

LINEAR POTENTIOMETER



Series LZW2-SP

Key-Features:

- Measuring probe with return spring
- Ball tip for transversal forces
- Flexible mounting with brackets or flange
- Measurement ranges from 25 to 200 mm
- Linearity up to $\pm 0.05\%$
- Displacement speed ≤ 10 m/s
- Protection class up to IP65
- Operating temperature $-30...+100\text{ }^{\circ}\text{C}$
- Life cycle $>25 \times 10^6$ m or $>100 \times 10^6$ operations, whichever is less
- Simple apparatus according to EN 60079-11 standard

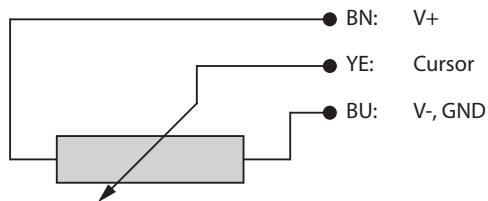
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TECHNICAL DATA

Measurement range	[mm]	25	50	75	100	125	150	200
Linearity	[%]	±0.2	±0.1			±0.05		
Repeatability	[mm]	0.01						
Hysteresis	[mm]	0.02						
Resolution		theoretical infinite, depends on the signal quality of the reference voltage respectively supply voltage						
Displacement force	[N]	≤0.5						
Displacement speed	[m/s]	≤10						
Resistance	[kΩ]	1	2	3	4	5	6	8
Tolerance on resistance	[%]	±20						
Dissipation at 40 °C (0 W at 120 °C)	[W]	0.8	1.6	2.6	3			
Applicable voltage max.	[V]	20	40	60				
Recommended cursor current	[μA]	<0.1						
Cursor current max.	[mA]	10						
Electrical isolation		>100 MΩ at 500 VDC, 1 bar, 2 s						
Dielectric strength		>100 μA at 500 VAC, 50 Hz, 1 bar, 2 s						
Protection class		flange version: IP60 / brackets version: IP65						
Operating temperature	[°C]	-30...+100						
Storage temperature	[°C]	-50...+120						
Temperature coefficient of output voltage	[ppm/°C]	<1.5						
Connection		PUR cable, 3 poles, 1 m or 10 m						
Rod		stainless steel AISI 303						
Housing		anodised aluminium, Nylon 66 G 25						
Mounting		flange	flange or brackets					brackets

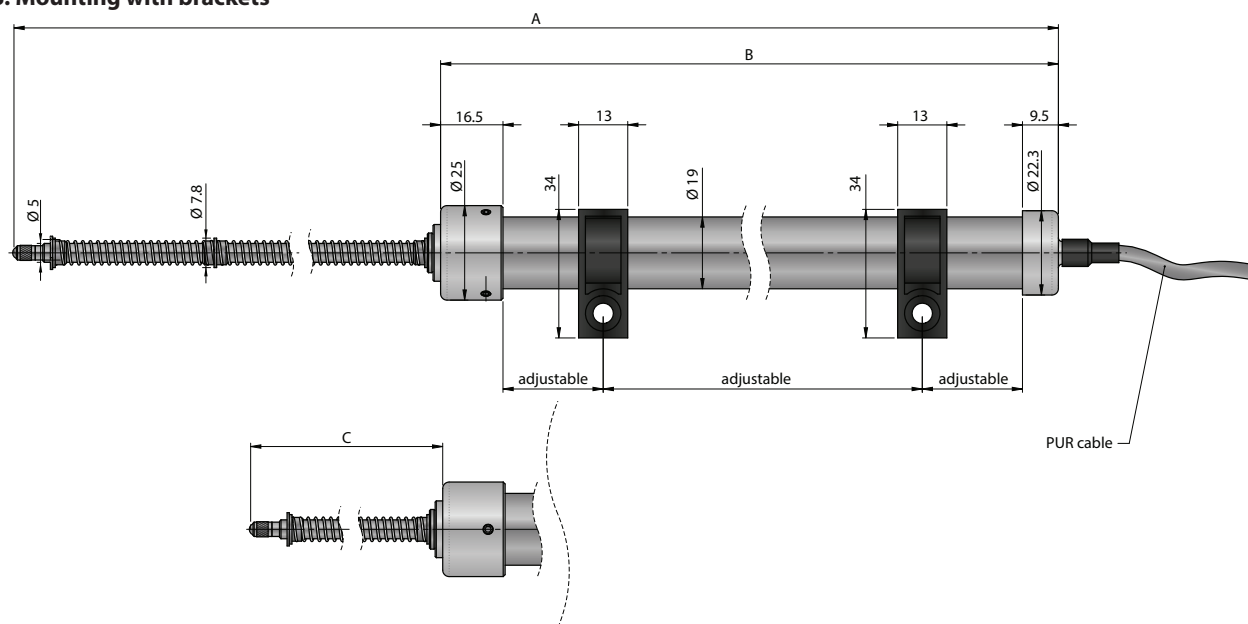
ELECTRICAL CONNECTION



- Sensor is to be used as voltage divider only, using a maximum cursor current of $I_c \leq 0.1 \mu\text{A}$. Do **NOT** use the sensor as variable resistance!
- When calibrating the transducer, be careful to set the stroke so that the output does not drop below 1 % or rise above 99 % of the voltage level.

