

Extensometer

FEATURES

- Strain gage based sensor
- Alloy steel construction
- 2 Bolt holes
- IP66 Hermetically sealed protection
- **Optional**
 - EEx ia IIC T4 Hazardous area approval

APPLICATIONS

- Tank weighing or level systems
- Agricultural equipment
- Rolling mill sensing
- Moment sensing
- Structural loading measurements
- Bridge structures

DESCRIPTION

The Model 178 extensometer is a load sensor designed for force measurement on any load-bearing structure. This extensometer provides the total solution for weighing, level control, stress and fatigue monitoring. The design

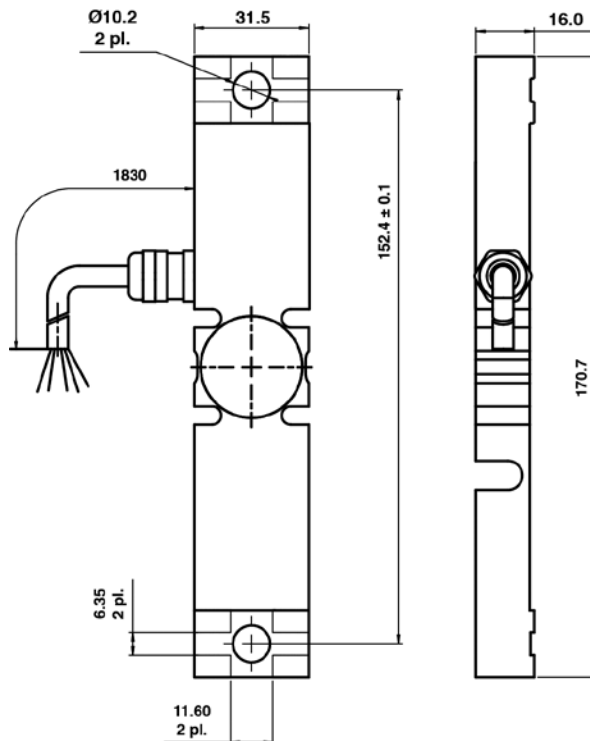


also allows multiple sensors to be permanently mounted for more complex stress profiling and analysis.

The Model 178 extensometer provides an ideal solution for non-intrusive level measurements for materials that are subject to uneven buildup, bridging, or sidewall collection. Also, liquids or wetted materials that are not suited for direct contact level measurement are an ideal application for the Model 178 extensometer.

The design of the Model 178 makes it an excellent solution for retrofitting existing structures without compromise of the integrity of the vessel or structure.

OUTLINE DIMENSIONS in millimeters



Extensometer

SPECIFICATIONS		
PARAMETER	VALUE	UNIT
Calibrated output	1.7	mV/V at 500 $\mu\epsilon$
Overload capability (zero)	300	% of rated output
Overload capability (max)	500	% of rated output
Input resistance	350 \pm 10	Ω
Output resistance	350 \pm 10	Ω
Insulation resistance	>2000	M Ω
Excitation, recommended	10	VDC
Excitations, range	5–20	VDC
Thermal effect on zero	0.025	\pm % of FSO/ $^{\circ}$ C
Compensated temperature range	–30 to +80	$^{\circ}$ C
Construction	Painted steel	
Environmental protection	IP66	

All specifications subject to change without notice.



Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Vishay Precision Group, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "VPG"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

The product specifications do not expand or otherwise modify VPG's terms and conditions of purchase, including but not limited to, the warranty expressed therein.

VPG makes no warranty, representation or guarantee other than as set forth in the terms and conditions of purchase. **To the maximum extent permitted by applicable law, VPG disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.**

Information provided in datasheets and/or specifications may vary from actual results in different applications and performance may vary over time. Statements regarding the suitability of products for certain types of applications are based on VPG's knowledge of typical requirements that are often placed on VPG products. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. You should ensure you have the current version of the relevant information by contacting VPG prior to performing installation or use of the product, such as on our website at vpgsensors.com.

No license, express, implied, or otherwise, to any intellectual property rights is granted by this document, or by any conduct of VPG.

The products shown herein are not designed for use in life-saving or life-sustaining applications unless otherwise expressly indicated. Customers using or selling VPG products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify VPG for any damages arising or resulting from such use or sale. Please contact authorized VPG personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Copyright Vishay Precision Group, Inc., 2014. All rights reserved.