

CLS1300 features

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-type55-24 signal cabling ensuring total system reliability. The physical design of these slim body linear potentiometers enables their survival in the severest of environmental conditions.

- Range: 10mm (0.4") to 350mm (14")
- Slim 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

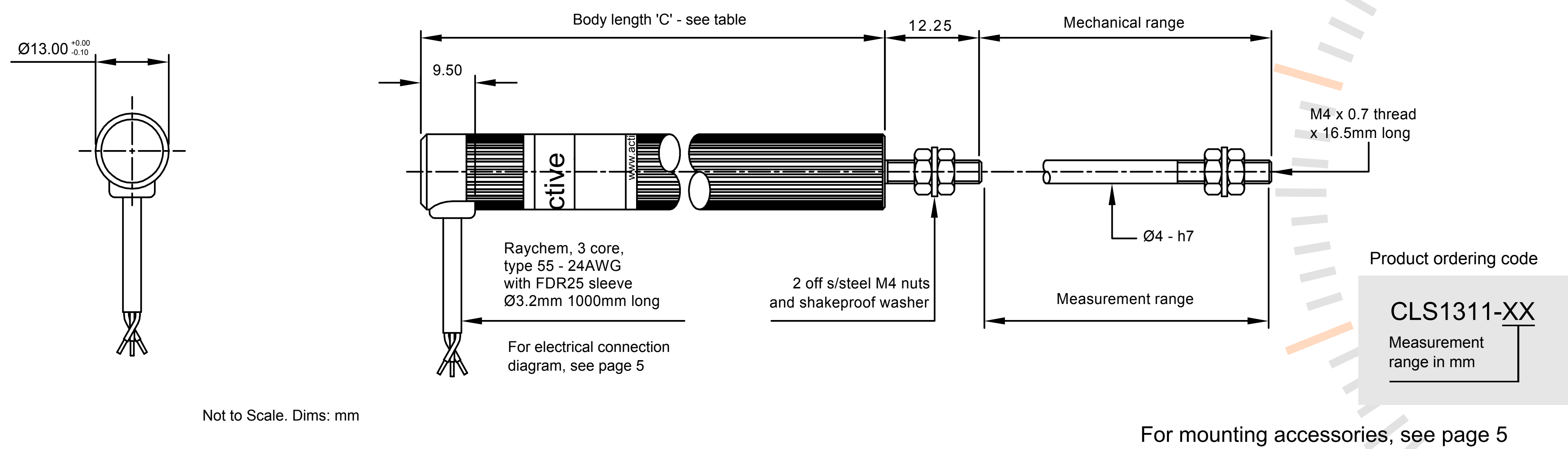
CLS1310 ultra compact series

- Range: 10mm (0.4") to 75mm (3")
- Ultra compact 13mm (1/2") body Ø
- Low noise output signal
- Sealed as standard
- Raychem cabling
- Choice of mounting



