

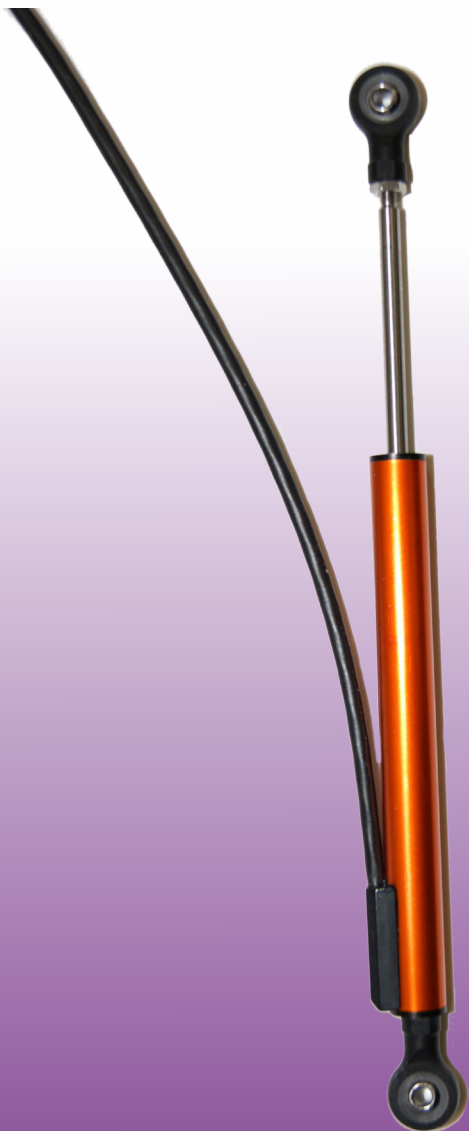


Compact Linear Potentiometers & Transducers



measuring
•
monitoring
•
analysing

AMS



- Rugged construction
- Aluminium housing
- Alloy spherical bearing housing
- Stainless steel actuating rod
- Seal pack options
- IP54, IP65, IP67
- Excellent linearity
- Long life >25 million cycles
- Heavy duty spherical bearings
- Analogue Output
- Potentiometric Output



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KOBOLD Instruments UK Ltd
8/9 Brunts Business Centre,
Samuel Brunts Way,
Mansfield, Nottingham,
NG18 2AH
Phone: 01623 427701
Email: info.uk@kobold.com
Web: www.kobold-direct.co.uk



Description

Linear Potentiometers or Transducers are also commonly known as pots or voltage dividers. The sensors provide a voltage output proportional to the input voltage, varying as the shaft position is moved across its mechanical range. Using proven 'conductive plastic' technology, the sensors offer a range of features suitable for both harsh environments and clean room test applications.

New to the range are analogue output options for the types AMS-13, AMS-15 and AMS-19.

The technology utilises a set of 'cats claw' style contact fingers, which effectively provide multiple redundancy during operation, high operating speeds up to 10m/s without 'bouncing' and a precise contact with the element, which provides a near infinite resolution without backlash. Conductive Plastic elements have evolved over the years and is essentially a conductive ink formula, screen printed onto circuit board plastic material (FR4). As screen printing techniques have improved over the years, so has the achievable linearity of the element, without the need for post-production laser correction. All of our Linear Potentiometers offer a standard linearity of less than 0.5% and the life expectancy is measured in millions of cycles.

Sealing a potentiometer from the environment has long been an issue in the sensor industry but by using an innovative seal design this issue has been solved. The standard IP rating is IP65 however, IP54 and IP67 are available for each sensor type. This enables the sensors to be used in environments where water, coolants, even fuels are present, but without being continuously immersed.

Custom options for sensor design include an analogue dual outputs (redundancy), return spring, flange mount, specified retracted mounting distance, stroke length, and cable length.

