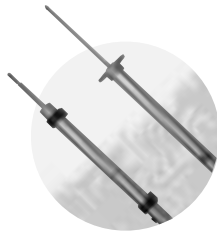


# HLP 190



The HLP190 range of hybrid linear potentiometers provides the facility for single or dual electrical output with a body diameter of only 19mm. Stroke lengths are from 25mm to 150mm, with a choice of body clamp (BS) or flange (FS) mounting. This model is supplied with a spring loaded shaft, biased to the fully extended position. Suited to a wide range of industrial applications for medium stroke length requirements.

## PERFORMANCE

Electrical stroke E	mm	25	50	75	100	125	150
Resistance $\pm 10\%$	k $\Omega$	1	2	3	4	5	6
Independent linearity	$\pm\%$	0.25	0.25	0.15	0.15	0.15	0.15
Power dissipation at 20°C	W	0.5	1.0	1.5	2.0	2.5	3.0
Applied voltage maximum	Vdc	22	44	67	74	74	74
Electrical output		Single or dual - minimum of 0.5% to 99.5% applied volts					
Resolution		Virtually infinite					
Phasing between elements		0.5mm total in retracted position (multi output units)					
Operational temperature	°C	-30 to +100					
Output smoothness		To MIL-R-39023 grade C 0.1%					
Insulation resistance		Greater than 100M $\Omega$ at 500Vdc					
Operating mode		Voltage divider only - see Circuit Recommendations on page 2					
Wiper circuit impedance		Minimum of 100M $\Omega$ x track resistance or 0.5M $\Omega$ (whichever is greater)					
Operating force maximum	gf	450	475	500	525	550	600
Life at 250mm per second		Typically greater than 50 x 10 <sup>6</sup> cycles at 25mm stroke length					
Shaft velocity maximum	mm/s	1000					
Shaft seal		None fitted					

## OPTIONS

Electrical stroke length	Non standard electrical stroke lengths can be specified
Resistance	500 $\Omega$ to 5k $\Omega$ per 25mm of stroke length
Independent linearity	25mm and 50mm stroke to $\pm 0.075\%$ ; 75mm stroke upwards to $\pm 0.05\%$
Intermediate taps	Can be specified (limited by a maximum of 14 flying leads)
Upper temperature limit	May be extended in certain applications; please discuss with our engineers.
Radiation hard models	Can be built to special order

## AVAILABILITY

Instruments normally available from stock

HLP190/FS, single electrical output, 25 to 150mm stroke length, standard resistance

## ORDERING CODES

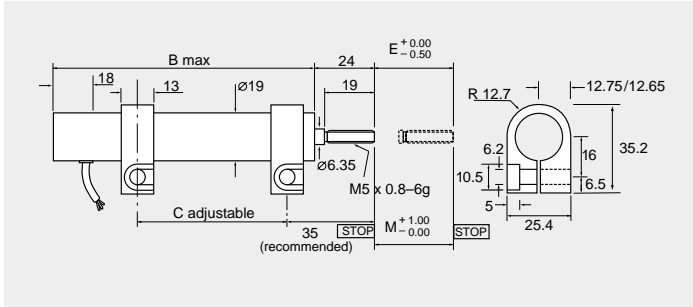
HLP190/...../...../...../.....

BS = Body clamp mounting with spring shaft	
FS = Flange mounting with spring shaft	
Electrical outputs 1 = Single 2 = Dual	
Stroke length mm	
Resistance	

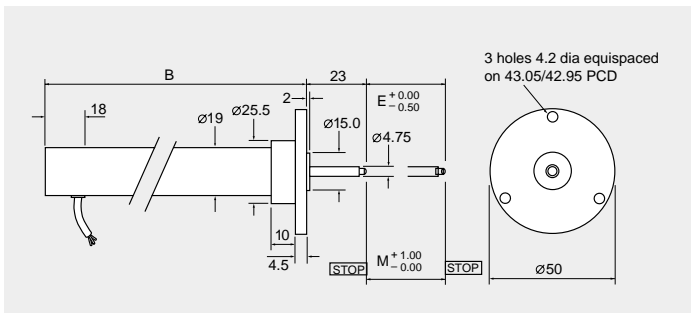
HLP190/SA, /BC and /FL models have been superseded by the new SLS190 range.  
Please see separate brochure for details.

## DIMENSIONS AND MOUNTING OPTIONS

### BODY CLAMP MOUNTING WITH SPRING SHAFT HLP 190/BS



### FLANGE MOUNTING WITH SPRING SHAFT HLP 190/FS



Note: Drawings not to scale

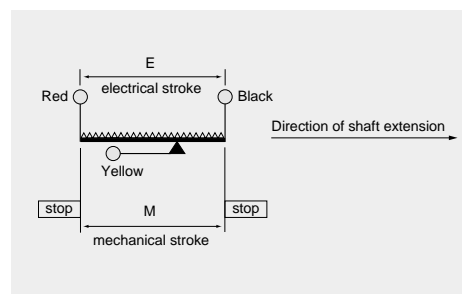
Mechanical stroke M	mm	25	50	75	100	125	150
Body length B							
type BS	mm	155	205	230	255	305	355
type FS	mm	156	206	231	256	306	356
Clamp spacing † C	mm	114	164	189	214	264	314
Weight approximate							
type BS single output	g	93	113	128	158	173	188
type FS single output	g	120	140	155	185	200	215

† recommended position

## ELECTRICAL CONNECTIONS

Flying leads: PVC sheathed cable, 500mm long with ETFE insulated 19/0.15 cores.

### Single output



### Dual output

