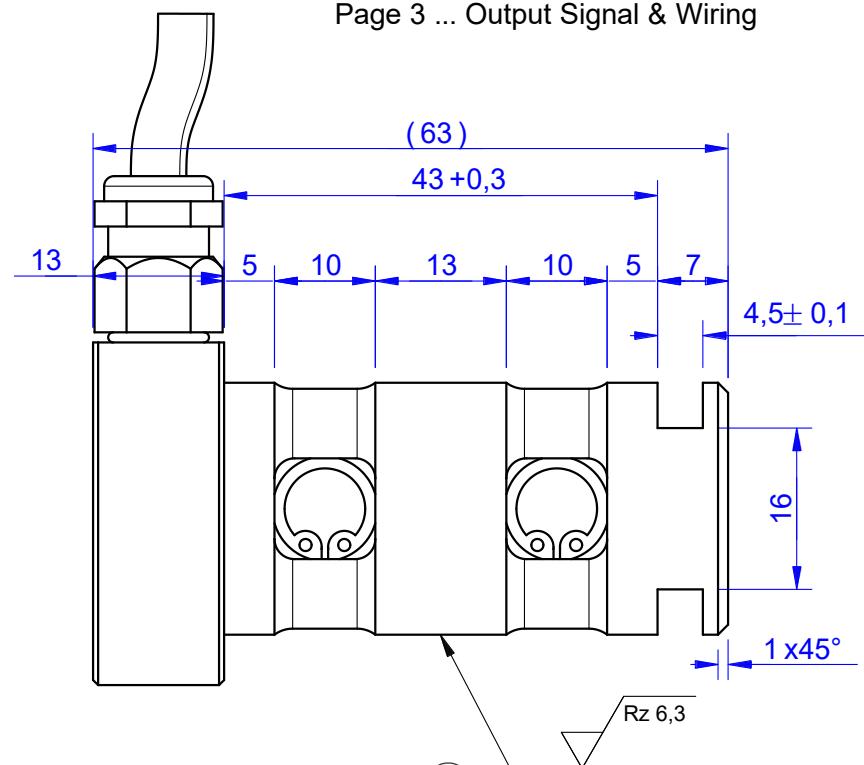
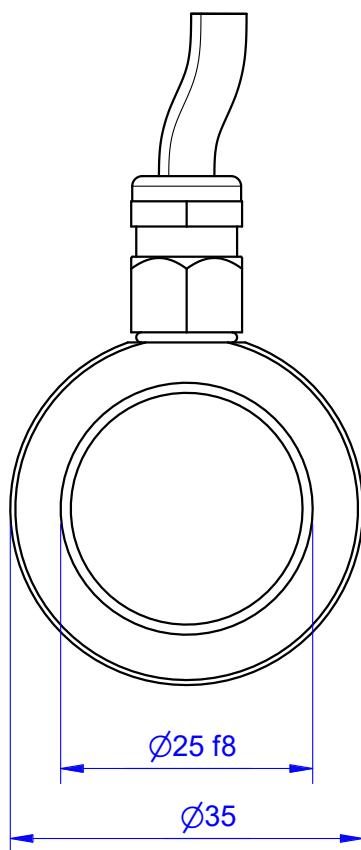


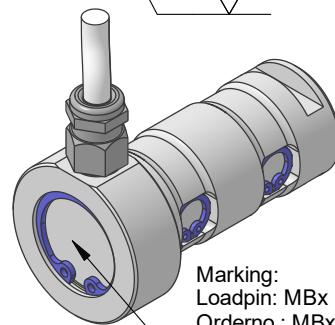
# MB1778

Load Pin



## Content of Loadpin Datasheet

Page 1 ... General  
Page 2 ... Mounting Situation  
Page 3 ... Output Signal & Wiring



Marking:  
Loadpin: MBx  
Orderno.: MBx-xxx-x-x  
Serialno.: xxxxxxxx  
www.batarow.com  
Made in Germany

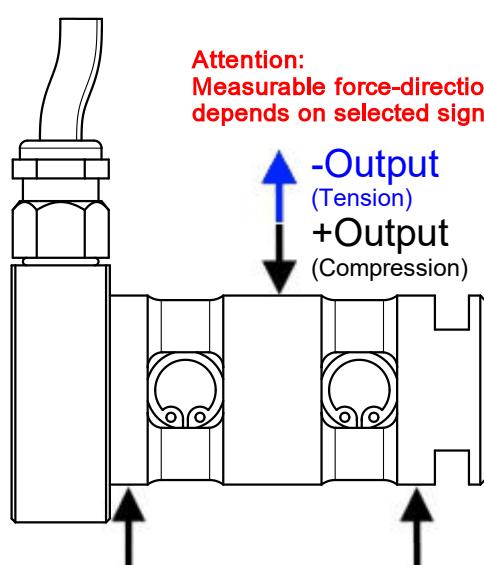
Ordernumber	Capacity [kN] (F.S.)	Uncertainty [kN] (k=2)	Review
MB1778-20-x-H	20	± 0,135	H
MB1778-25-x-H	25	± 0,165	H
MB1778-30-x-H	30	± 0,200	H
MB1778-35-x-H	35	± 0,235	H
MB1778-50-x-H*	50	± 0,350	H