Technical Details

Potentiometric

Maximum Supply Voltage	40 VDC
Resolution	Essentially Infinite
Repeatability	≤0.01mm
Operational Speed	10 M/s max
Mechanical Life	> 25 Million Cycles
Recommended Wiper Current	< 10μA
Independent Linearity	≤ +/- 0.5%
Cable Type*	3 Wire Raychem 55A, 26 AWG, FDR 25 Jacket
Cable Length*	500mm
Track Technology	Conductive Plastic
Housing Material	Aluminium
Shaft Material	Stainless Steel
Operating Temperature	-40 to +150°C
Sealing Option	IP54 - Light Duty O
Ring	IP65 - Dual O Rings IP67 - PTFE U Spring + Ring

O

Analogue

Supply Voltage	6-30Vdc
Output	4-20mA (2-wire) +/- 1%
All other specification as above	

Typical Applications

Robotics
Dancer Arms for Labelling/Wrapping/Packaging Machines
Hydraulic & Pneumatic Ram Position
Power Generation Auxiliary Controls
Food & Beverage, Liquid Level
Civil Engineering
Automotive
Plastic and Rubber Manufacturing Machines
Forming and Press Machines - Roller Gap
Tools and Filling/Dispensing Machines
Woodwork, Sawmill and Paper Converting Machinery
Textiles - Tension Testing
Packaging and Warehouse Equipment
Laboratory R&D
Materials Analysis
Medical Beds
Transportation Equipment
Conveyor Automation

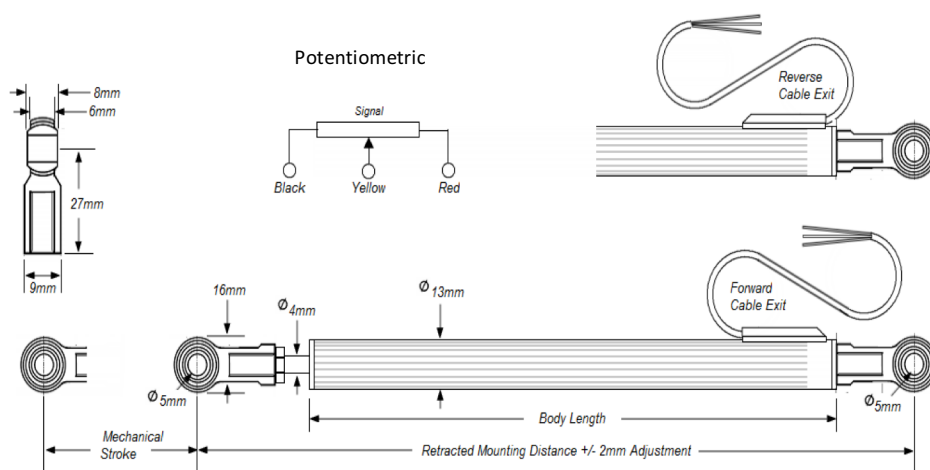


Compact Linear Potentiometers & Transducers Model AMS

AMS-13-M

Standard Type

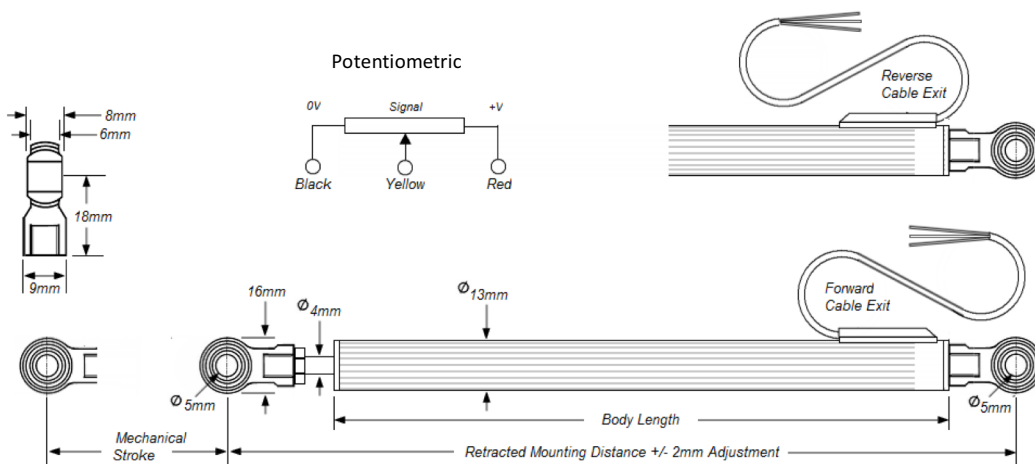
Active Electrical Stroke (mm)	25	50	75	100	125	150	175	200
Retracted Mounting Distance (mm)*	173	198	223	248	273	298	323	348
Mechanical Stroke (mm)*	27	52	77	102	127	152	177	202
Body Length	103	128	153	178	203	228	253	278
Weight without Cable (g)	53	58	63	68	73	78	83	88
Resistance (KOHms +/-20%) (Potentiometric)	1.7	3.4	5	6.7	8.4	10	11.7	13.4



