB1642-100-x-A	100	$\pm 0,50$	A
MB1642-200-x-A	200	$\pm 1,00$	A
MB1642-360-x-A*	360	$\pm 1,80$	A

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

## Specifications:

Dimension / Material		
Material		Steel
Protection class		IP 66
Hardness (load area)	HRC	45..48
<b>Mechanical Data</b>		
Safe Load Limit	% of F.S.	150
Breaking Load	% of F.S.	300
<b>Precision</b>		
Nonlinearity	% of F.S.	$\pm 0,5$
Nonrepeatability	% of F.S.	$\pm 0,25$
Hysteresis	% of F.S.	$\pm 0,2$
Temp. Shift Zero	% of F.S./K.	$\pm 0,05$
Temp. Shift Span	% of F.S./K.	$\pm 0,05$
<b>Temperature</b>		
Compensated Temp.	$^{\circ}\text{C}$	-10...+60
Operating Temp.	$^{\circ}\text{C}$	-20...+70



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# Mounting Situation

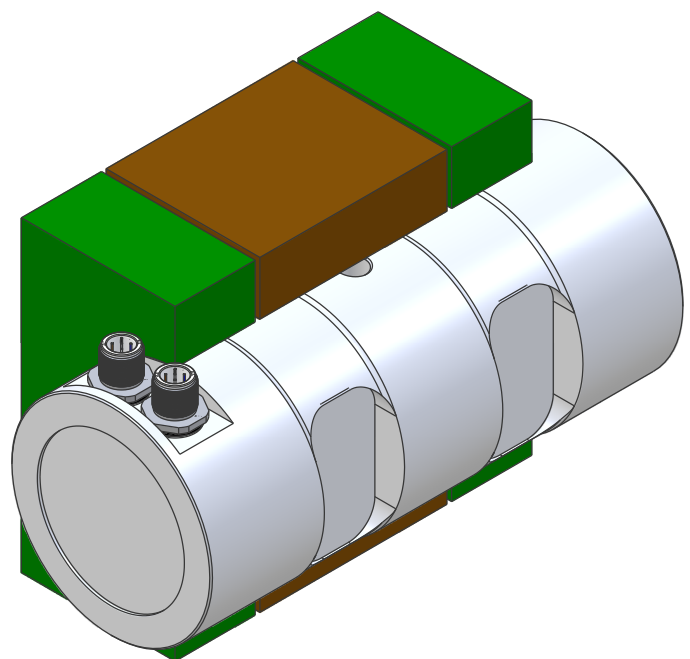
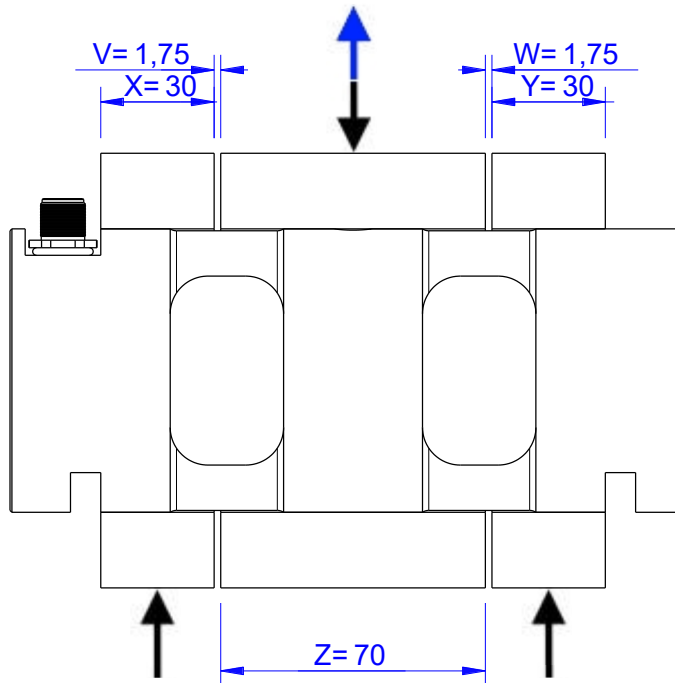
MB1642 Review: A

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

MB1642 Review: A

## Analog Output mV/V (S1)


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

Wiringcode: WC58 2x		Connectortype: M12 (male)			
	Exitation (+) Pin 1	Exitation (-) Pin 2	Bridge (+) Pin 3	Bridge (-) Pin 4	

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

## Analog Output 0V..10V (U1)\*


Electrical Data U1		
Output @ 0kN	V	0
Output @ F.S.	V	10
Supply Voltage	V	14..28
Current Consumption	mA	25 (@ 24V)
Bandwidth	kHz	1

Wiringcode: WC46 2x		Connectortype: M12 (male plug)			
	Supply (+) Pin 1	Output Pin 4	GND Pin 3	Tara Pin 2	Scale Pin 5

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

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


Electrical Data I1		
Output @ 0kN	mA	4
Output @ F.S.	mA	20
Supply Voltage	V	14..28
Current Consumption	mA	45 (@ 24V)
Bandwidth	kHz	1

Wiringcode: WC46 2x		Connectortype: M12 (male plug)			
	Supply (+) Pin 1	Output Pin 4 2x	GND Pin 3	Tara Pin 2	Scale Pin 5

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

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


Electrical Data U20		
Output @ 0kN	V	0
Output @ F.S.	V	10
Supply Voltage	V	9..28
Current Consumption	mA	15 (@ 24V)
Bandwidth	Hz	2000
Switching Output		Open Collector
max. Switching current	mA	100

Wiringcode: WC39 2x				
Integrated Amplifier: GSV-6				
Cabeling: M12 (male plug)				
Supply(+)	Pin 1	Scale	Pin 5	
Ground (-)	Pin 3	Threshold	Pin 6	
Output	Pin 4	Output Ground	Pin 7	
Tare	Pin 2			

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	9..28
Current Consumption	mA	35 (@ 24V)
Bandwidth	Hz	2000
Switching Output		Open Collector
max. Switching current	mA	100

Wiringcode: WC39 2x				
Integrated Amplifier: GSV-6				
Cabeling: M12 (male plug)				
Supply(+)	Pin 1	Scale	Pin 5	
Ground (-)	Pin 3	Threshold	Pin 6	
Output	Pin 4	Output Ground	Pin 7	
Tare	Pin 2			

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

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

MB1642 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: 38,6 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 20 years in continuous operation with a maximum duty cycles of from 500,000 cycles per year.

## 5. Error display:

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

## Output signal:

Error 1: the output signal is less 3,5 mA

Error 2: the output signal is greater 20,5 mA