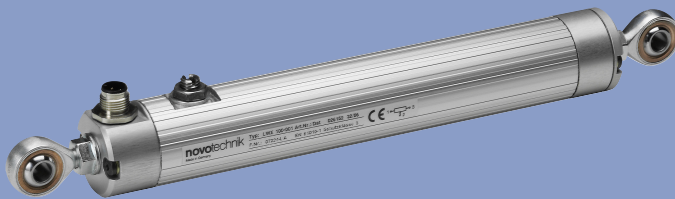


Product discontinued.  
Replaces by series LWX-003.

**Position Transducer  
Pivot head mounting  
potentiometric  
up to 750 mm, IP67**

Series LWX,  
Model 001



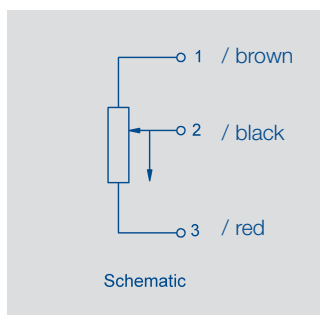
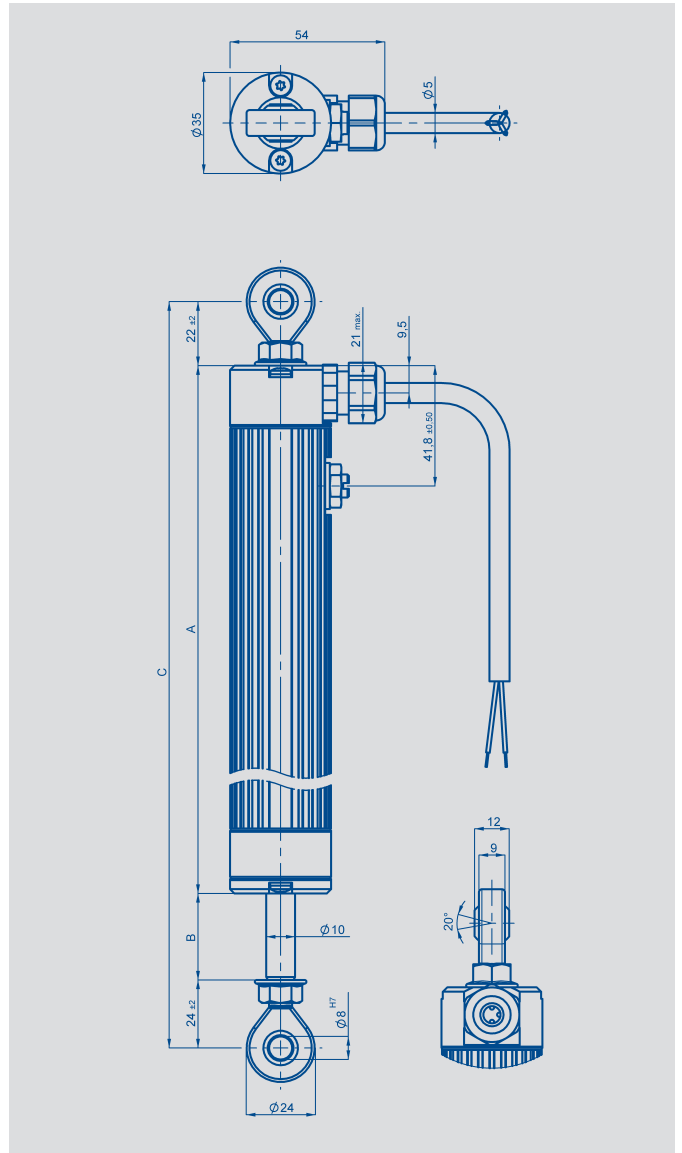
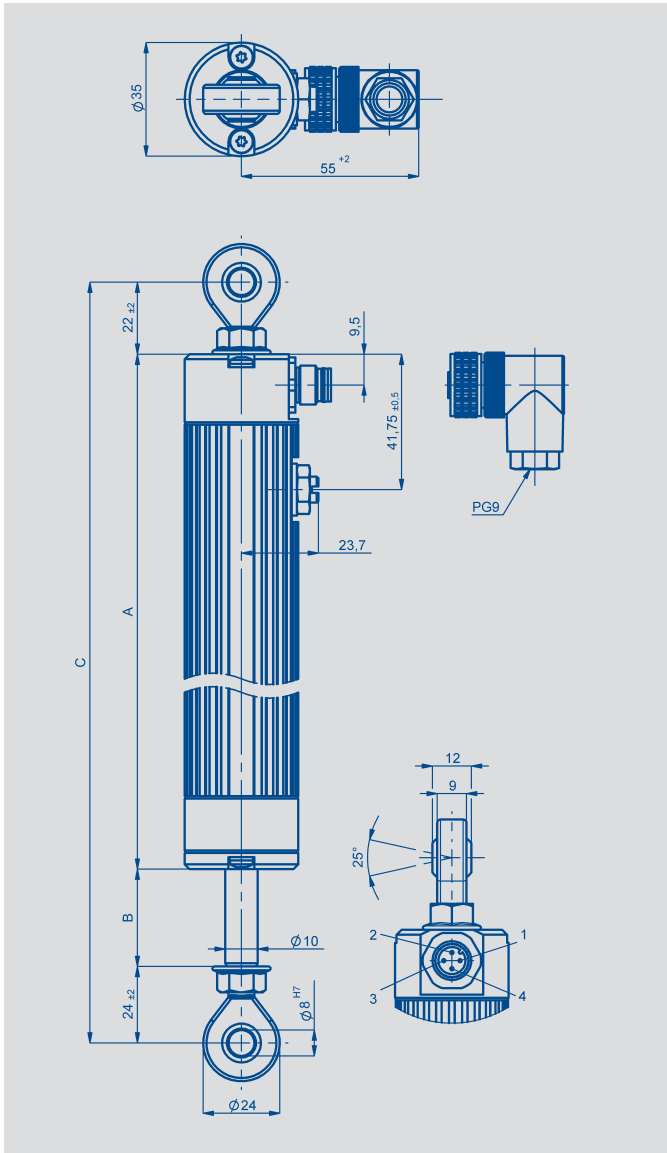
**Special features**