AMS-13-C

Compact Type

Active Electrical Stroke (mm)	25	50	75	100	125	150	175
Retracted Mounting Distance (mm)*	142	167	192	217	242	267	292
Mechanical Stroke (mm)*	27	52	77	102	127	152	197
Body Length	93	118	143	168	193	218	247
Weight without Cable (g)	43	48	53	58	63	68	73
Resistance (KOHms +/-20%) (Potentiometric)	1.7	3.4	5	6.7	8.4	10	11.7





Compact Linear Potentiometers & Transducers Model AMS

Order Details (example) AMS-13-C-150-65-P-0

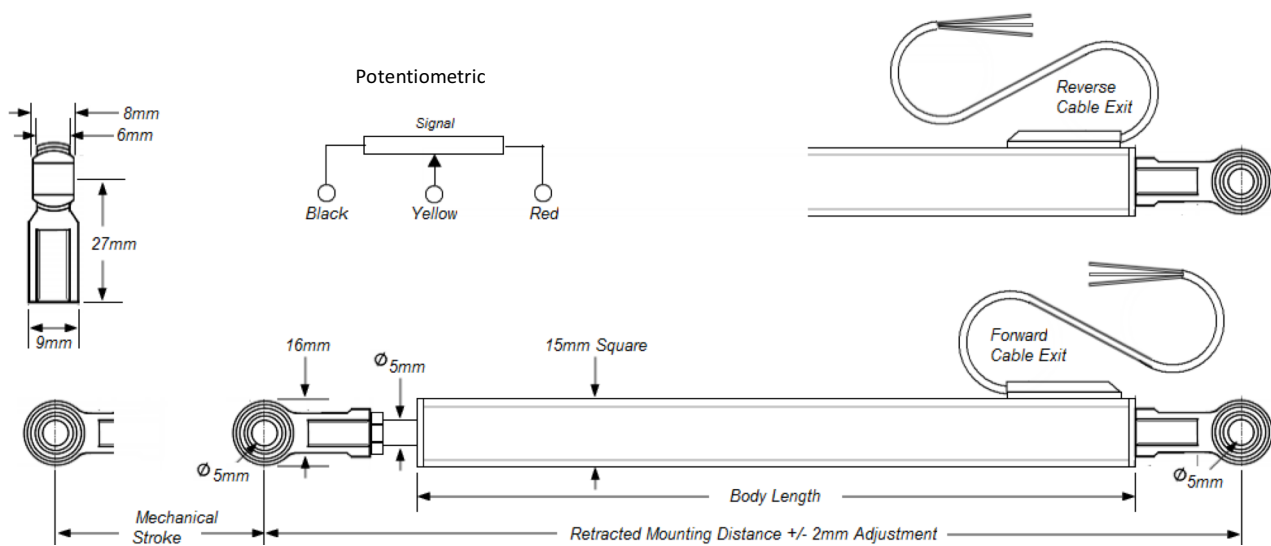
Model	Body Type	Range Active Electrical Stroke - mm	IP Rating	Cable Exit	Output	Options
AMS-13	M = Standard C = Compact	25 50 75 100 125 150 175 200*	54 65 67	R= Reverse F= Forward	A= Analogue P= Potentiometric	0= None Y= Special (describe in detail)