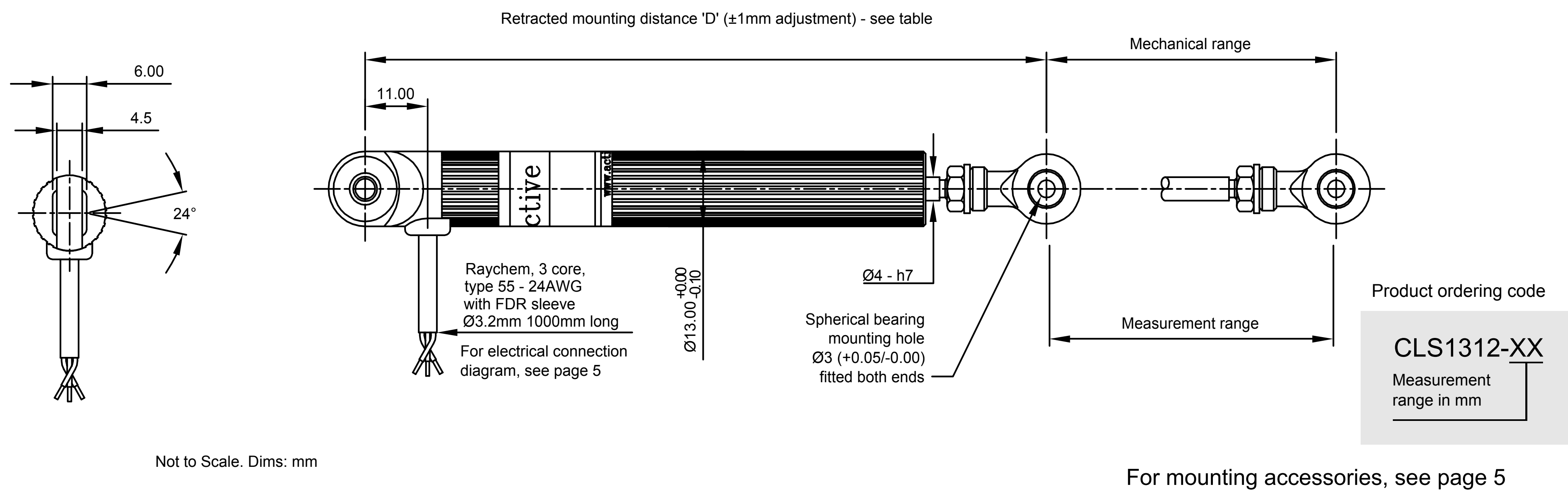
Model dimensions and mounting

CLS1311 - body clamp mounting



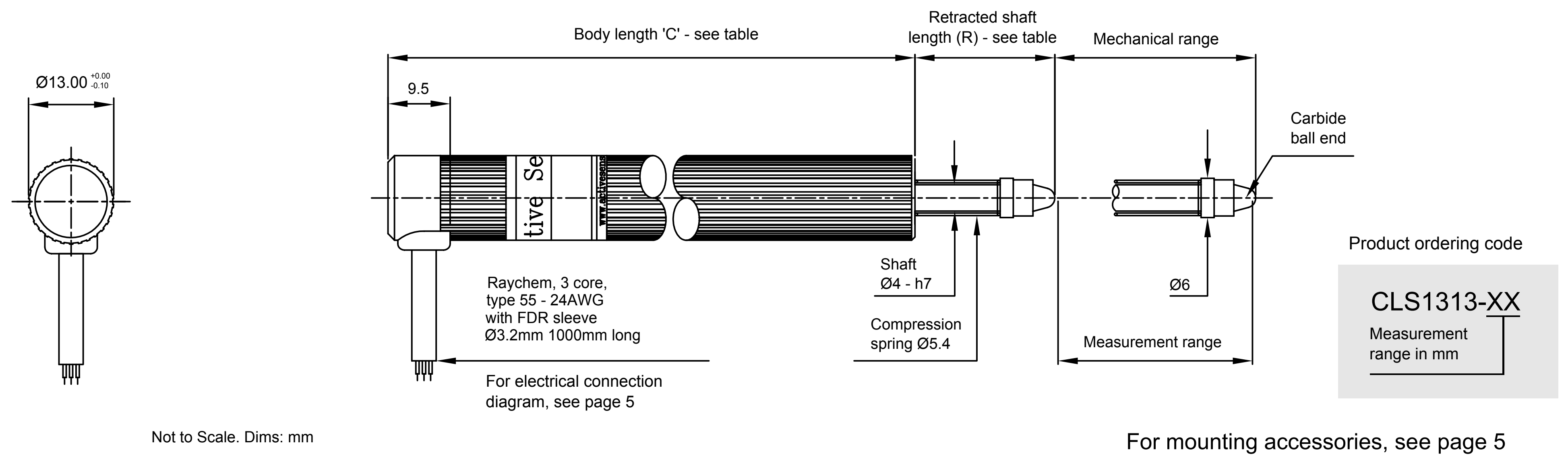
Not to Scale. Dims: mm

CLS1312 - rod-end mounting



Not to Scale. Dims: mm

CLS1313 - sprung loaded shaft



Not to Scale. Dims: mm

Electrical & mechanical information

Measurement range (± 0.5 mm)	10	25	30	50	75	mm
Retracted mounting distance (D)	80	95	100	120	145	mm
Retracted shaft length (R)	16.4	21.5	22.5	38.5	55.5	mm
Body length (C)	53	68	73	93	118	mm
Resistance (Typical)	0.4	1	1.2	2	3	K ohms
Non-linearity	$\leq \pm 0.25$					%
Max applied voltage	12	22	27	45	67	Volts
Wiper load	> 500					K ohms
Mechanical range	Measurement range +1					mm
Maximum shaft velocity	10					m/sec
Insulation resistance (at 500V dc.)	> 100					M ohms
Operating temp. range	-30° to $+125^\circ$					$^\circ\text{C}$
Sensor sealing	CLS1311, 12 - IP66.		CLS1313 - IP50			
Shaft operating force	200 (typical)					grams
Shaft operating force (CLS1313)	150 - 350 (typical)					grams
Weight (approx.)	52	60	61	66	72	grams
Case material	Aluminium 6063 - Sulphuric acid anodised					
Shaft material	Stainless steel - 303 series					

