



APEM's HS series is a single pole, MOM-OFF-MOM micro switching joystick. Numerous button styles are available and the HS series may be specified for 2-way, 4-way and 5-way operation. The HS series is available with a threaded case or may be configured for rear or drop-in panel mounting and is well suited for control grip integration.



KEY FEATURES



- 5-way with center pushbutton option**
- Positive tactile feedback**
- MOM-OFF-MOM action**
- Threaded bush mount option**
- Sealed to IP68 and IP69K**
- Connectorized housing**



HS series

Sealed 5-way switch based miniature joystick

OPTION SELECTION

HS						A
SERIES	HANDLE	MOUNTING OPTIONS	TERMINATION	LIMITER	CONTACT	
	<ul style="list-style-type: none"> 0 None 1 Castle 2 Winged Hat 3 Conical 4 Finger Tip 5 Round Jog 6 Pushbutton 7 Mushroom* 8 Low Profile* 	<ul style="list-style-type: none"> N None D Drop-in R Rear Mount A Drop-in and Rear Mount T Threaded Housing 	<ul style="list-style-type: none"> 1 1.00mm (0.039in) Pitch Molex Connector 2 1.00mm (0.039in) Pitch Molex Connector with 10" Mating Harness 	<ul style="list-style-type: none"> 2 2-way  4 4-way  	S Silver Plated	G Gold Plated

* = Not available with Threaded Housing (Mounting Option "T")

SPECIFICATIONS

CURRENT/VOLTAGE RATING WITH RESISTIVE LOAD

CONTACT	RATING	LIFECYCLES
Gold plated (G)	- 10mA @ 30VDC	- 200,000 operations
Silver plated (S)	- 100mA @ 30VDC	- 100,000 operations
Mechanical life	- 300,000 operations	
Insulation resistance	- Min 100MΩ (250VDC by insulation resistance meter)	
Voltage withstand	- 500VAC for 1 minute	
Contact resistance	- Max 200mΩ (by YHP4328A)	
Electrical function	- MOM-OFF-MOM	

MECHANICAL

Operating Force	- 5.56N±0.53N (1.25lbf±0.12lbf) ¹
Maximum Vertical Load	- 200N (45lbf) ¹
Maximum Horizontal Load	- 150N (33.7lbf) ¹
Lever travel	- 30° (±15°)
Mass/weight	- 17g (0.0375lb) (Option HS1DXXXX)

ENVIRONMENTAL

Sealing	- IP68, IP69K ²
Operating temperature	- -25°C to +80°C (-13°F to +176°F)

PUSHBUTTON SWITCH SPECIFICATIONS (Option 6 Handle)

Electrical life	- 100,000 cycles
Rating	- 50 mA, 12VDC
Terminal	- Brass with silver plating
Contact resistance	- 100 milliohms max.
Insulation resistance	- 100 megohms min. 500VDC
Dielectric strength	- 250VAC /1 minute
Contact arrangement	- 1 pole 1 throw
Operation force	- 1.5lbf
Stop strength	- Max 3kgf vertical static load for 15 seconds
Operating temperature	- -25°C to +70°C (-13°F to +158°F)
Storage temperature	- -30°C to +85°C (-22°F to +185°F)

TERMINATION

Manufacturer	- Molex
Manufacturer part number	- 501331-0607
Product range	- Pico-Clasp™
Circuits	- Six
Pitch	- 1.00mm
Mating connector	- Molex 501330-0600

NOTES:

- 1 Force applied to the top of the castle cap.
- 2 All options are IP68 and IP69K rated, however Drop-in mounting does not prevent panel ingress.

Note: All values are nominal
The company reserves the right to change specifications without notice.