*Body type M only

AMS-15-M

Standard Type

Active Electrical Stroke (mm)	100	150	200	250
Retracted Mounting Distance (mm)*	248	298	348	398
Mechanical Stroke (mm)*	102	152	202	252
Body Length	182	232	282	332
Weight without Cable (g)	109	116	123	130
Resistance (KOhms +/-20%) (Potentiometric)	6.7	10	13.4	16.7





Compact Linear Potentiometers & Transducers Model AMS

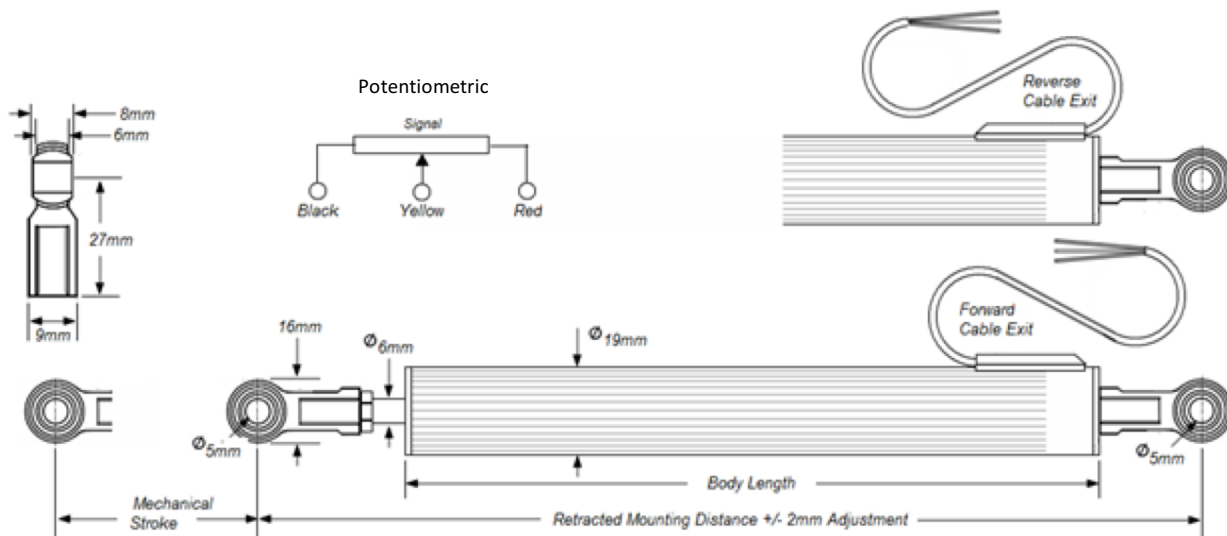
Order Details (example) AMS-15-M-150-65-A-0

Model	Body Type	Range Active Electrical Stroke - mm	IP Rating	Cable Exit	Output	Options
AMS-15	M = Standard	100 150 200 250	54 65 67	R= Reverse F= Forward	A= Analogue P= Potentiometric	0= None Y= Special (describe in detail)

AMS-19-M

Standard Type

Active Electrical Stroke (mm)	25	50	75	100	150	200	250	300
Retracted Mounting Distance (mm)*	173	198	223	248	298	348	398	448
Mechanical Stroke (mm)*	27	52	77	102	152	202	252	302
Body Length	107	132	157	182	232	282	332	382
Weight without Cable (g)	123	127	131	135	143	151	159	167
Resistance (KOhms +/-20%) (Potentiometric)	1.7	3.4	5	6.7	10	13.4	16.7	20