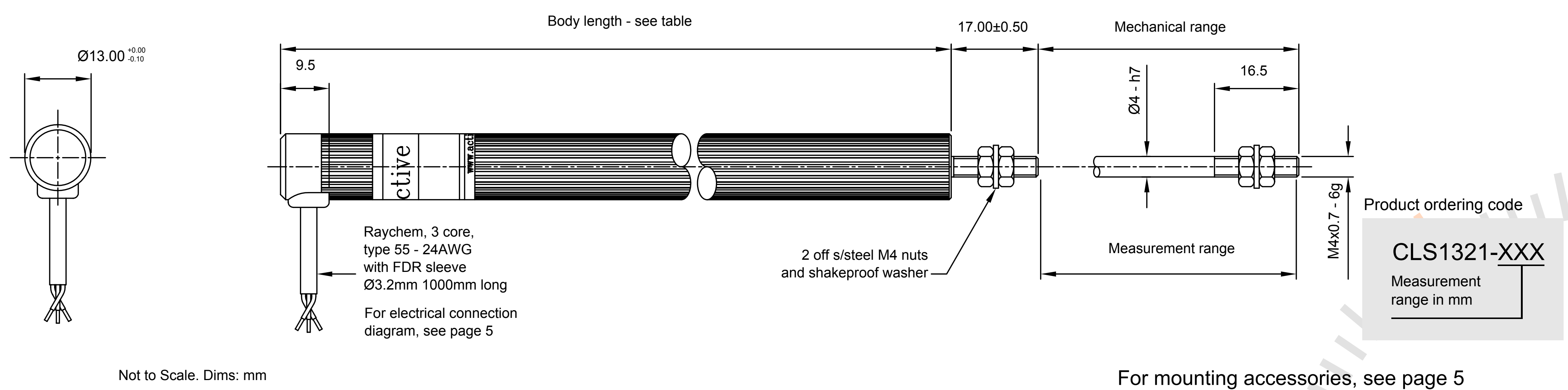
CLS1320 compact series

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

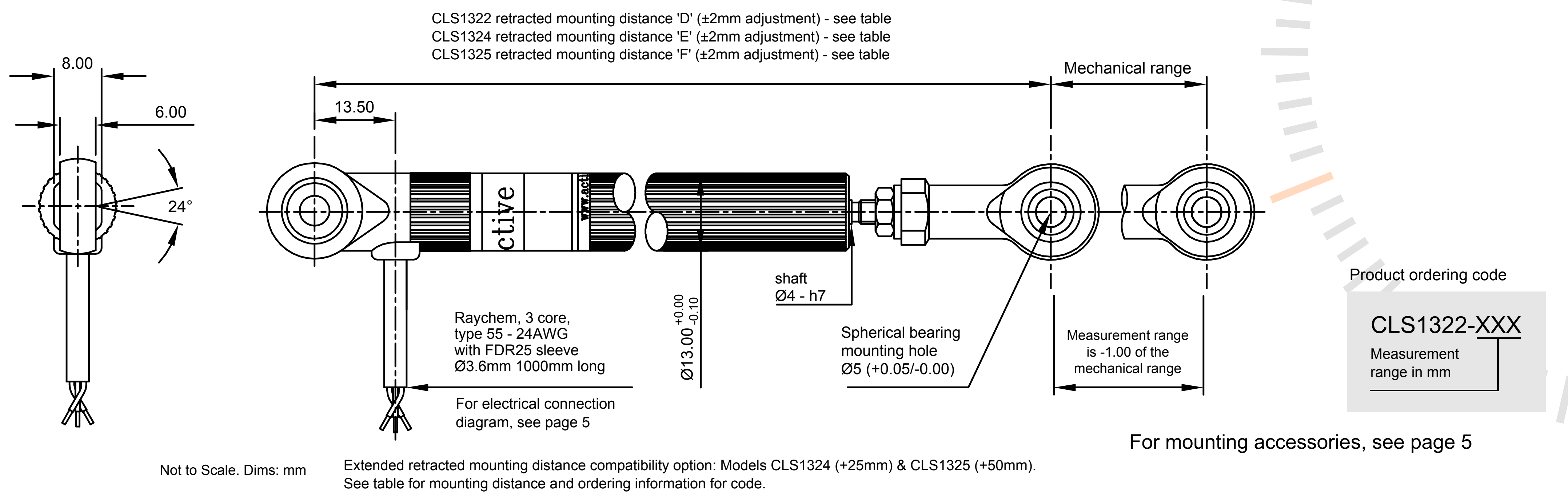


Model dimensions and mounting

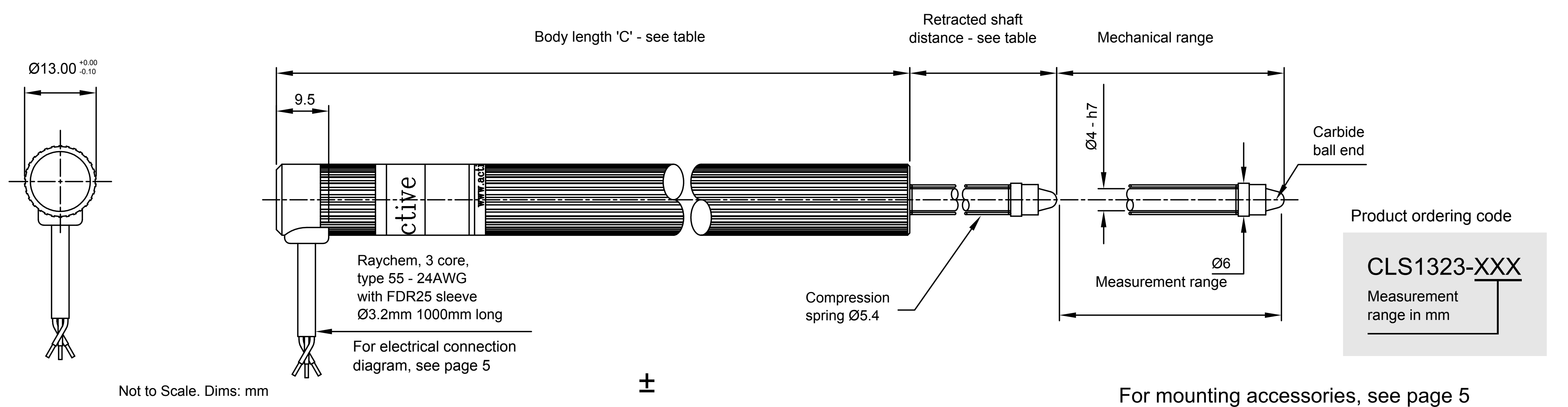
CLS1321 - body clamp mounting



CLS1322 - rod-end mounting

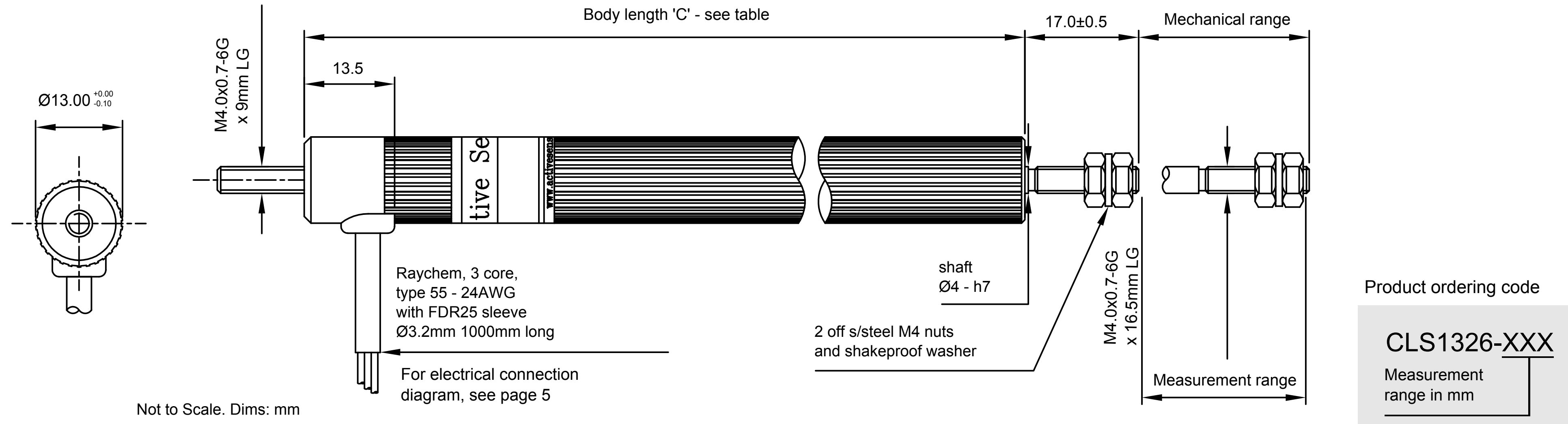


CLS1323 - sprung loaded shaft



CLS1320 standard compact series

CLS1326 - threaded mounting



Model designed for mounting with accessories of customer choice

For mounting accessories, see page 5

Electrical & mechanical information

Measurement range (± 0.5 mm)	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 mounting distance (E)	148	173	198	223	248	273	298	323	-	-	-	-	mm