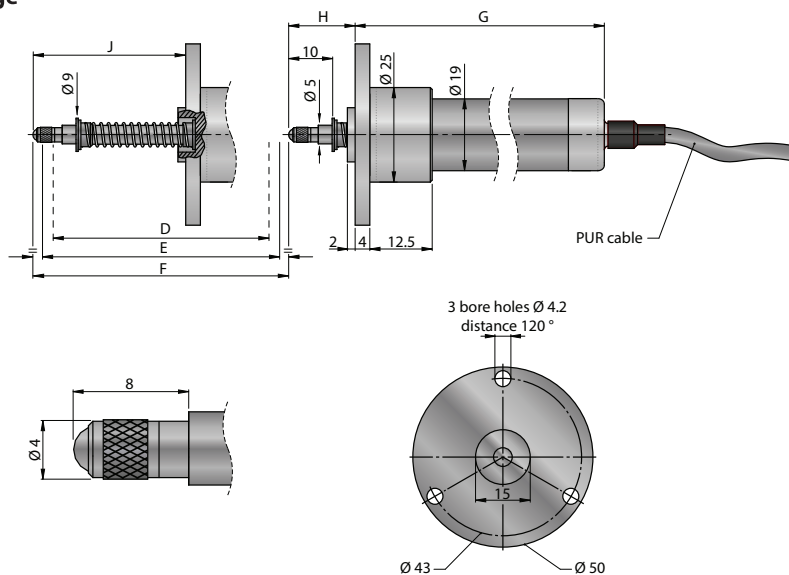
TECHNICAL DRAWING

LZW2-S: Mounting with brackets



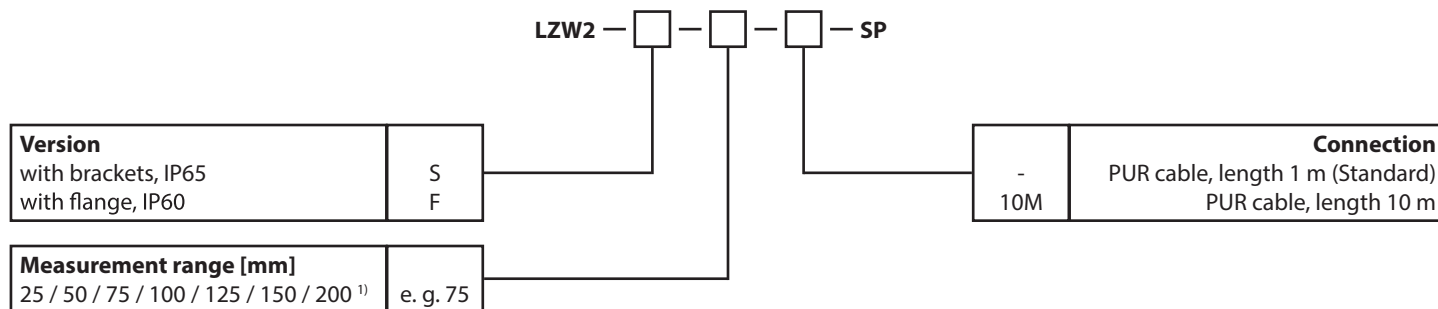
Measurement range / useful electrical stroke +1/-0	50	75	100	125	150	200
Theoretical electrical stroke ± 1	51	76	101	126	151	201
Mechanical stroke	55	80	105	130	155	205
Overall length (A)	274.2	333.5	392.8	452.4	511.8	621.6
Housing length (B)	185	212	235	260	285	335
Length of the extended push rod	89.2	121.5	157.8	192.4	226.8	286.6
Length of the retracted push rod (C)	34.2	43.5	52.8	62.4	71.8	81.6

LZW2-F: Mounting with flange



Measurement range / useful electrical stroke +1/-0 (D)	25	50	75	100	125	150
Theoretical electrical stroke ± 1 (E)	26	51	76	101	126	151
Mechanical stroke (F)	55	80	105	130	155	205
Overall length	175.3	207	238.9	270.6	309.4	341.3
Housing length (G)	160	185	212	235	260	285
Length of the extended push rod (J)	45.3	78	108.9	140.6	179.4	211.3
Length of the retracted push rod (H)	15.3	22	28.9	35.3	49.4	56.3

ORDER CODE



¹⁾ measurement range 25 mm version F only,
measurement range 200 mm version S only

ACCESSORIES

Digital displays for sensors with analog output, 2 channel

WAY-AX-S touch screen, supply: 18...30 VDC

WAY-AX-S-AC touch screen, supply: 115...230 VAC

For more information and options please refer to the [WAY-AX data sheet](#).

Mounting accessory

STA075 Bracket ¹⁾

¹⁾ 2 x included in scope of delivery for version LZW2-S

Signal conditioner

PMX-24 Output signals: 4...20 mA, 0...10 V, 0...5 V, ± 10 V, ± 5 V

For more information and options please refer to the [PMX-24 data sheet](#).

Teléfonos / Phone number

Mex: +52 (33)-3854-5975

+52 (33)-3823-4349

USA: +1 (619) 619-7350

Página Web / Website

tienda.logicbus.com.mx

logicbus.com

Correo electrónico / E-mail

ventas@logicbus.com

sales@logicbus.com



Dirección / Address



Av. Fray Antonio Alcalde 1822

Miraflores, 44270

Guadalajara, Jal



8280 Clairemont Mesa Blvd

Suite 122

San Diego, CA 92111