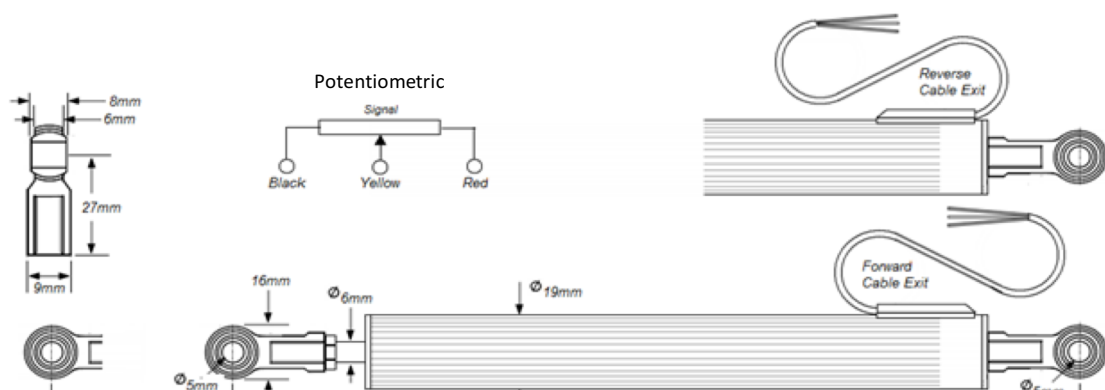


Compact Linear Potentiometers & Transducers Model AMS

AMS-19-E

Extended Range

Active Electrical Stroke (mm)	350	400	450
Retracted Mounting Distance (mm)*	518	568	618
Mechanical Stroke (mm)*	352	402	452
Body Length	452	502	552
Weight without Cable (g)	223	278	333
Resistance (KOhms +/-20%) (Potentiometric)	23.4	26.7	30



Order Details (example) AMS-19-M-150-65-A-0

Model	Body Type	Range Active Electrical Stroke - mm	IP Rating	Cable Exit	Output	Options
AMS-19	M= Standard E= Extended*	25 50 75 100 150 200 250 300 *350 *400 *450	54 65 67	R= Reverse F= Forward	A= Analogue P= Potentiometric	0= None Y= Special (describe in detail)

*Body type E only

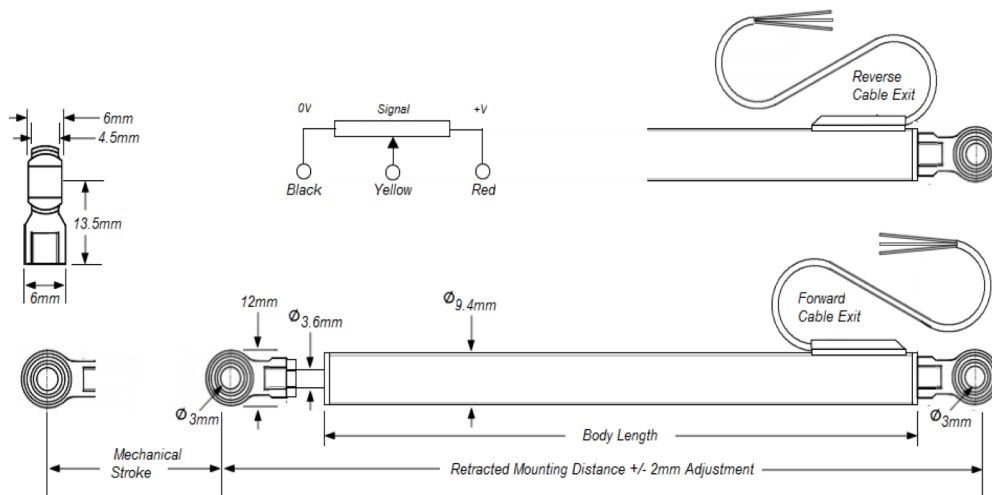


Compact Linear Potentiometers & Transducers Model AMS

AMS-94-M

Standard Type

Active Electrical Stroke (mm)	12.5	25	50	75	100	125	150	175
Retracted Mounting Distance (mm)*	86	98	123	148	179	204	229	254
Mechanical Stroke (mm)*	14.5	27	52	77	102	127	152	177
Body Length	53	66	91	116	147	172	197	222
Weight without Cable (g)	15	17	21	25	29	33	37	41
Resistance (KOHms +/-20%) (Potentiometric)	0.8	1.7	3.4	5	6.7	8.4	10	11.7