- protection class IP 67
- all-metal housing
- corrosion resistant
- patented differential pressure compensation system compensates for pump effect of push rod movement
- high vibration resistance
- suitable for harsh environmental conditions (humidity, oil, dust)
- double beared actuating rod
- mountable via low-backlash pivot heads with a large angle of free movement (up  $\pm 12.5^\circ$ )
- outstanding linearity up to  $\pm 0.04\%$
- resolution better than 0.01 mm
- long life up to 50 million movements, depending on application
- cable or connector version available
- version IP65 see data sheet LWG
- shaft protected version see data sheet LWX, model 002

Designed for extreme operating environments, the LWX series features all-metal construction and patented pressure equalization technology to prevent buildup that could degrade operation in mechanical, vehicle, automation and robotic applications where an extended operating life is essential.

These rugged position transducers provide direct, absolute measurement of displacement or length. A free-pivot-head mounted on the actuating rod eliminates backlash guaranteeing high accuracy.

Description	
Housing	aluminium, anodized
Mounting	see drawing
Actuating rod	stainless steel (1.4305), rotatable
Bearings	metal-polymer slide bearing
Resistance element	conductive plastic
Wiper assembly	precious metal multi-finger wiper, elastomer damped
Electrical connections	4-pin round connector, M12x1 or 3-wire PVC-cable, 3x0.34 mm <sup>2</sup> , shielded, 1 m length



