


KEY FEATURES

- Rugged Construction
- Compact Design
- Long Life
- Excellent Linearity
- Regulated Output Options

APPLICATIONS

- Motorsport control monitoring
- Vehicle and machine controls
- Structural Monitoring

Description/Application Information

The MS-13 series of linear potentiometers are designed to withstand the harsh environments of motorsport, testing and industrial applications. Using proven 'Conductive Plastic' technology, the sensors offer high performance and reliability at operational temperatures up to +150°C

The rugged, yet compact 13mm diameter MS-13 is available with stroke lengths 25 to 250mm, flange mount, a choice of potentiometer and regulated analogue outputs.

Spring-return versions available – See MS-13SR datasheet.

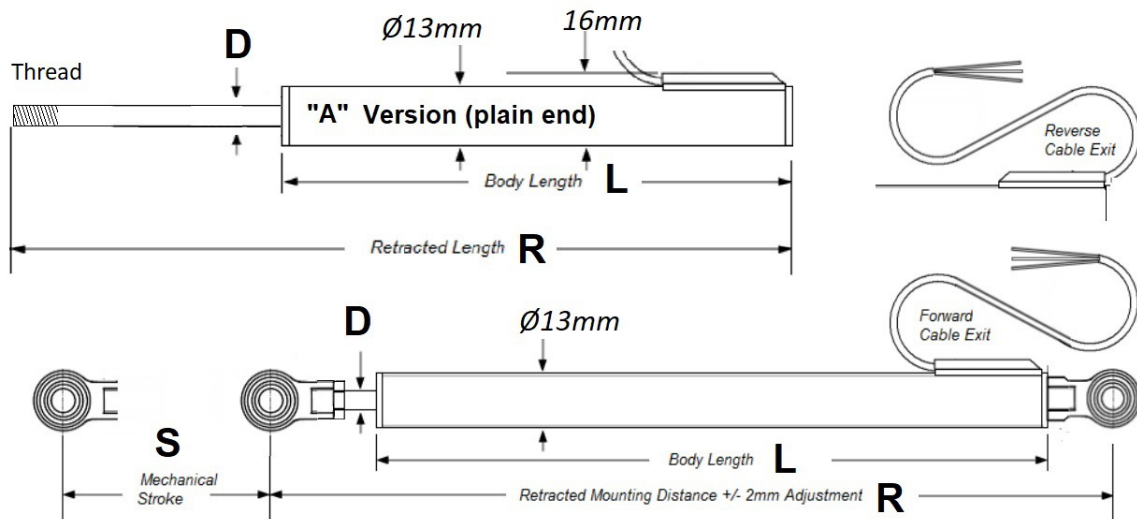
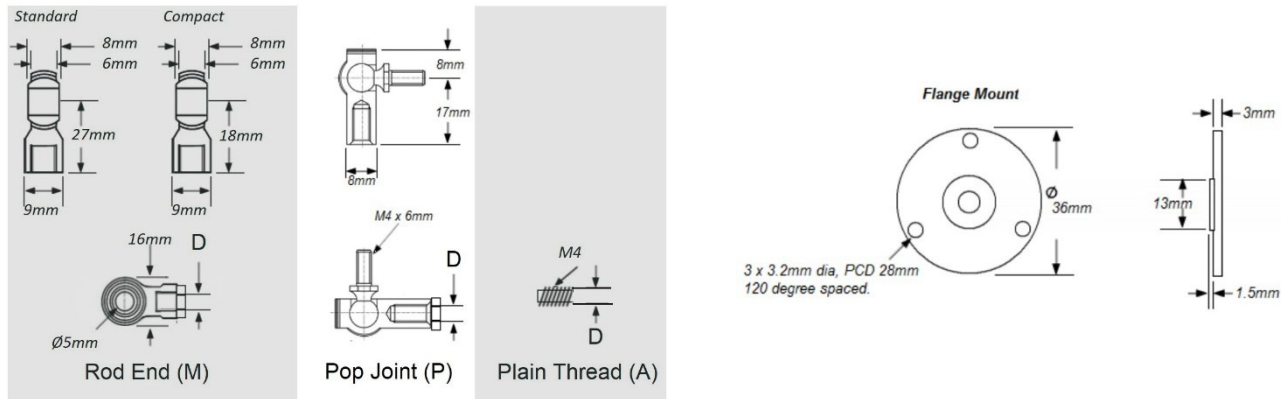
Accessories available in our Accessory Datasheet such as, protective sleeve, body clamps etc.