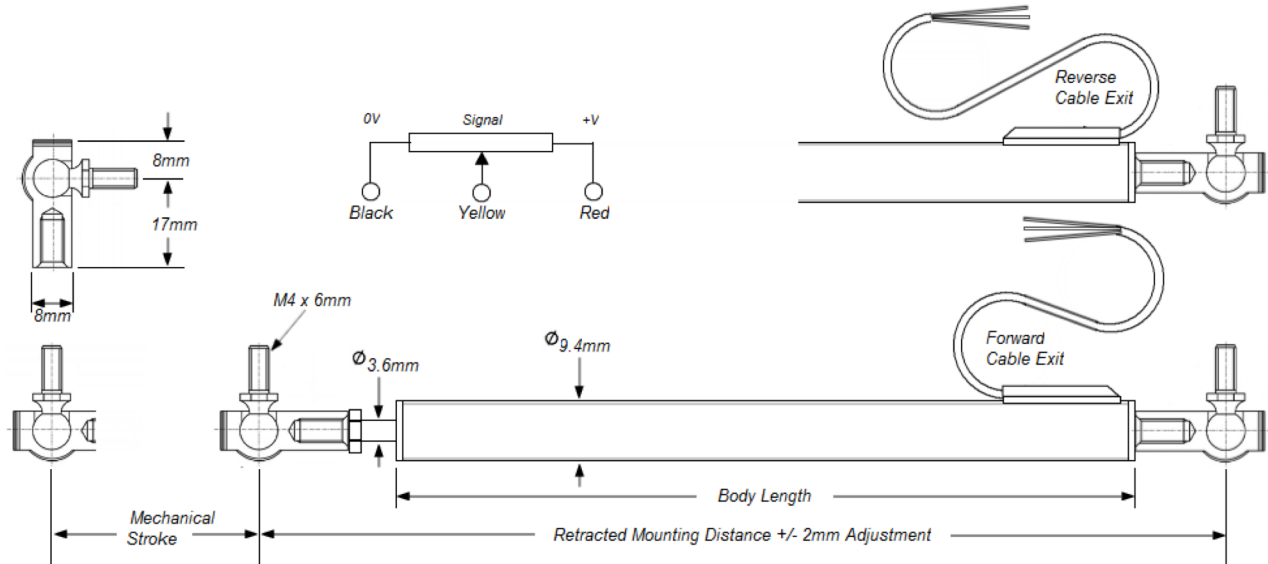
AMS-94-P

Type with Pop Joint Fixings

Active Electrical Stroke (mm)	12.5	25	50	75	100	125	150	175
Retracted Mounting Distance (mm)*	86	98	123	148	179	204	229	254
Mechanical Stroke (mm)*	14.5	27	52	77	102	127	152	177
Body Length	53	66	91	116	147	172	197	222
Weight without Cable (g)	15	17	21	25	29	33	37	41
Resistance (KOHms +/-20%) (Potentiometric)	0.8	1.7	3.4	5	6.7	8.4	10	11.7



Compact Linear Potentiometers & Transducers Model AMS



Order Details (example) AMS-94-P-M-100-67-P-0

Model	Body Type	Range Active Electrical Stroke - mm	IP Rating	Cable Exit	Output	Options
AMS-94	M= Standard P= M4 x 6mm Pop Joints	12.5 25 50 75 100 150 175	54 65 67	R= Reverse F= Forward	P	0= None Y= Special (describe in detail)

No responsibility taken for errors:
Subject to change without notice