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

## Specifications:

Dimension / Material		
Material		
Protection class		
Hardness (load area)	HRC	Stainless Steel IP 67 40..45
<b>Mechanical Data</b>		
Safe Load Limit	% of F.S.	120
Breaking Load	% of F.S.	250
<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	-20...+71
Operating Temp.	°C	-40...+71

**Attention:**  
Measurable force-direction  
depends on selected signal



# Mounting Situation

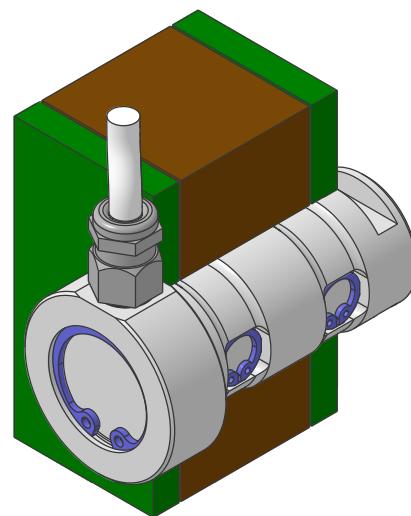
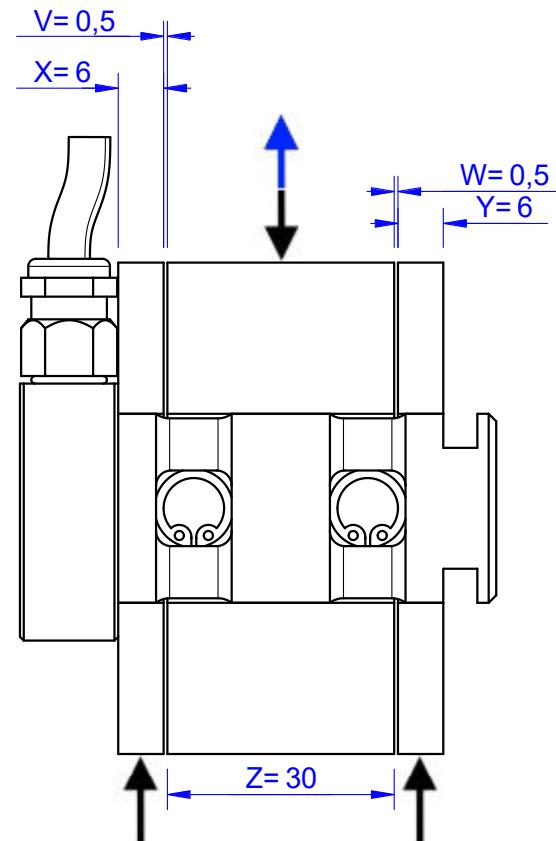
MB1778 Review: H

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)



# Output Signal & Wiring

MB1778 Review: H

## S1 - Analog Output mV/V

Electrical Data S1		
Rated Output @ F.S.	mV/V	1
Zero Balance	mV/V	$\pm 0,05$
Supply Voltage Maximum	V	10
Input Resistance	$\Omega$	$450 \pm 100$
Output Resistance	$\Omega$	$352 \pm 2$
Insulating Resistance	$G\Omega$	>5

Wiringcode: WC52		
Cabletype: 24-4 PUR (4x0,14)		Length: 3 m
Supply (US+)	brown	Output (UD+)
Supply (US-)	white	Output (UD-)

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

## U1 - Analog Output 0...10 V (only +Output / compression\*)

Electrical Data U1		
Output @ 0 kN	V	0
Output @ F.S.	V	10
Supply Voltage	V	14...28
Current Consumption	mA	25 (@ 24V)
Bandwidth	Hz	1000

Wiringcode: WC514		
Cabletype: Unitronic FD CP Plus (5x0,14)		Length: 3 m
Integrated Amplifier: GSV13		
Supply (+)	brown	Tara
Ground (-)	white	Scale
Output	green	

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

## I1 - Analog Output 4...20 mA (only +Output / compression\*)

Electrical Data I1		
Output @ 0 kN	mA	4
Output @ F.S.	mA	20
Supply Voltage	V	14...28
Current Consumption	mA	45 (@ 24V)
Bandwidth	Hz	1000

Wiringcode: WC514		
Cabletype: Unitronic FD CP Plus (5x0,14)		Length: 3 m
Integrated Amplifier: GSV13		
Supply (+)	brown	Tara
Ground (-)	white	Scale
Output	green	

Ordernumber Add-On:  
MBxxx-x-I1-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 no negative signal (Tension) possible. Please ask our engineering for 4..12..20mA; 1..5..9V or ±10V versions.

<b>Batarow</b> Made in Germany	Batarow Sensorik GmbH Gewerbegebiet 4 18276 Lüssow OT Karow	Mail: info@batarow.com Phone: +49 (0) 3843-855555 Fax : +49 (0) 3843-855556	Internet: <a href="http://www.batarow.com">www.batarow.com</a>
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# Performance Level

MB1778 Review: H

## 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° C to +70 ° 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 250,000 cycles per year.

## 5. Error display:

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

### Current output:

Error 1: the output current is less 3.5mA

Error 2: the output current is greater 20.5mA