

# Precision Linear Transducers, Designed for Mounting in Hydraulic or Pneumatic Cylinder, Conductive Plastic (Unsealed Series/Ø 16 mm)



These unsealed sensors are suitable for installation in the high pressure chamber of cylinders.

## FEATURES

- Large range of strokes from 25 mm to 2000 mm
- High accuracy
- Very good repeatability
- Continuous resolution
- Easy mounting
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT

## QUICK REFERENCE DATA

Sensor type	LINEAR, conductive plastic
Output type	Wires
Market appliance	Industrial
Dimensions	L x 16 mm dia. (with L = TET + 70 mm)

## ELECTRICAL SPECIFICATIONS

Theoretical electrical travel (TET) = E	From 25 mm to 2000 mm in increments of 25 mm
Independent linearity (over TET) On request	$\leq \pm 1\%$ ; $\leq \pm 0.1\%$ $\leq \pm 0.05\%$ if $E \geq 100$ mm, $\leq \pm 0.025\%$ if $E \geq 200$ mm
Actual electrical travel (AET)	TET + 6 mm $\pm$ 0.5
Total resistance $R_T$	150 $\Omega$ /cm
Resistance tolerance at 20 °C	$\pm 20\%$
Repeatability	$\leq 0.01\%$
Maximum power rating	0.05 W/cm at 70 °C, 0 W at 125 °C
Wiper current	Recommended: a few $\mu$ A - 1 mA max. (continuous)
Load impedance	1000 times $R_T$ minimum
Insulation resistance	> 1000 M $\Omega$ 500 V <sub>DC</sub>
Dielectric strength	> 300 V <sub>RMS</sub> at 50 Hz

## MECHANICAL SPECIFICATIONS

Mechanical travel (MT)	MT = TET
Body	Anodized aluminum
Rod internal diameter	16 LH: Ø 18 mm
Support	2 screws
Operating force	1 N typical
Electrical outputs	Wires 300 mm long
Oil	Insulating mineral hydraulic
Pressure	300 bars continuous, 1000 bars accidentally
Wiper	Precious metal multifinger

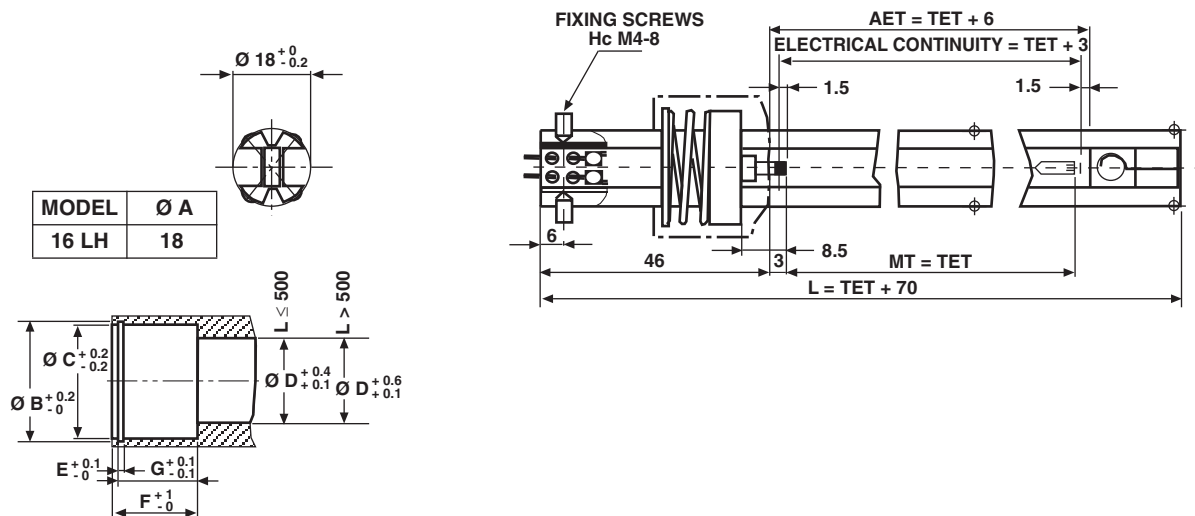
## PERFORMANCE

Life	25 million cycles typical/1 Hz/T° = 20 °C $\pm$ 5 °C/80 % TET
Temperature limits	-20 °C to +80 °C
Speed at 20 °C	1.5 m/s max.

### Note

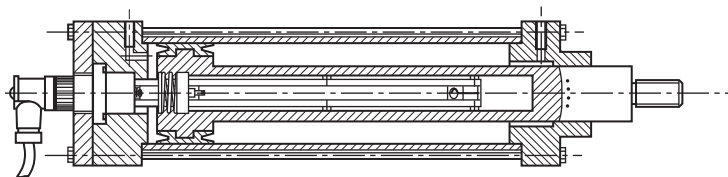
- Nothing stated herein shall be construed as a guarantee of quality or durability.

## DIMENSIONS in millimeters, general tolerance $\pm 1$ mm



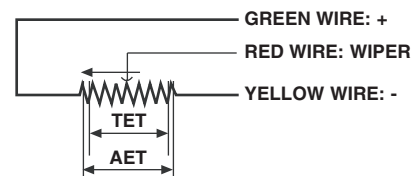
MODEL	B	C	D	E	F	G
16 LH	25.2	24	18	1.3	17.8	16.3

## MOUNTING IN ACTUATOR



On these models:  
Cylinder sealing and electrical connections required

## ELECTRICAL CONNECTIONS



TET = THEORETICAL ELECTRICAL TRAVEL  
AET = ACTUAL ELECTRICAL TRAVEL

## ORDERING INFORMATION/DESCRIPTION

REC	16	LH	4	D	152	W...	e.
SERIES	MODEL	TYPE	THEORETICAL ELECTRICAL TRAVEL	LINEARITY	RESISTANCE	MODIFICATIONS	LEAD FINISH
		Unsealed	Times 25 mm	A: $\leq \pm 1\%$ D: $\leq \pm 0.1\%$ E: $\leq \pm 0.05\%$ F: $\leq \pm 0.025\%$	First 2 digits are significant numbers 3 <sup>rd</sup> digit indicates number of zeros	Special feature code number	

## SAP PART NUMBERING GUIDELINES

RE	16 LH	4	D	152	W...
SERIES	MODEL	TET	LINEARITY	OHMIC VALUE	SPECIAL FEATURES



## Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

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

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay 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.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. 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. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.