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SPECIFICATIONS - continued

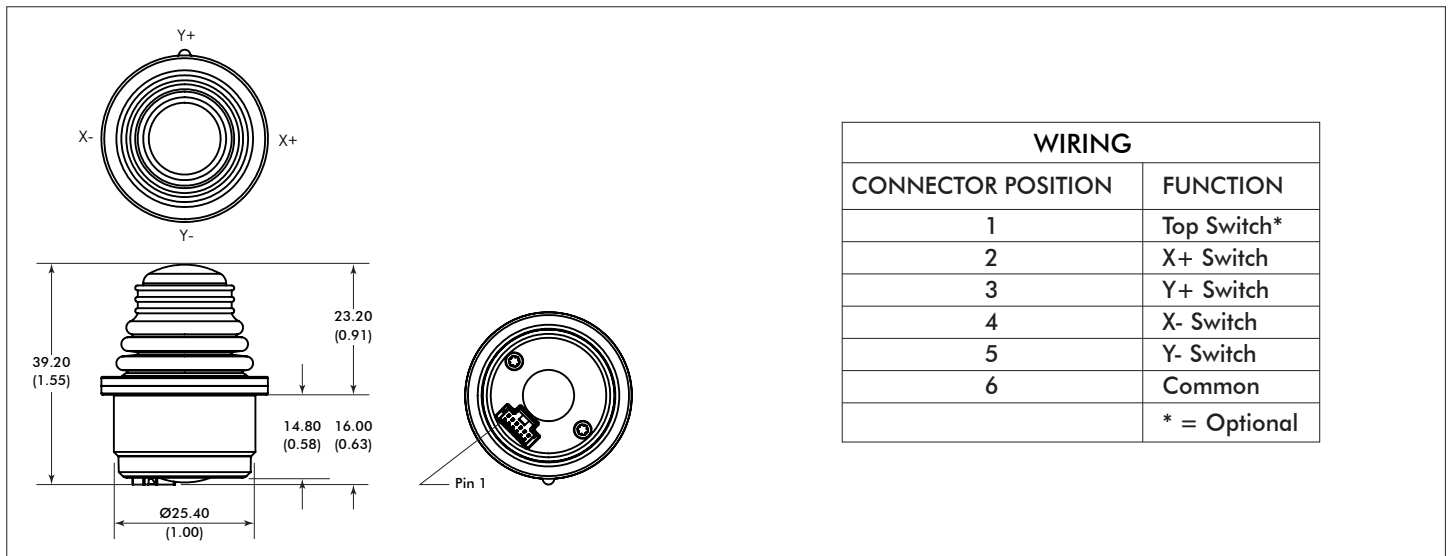
OPTIONAL MATING HARNESS¹

Wire type	- 28AWG 25cm PTFE
Connector	- Molex 501330-0600

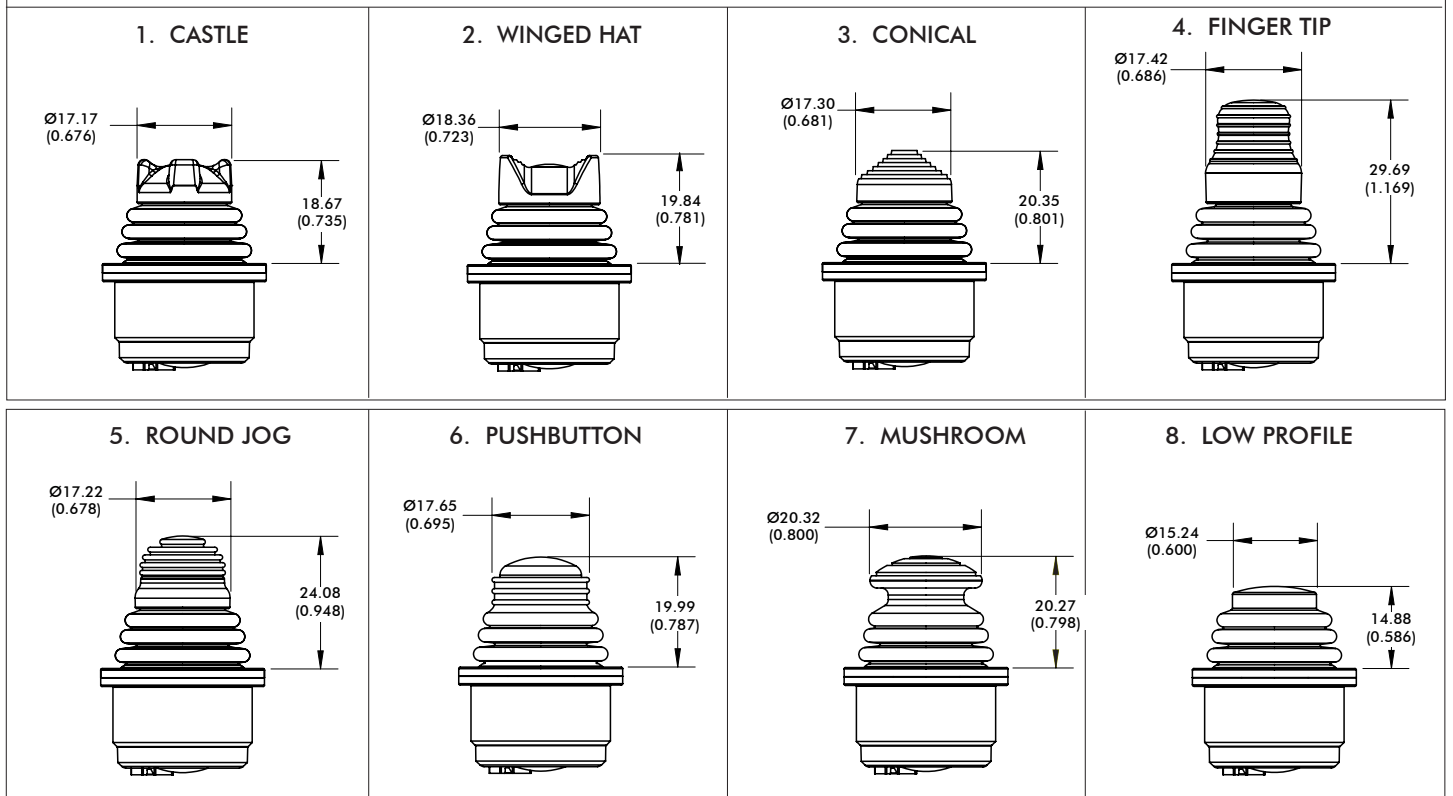
NOTE:

1 The HS Series tactile toggle switch is fitted with a six terminal Molex (501331-0607) connector. A mating harness is not included, but may be specified at the time of order for an additional charge. The 4-function harness is part number 