



CLS1300 slim bodied range

These high performance, high temperature linear potentiometers are designed for the most demanding control and measurement applications. They are constructed from aluminum alloy and stainless steel for high strength and durability, yet are lightweight in design, making them ideal for industrial, automotive and motor racing measurement applications. The sensors are sealed to IP66 as standard and feature fire and chemical resistant high temperature Raychem FDR-type 55-24 signal cabling ensuring total system reliability. The physical design of these slim body linear potentiometers enables their survival in the severest of environmental conditions.

- Measurement range: 10mm (0.4") to 350mm (14")
- Ultra compact 13mm (1/2") body Ø
- Low noise output signal
- Sealed as standard
- Raychem cabling
- Choice of mounting
- Very long operational life
- Models available from stock

CLS1313 ultra compact series

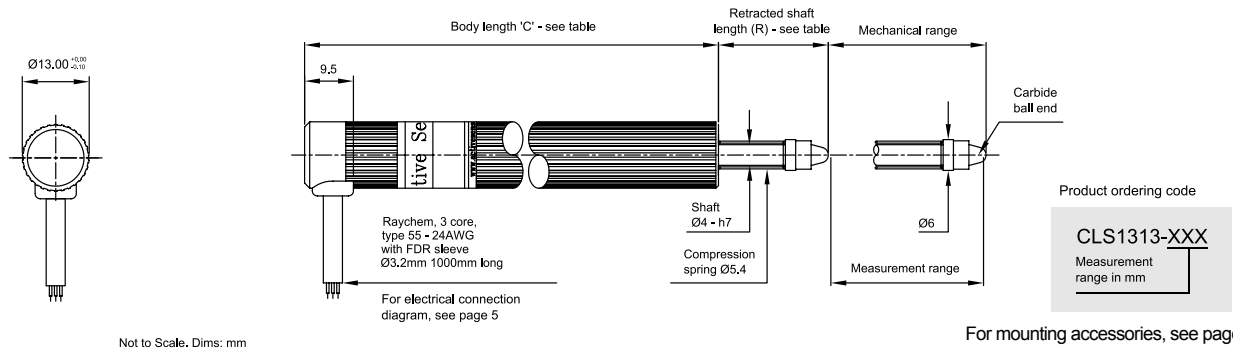
Model features

- Measurement range: 10mm (0.4") to 50mm (2")
- Ultra compact 13mm (1/2") body Ø
- Low noise output signal
- Sealed as standard
- Raychem cabling
- Sprung loaded shaft



Model dimensions and mounting

CLS1313 - sprung loaded shaft



Not to Scale. Dims: mm

Electrical & mechanical information for CLS1313 range

Measurement range (± 0.5 mm)	10	25	30	50	mm
Retracted shaft length (R)	16.4	21.5	22.5	38.5	mm
Body length (C)	53	68	73	93	mm
Resistance (Typical)	0.4	1	1.2	2	kohms
Non-linearity	$\leq \pm 0.25$				%
Applied voltage	<18	<22	<27	<45	Volts
Wiper load	>500				kohms
Mechanical range	Measurement range +1				mm
Shaft velocity	<10				m/sec
Insulation resistance (at 500V dc.)	>100				Mohms
Operating temp. range	-30° to +125°				°C
Sealing	IP50				
Shaft operating force	200 (typical)				grams
Shaft operating force (CLS1313)	150 - 350 (typical)				grams
Weight (approx.)	52	60	61	66	grams
Materials	Case - Aluminium 6063 - Sulphuric acid anodised Shaft - Stainless steel - 303 series				

Note: 10mm measurement range only available with CLS1313

CLS1320 compact series

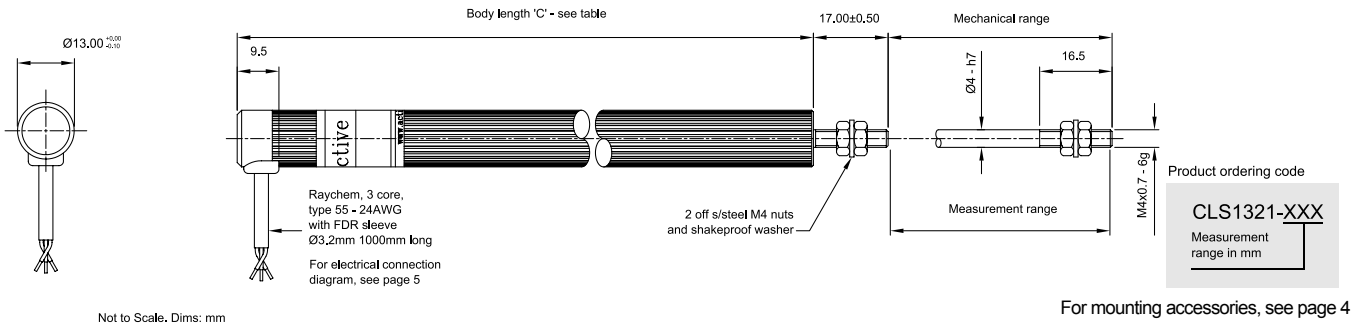
Model features

- Measurement range: 25mm (1") to 350mm (14")
- Slim 13mm (1/2") body Ø
- Compact design
- Sealed as standard
- Raychem cabling
- Choice of mounting

