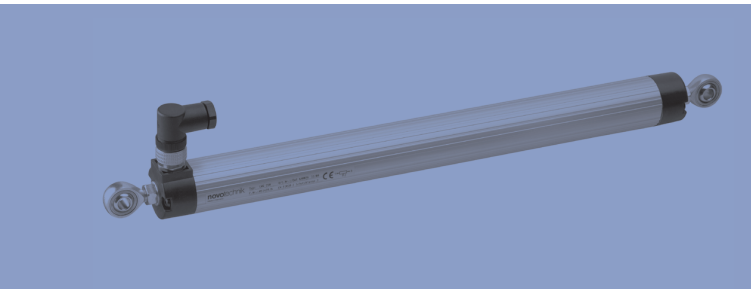


**Position Transducers
up to 750 mm**

Series LWG



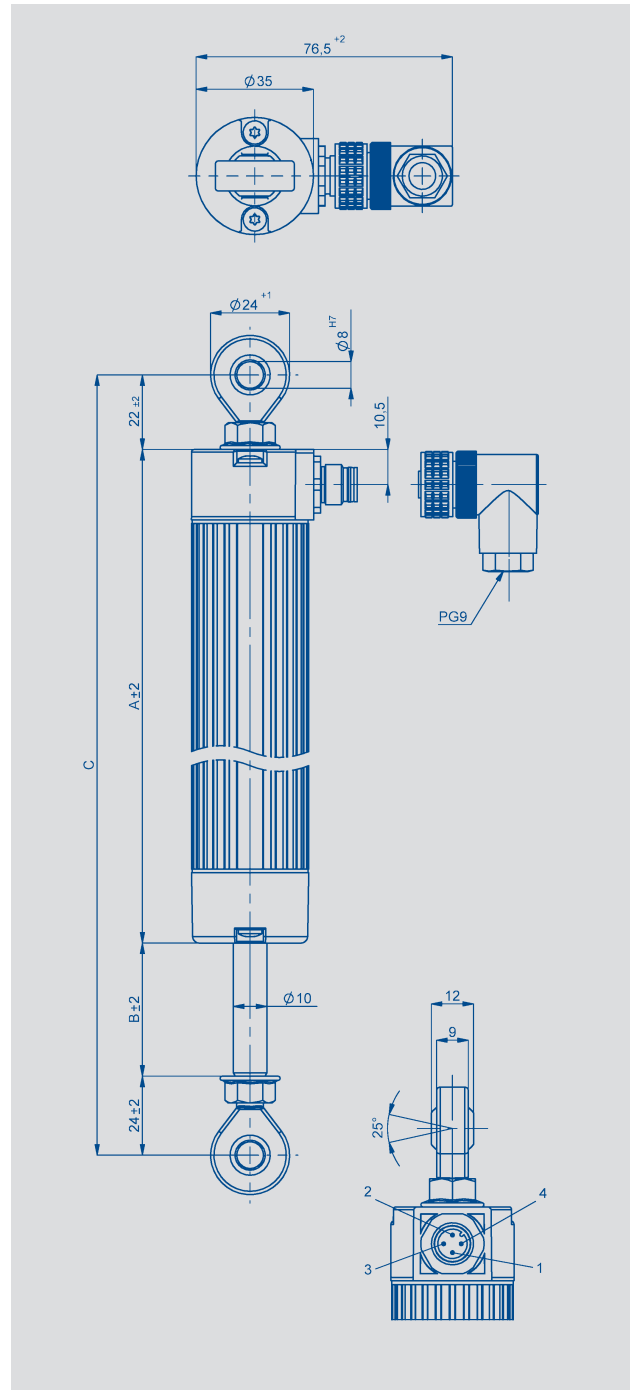
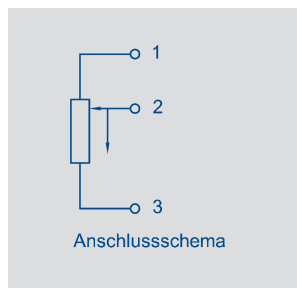
Special features

- twin-bearing actuating rod
- mountable over back-lash free pivot heads with a large angle of free movement (up $\pm 12.5\%$)
- outstanding linearity
- resolution better than 0.01 mm
- life (depending on application) up to 50 million movements
- protection class IP 65

Accurate measurement with a resistance element made of conductive plastic, on a glass-fibre reinforced substrate.

The wiper system is mounted on the actuating rod and is coupled free of backlash; this guaranteeing the highest accuracy and the longest life-time.

The series can be used in a wide range of applications in mechanical and vehicle engineering industries as well as in automation and robotics technologies, combining remarkable robustness with high accuracy.



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 Art.-Nr.: 062 726
 Printed in Germany

Description	
Housing	aluminium, anodized
Fixings	see drawing
Actuator	stainless steel, rotatable
Bearings	sleeve bearing
Resistance element	conductive plastic
Wiper assembly	precious metal multi-finger wiper, elastomer damped
Electrical connections	4-pin round connector, M12x1, IP 67 for suitable cables diameter 6...8 mm, max. 0.75 mm ² optional cable outlet on request

Environmental Data		
Temperature range	-30...+100	°C
Vibration	5...2000 $A_{max} = 0,75$ $a_{max} = 20$	Hz mm g
Shock	50 11	g ms
Life	> 50 x 10 ⁶ (typical)	movem.
Operating speed	5	m/s max.
Protection class	IP 65 (DIN 40050 / IEC 529)	

Type designations	LWG 75	LWG 100	LWG 150	LWG 175	LWG 225	LWG 250	LWG 300	LWG 360	LWG 450	LWG 500	LWG 600	LWG 750	
Electrical Data													
Defined electrical range	75	100	150	175	225	250	300	360	450	500	600	750	mm
Electrical stroke	76	102	152	178	228	253	304	366	457	508	610	762	mm
Nominal resistance	3	3	5	5	5	5	5	5	5	5	5	10	kΩ
Resistance toleranz	20												±%
Independent linearity	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, 1 bar, 2 s)	≥ 10										MΩ		
Dielectric strength (50 Hz, 2 s, 1 bar, 500 VAC)	≤ 100										µA		
Mechanical Data													
Body length (dimension A)	201	227	277	303	354	379	430	505	619	684	810	994	±2 mm
Mechanical stroke (dimension B)	79	105	155	181	231	257	307	368	460	510	612	764	±2 mm
Minimum distance between pivot heads (dimension C)	247	273	323	349	400	425	476	551	665	730	856	1040	mm
Operating force													
horizontal	3.6	3.7	4.0	4,2	4.5	4,6	4.9	5.2	5.7	6	6.6	7.5	N
vertical	7.4	7.6	8.0	8,2	8.7	8,9	9.3	9.8	10.6	11	11.9	13.2	N

Order designations	
Type	Art.no.
LWG 50	026102
LWG 75	026103
LWG 100	026104
LWG 150	026106
LWG 175	026107
LWG 225	026109
LWG 250	026110

Order designations	
Type	Art.no.
LWG 300	026112
LWG 360	026114
LWG 450	026118
LWG 500	026120
LWG 550	026122
LWG 600	026124
LWG 750	026130

Other lenghts on request

Included in delivery

1 plug connector 515532

Recommended accessories

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

Important

All the values given in this data sheet for linearity, lifetime and temperature coefficient in the voltage dividing mode are quoted for the device operating with the wiper voltage driving on operational amplifier working as a voltage follower, where virtually no load is applied to the wiper ($I_e \leq 1 \mu A$).

Subject to changes