Measurement Ranges

Electrical Stroke	25	50	75	100	125	150	175	200	225	250
MS-13M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MS-13C	✓	✓	✓	✓	✓	✓	-	-	-	-
MS-13MP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MS-13CP	✓	✓	✓	✓	✓	✓	-	-	-	-
Resistance (KW)	1.7	3.4	5	6.7	8.4	10	11.7	13.4	15.1	16.8

*Resistance given ±20%

Diagrams and Dimensions



Dimension

		13M/MP	13C/CP		13M	13C	13MP	13CP
Stroke	S	L	L	D	R	R	R	R
25	27	107	97	4	173	142	153	140
50	52	132	122	4	198	167	178	165
75	77	157	147	4	223	192	203	190
100	102	182	172	4	248	217	228	215
125	127	207	197	4	273	242	253	240
150	152	232	222	4	298	267	278	254
175	177	257	-	4	323	-	303	-
200	202	282	-	4	348	-	328	-
225	227	307	-	4	373	-	353	-
250	252	332	-	4	398	-	398	-

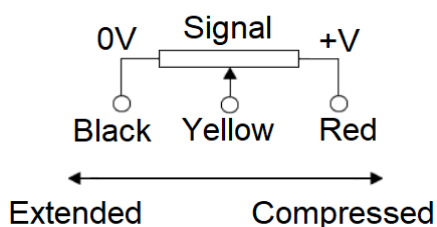
Specification

Technology	Conductive Plastic	
Stroke Lengths (Standard)	25mm to 250mm	
Resolution	Essentially infinite	
Repeatability	<0.01mm	
Independent Linearity (BFSL)	<0.5%	Of Measurement Range
Operating Temperature	-40 to +150°C	*Amplified restricted to +125°C
Operational Speed	10m/s Max	
Electrical and mechanical life	>25 Million Cycles	Depending on installation
Housing Material	Aluminium	
Shaft Material	Stainless Steel	
Sealing	IP54, IP65, IP67	
Internal Contact	Multi - 4 point	Reduces Vibration effects
Mechanical Life	>50 Million Cycles	Depending on Environment

Electrical and power supply specification

Supply voltage (potentiometric)	1-30V DC	Maximum 40V
Supply voltage (amplified 4-20mA output)	8-30V DC	Maximum 30V
Supply voltage (amplified 0-5V output)	6-30V DC	Maximum 30V
Supply voltage (amplified 0-10V output)	11-30V DC	Maximum 30V

Electrical Characteristics

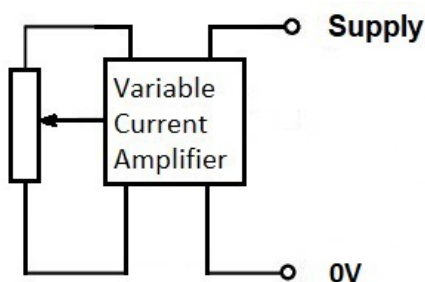


Single output	Red	+ Supply
Single output	Black	(0V)
Single output	Yellow	Signal
Dual output	Brown	+ Supply
Dual output	Blue	(0V)
Dual output	White	Signal
	Green	Not used

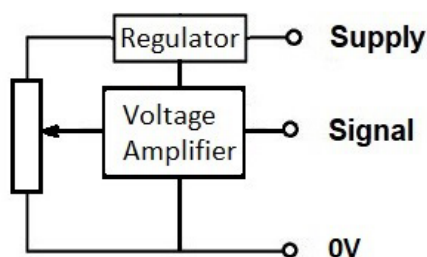
Cable: 3 Wire or 6 wire Raychem 55A, 26AWG, FDR25 sleeve

Cable Length: 500mm Approx

Dual output not available in amplified version



4-20mA output



Amplified Voltage output

Ordering Information

Example product code:

MS-13 C -125 -65 F -420

Series MS-13

Mechanical Mounting

C = Compact Rod End Bearings
 CP = Compact Pop Joints
 M = Standard Rod Ends
 MP = Standard Pop Joints
 A = No fixings

Stroke Length

25,50,75,100,125,150,175*,200*,225*,250* *13M,13MP only

Seal Rating

54 = IP54
 65 = IP65
 67 = IP67

Cable Exit Direction

F = Front facing
 R = Rear Facing

Options (leave blank if none selected)

FL = Flange Mount
 Dual = Dual Output (6 wire potentiometric only)
 SLV = Protective Carbon Fibre Sleeve
 420 = 4-20mA Amplified (single output only)
 V05 = 0-5V Amplified (single output only)
 V10 = 0-10V Amplified (single output only)
 Lxxxx = Cable length in mm (500mm supplied as standard)

Non-standard ranges available
 Please contact us for other options

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