Type designations	LWX 0050	LWX 0075	LWX 0100	LWX 0150	LWX 0175	LWX 0225	LWX 0250	LWX 0300	LWX 0360	LWX 0450	LWX 0500	LWX 0600	LWX 0750	
<b>Electrical Data</b>														
Defined electrical range	50	75	100	150	175	225	250	300	360	450	500	600	750	mm
Electrical stroke	52	77	102	152	178	228	254	304	366	457	508	610	762	mm
Nominal resistance	2	3	3	5	5	5	5	5	5	5	5	5	10	kΩ
Resistance toleranz	20													±%
Independent linearity	0.2	0.1	0.1	0.08	0.07	0.07	0.07	0.06	0.05	0.05	0.05	0.05	0.04	%
Repeatability	0.01													mm
Recommended operating wiper current	≤ 1													μA
Max. wiper current in case of malfunction	10													mA
Max. permissible applied voltage	42													V
Effective temperature coefficient of the output-to-applied voltage ration	typical 5													ppm/K
Insulation resistance (500 VDC)	≥10													MΩ
Dielectric strength (500 VAC, 50 Hz)	≤100													μA
<b>Mechanical Data</b>														
Body length (dimension A)	178	203	229	279	305	356	381	432	507	621	686	812	996	±2 mm
Mechanical stroke (dimension B)	56	81	107	157	183	233	259	309	370	462	512	614	766	±2 mm
Minimum distance between pivot heads, nominal (dimension C)	224	249	275	325	351	402	427	478	553	667	732	858	1042	mm
Weight with connector approx.	413	453	493	573	613	693	733	832	1023	1167	1247	1407	1647	g
Operating force horizontal	typical 50													N
vertical	typical 50													N
Tearing force horizontal	max. 150 (*)													N

<b>Environmental Data</b>		
Temperature range	-30...+100	°C
Operating humidity range	0... 95 (no condensation)	% R.H.
Vibration	5...2000 A <sub>max</sub> = 0,75 a <sub>max</sub> = 20	Hz mm g
Shock	50 11	g ms
Life	> 50 × 10 <sup>6</sup> (typical)	movem.
Operating speed	5	m/s max.
Protection class	IP 67 (DIN EN 60529), also dynamic	

(\*) Depending on the environmental temperature and standstill time, the necessary force for the initial operating of the push rod can increase.

Novotechnik  
 Messwertaufnehmer OHG  
 Postfach 4220  
 73745 Ostfildern (Ruit)  
 Horbstraße 12  
 73760 Ostfildern (Ruit)  
 Tel. +49 711 44 89-0  
 Fax +49 711 44 89-150  
 info@novotechnik.de  
 www.novotechnik.de



© 12/2012  
 Subject to  
 changes.  
 Printed in  
 Germany.

Order designations (connector version)	
Type	P/N
LWX-0050-001	026150
LWX-0075-001	026151
LWX-0100-001	026152
LWX-0150-001	026154
LWX-0175-001	026155
LWX-0225-001	026157
LWX-0250-001	026158
LWX-0300-001	026160
LWX-0360-001	026162
LWX-0450-001	026166
LWX-0500-001	026168
LWX-0600-001	026172
LWX-0750-001	026178

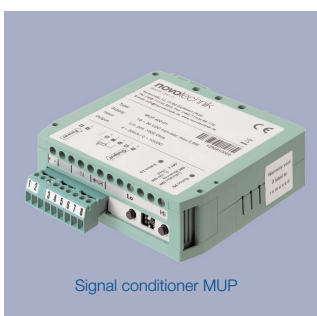
Order designations (cable version)	
Type	P/N
LWX-0050-001-201	026250
LWX-0075-001-201	026251
LWX-0100-001-201	026252
LWX-0150-001-201	026254
LWX-0175-001-201	026255
LWX-0225-001-201	026257
LWX-0250-001-201	026258
LWX-0300-001-201	026260
LWX-0360-001-201	026262
LWX-0450-001-201	026266
LWX-0500-001-201	026268
LWX-0600-001-201	026272
LWX-0750-001-201	026278

#### Included in delivery (connector version)

Angled connector M12  
 (4x0.75 mm<sup>2</sup>, Ø 9.5 mm),  
 EEM 33-89, unshielded, IP67.

#### Recommended accessories

Process-controlled indicators  
 MAP... with display,  
 Signal conditioner MUP.../  
 MUK ... for standardized out-  
 put signals.



Signal conditioner MUP

#### Important

All values specified in this data sheet for linearity, lifetime and temperature coefficient are only valid for a sensor used as a voltage divider with virtually no load applied to the wiper ( $I_e \leq 1 \mu A$ ).