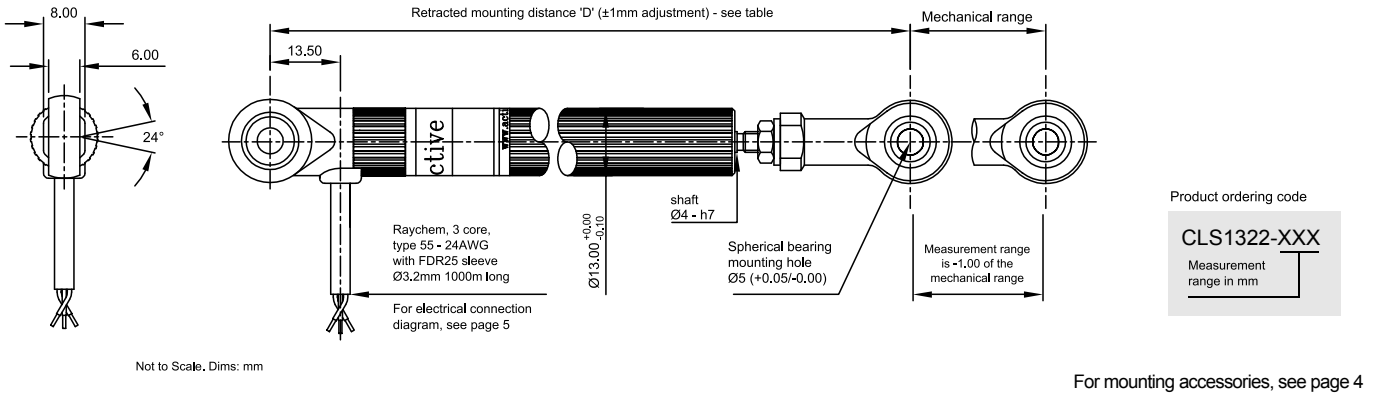


Model dimensions and mounting

CLS1321 - body clamp mounting

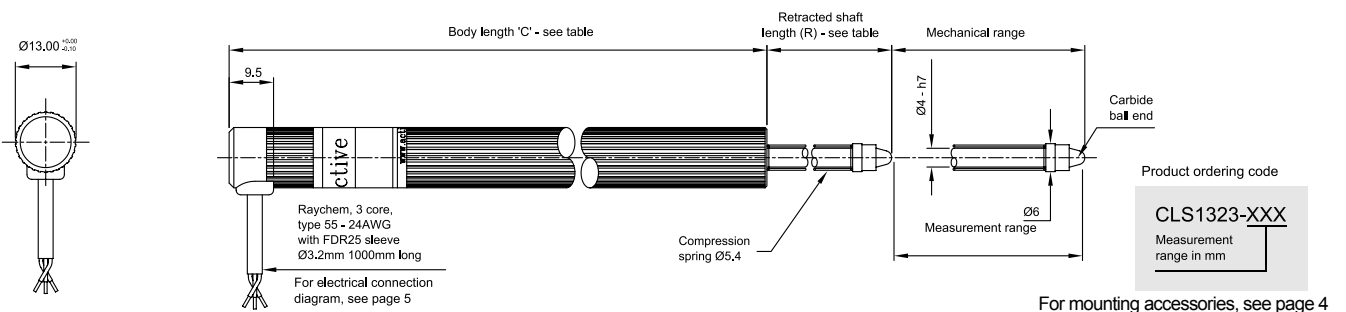


CLS1322 - rod-end mounting

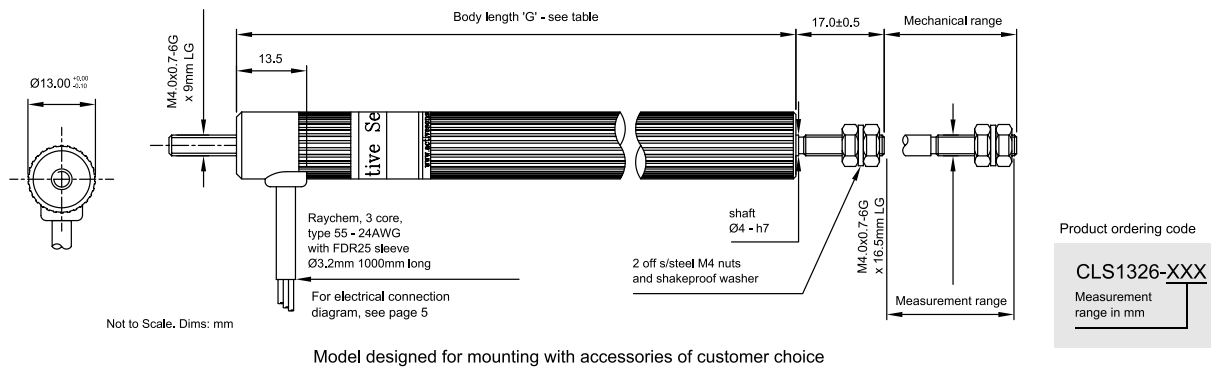


CLS1323 - sprung loaded shaft

Available in measurement ranges 50, 75, 100 & 150mm only



CLS1326 - threaded mounting



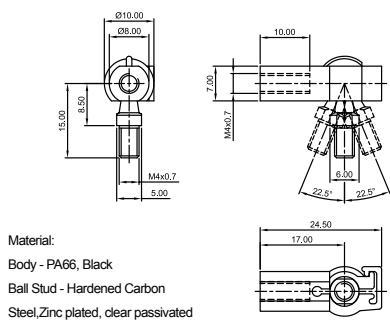
Model designed for mounting with accessories of customer choice

Electrical & mechanical information for CLS1320 range

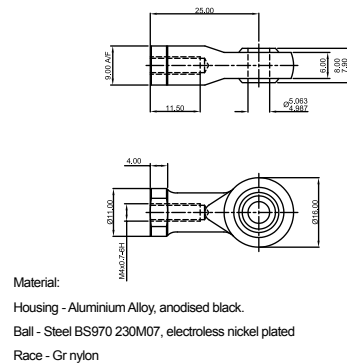
Measurement range (±0.5mm)	25	50	75	100	125	150	175	200	225	250	300	350	mm	
Retracted mounting distance (D)	123	148	173	198	223	248	273	298	323	348	398	448	mm	
Retracted shaft length (R)	-	38.5	53.5	58.5	-	88.5	-	-	-	-	-	-	mm	
Body length (C)	81	106	131	156	181	206	231	256	281	306	356	406	mm	
Body length (G)	85	110	135	160	185	210	235	260	285	310	360	410	mm	
Resistance (Typical)	1	2	3	4	5	6	7	8	9	10	12	14	kohms	
Non-linearity	<±0.25			<±0.15										%
Applied voltage	<22	<45	<65	<90	<110	<130	<130	<130	<130	<130	<130	<130	Volts	
Wiper load	>500	>500	>500	>500	>500	>600	>700	>800	>900	>1000	>1100	>1200	kohms	
Mechanical range	Measurement range +1												mm	
Shaft velocity	<10												m/sec	
Insulation resistance (at 500V dc.)	>100												Mohms	