Retracted mounting distance (F)	173	198	223	248	273	298	323	348	-	-	-	-	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
Resistance (Typical)	1	2	3	4	5	6	7	8	9	10	12	14	K ohms
Non-linearity	$<\pm 0.25$	$<\pm 0.25$	$<\pm 0.15$	$<\pm 0.15$	$<\pm 0.15$	$<\pm 0.15$	$<\pm 0.15$	$<\pm 0.15$	$<\pm 0.15$	$<\pm 0.15$	$<\pm 0.15$	$<\pm 0.15$	%
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	K ohms
Mechanical range	Measurement range +1												mm
Max shaft velocity	10												m/sec
Insulation resistance (500V dc.)	>100												M ohms
Operating temp. range	-30° to $+125^{\circ}$												$^{\circ}$ C
Sensor sealing	CLS1321, 22, 24, 25 - 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
Case material	Aluminium 6063 - Sulphuric acid anodised												
Shaft material	Stainless steel - 303 series												
Rod end bearing material	Aluminium 6262 housing & Stainless steel ball												

Mounting accessories

Quick release ball joints. Part no: JN029-003

Material:
Body - PA66, Black
Ball Stud - Hardened Carbon
Steel, Zinc plated, clear passivated

Body mounting clamps. Part no: PT1300-0109

Material:
Aluminium Alloy, anodised black.

Mounting flange. Part no: PT1300-0110

Material:
Aluminium Alloy, anodised black.

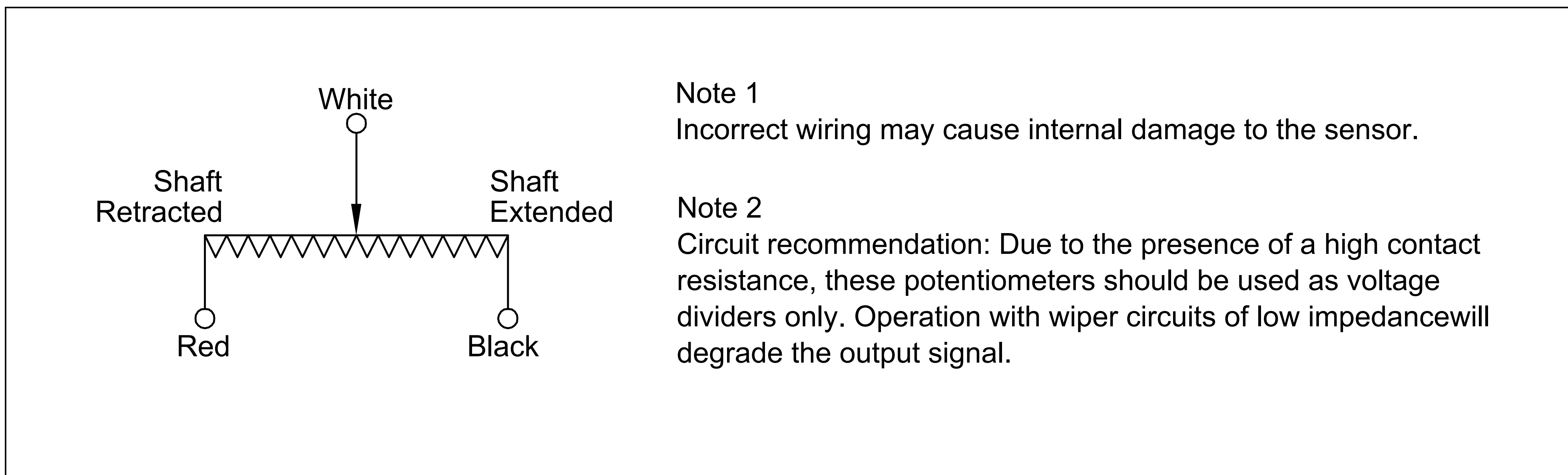
5mm rod-end. Part no: PT1322-0104

Material:
Housing - Aluminium Alloy, anodised black.
Ball - Steel BS970 230M07, electroless nickel plated
Race - Gr nylon

3mm rod-end. Part no: PT0952-0104

Material:
Housing - Aluminium Alloy, anodised black.
Ball - Steel BS970 230M07, electroless nickel plated
Race - Gr nylon

Electrical connections (all models)



About us

Active Sensors has for 20 years designed and manufactured a wide range of linear and rotary position sensors for precision motion control and measurement systems. With the increasing cost of engineering development programs, technical managers need to identify reliable and cost-effective program partners. Active Sensors is an ISO9001 certified company providing a wide range of mission critical position sensors for aerospace, automotive and industrial applications.

Other CLS linear position sensor models available

CLS0950

- Ultra-slim housing
- Up to 150mm (6") stroke
- Choice of mounting
- 9.54mm body Ø

CLS1900

- Robust housing
- Up to 400mm (16") stroke
- Choice of mounting
- 19mm body Ø

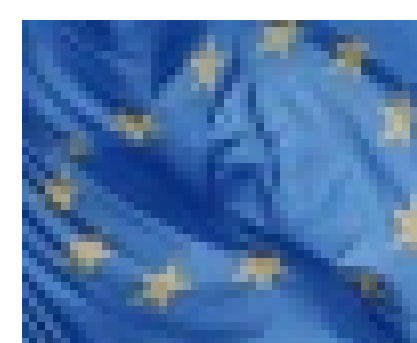
CLS3200

- Robust housing
- Up to 1100mm (44") stroke
- Choice of mounting
- 32mm body Ø

Contact details

Europe

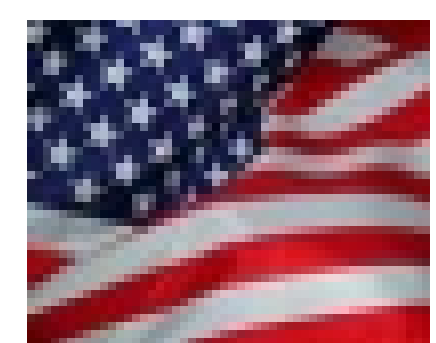
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Additional product information

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