Operating temp. range	-30° to +125°												°C	
Sealing	CLS1321, 22, 24, 25, 26 - IP66.						CLS1323 - IP50							
Shaft operating force	200 (typical)												grams	
Shaft operating force (CLS1323)	150 - 350 (typical)												grams	
Weight (approx.)	60	66	73	78	85	90	96	102	108	114	120	126	grams	
Materials	Case - Aluminium 6063 - Sulphuric acid anodised Shaft - Stainless steel - 303 series Rod end bearing - Aluminium 6262 housing & BS970 230M07, electroless nickel plate													

Mounting accessories

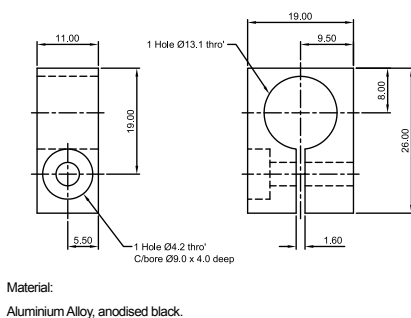
Quick release ball joints. Part no: JN029-003



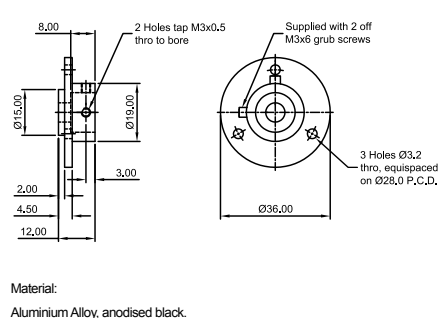
5mm rod-end. Part no: PT1322-0104-19



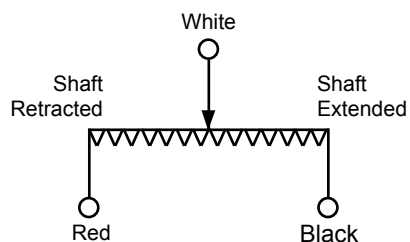
Body mounting clamps. Part no: PT1300-0109



Mounting flange. Part no: PT1300-0110



Electrical connections (all models)



Note 1

Incorrect wiring may cause internal damage to the sensor.

Note 2

Circuit recommendation: Due to the presence of a high contact resistance, these potentiometers should be used as voltage dividers only. Operation with wiper circuits of low impedance will degrade the output signal.

Other CLS linear position sensor models available



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Additional product information

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Page 5/5