505-508. The 5-function harness, necessary for the Option 6 Handle is part number 505-509.

DIMENSIONAL DRAWINGS



HANDLE OPTIONS



NOTE: Dimensions are in mm/(inch)

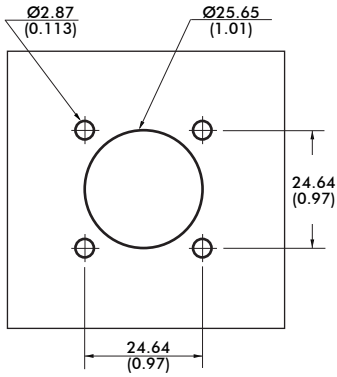
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MOUNTING OPTIONS AND MOUNTING ACCESSORIES

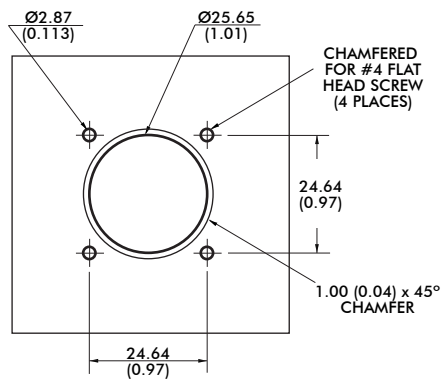
PLASTIC HOUSING – DROP-IN OPTION CUTOUT DIMENSIONS



4 x PUSH IN CONNECTORS



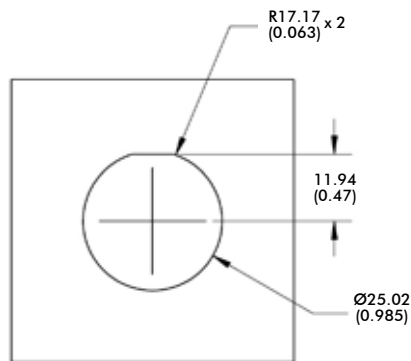
PLASTIC HOUSING – REAR MOUNT OPTION CUTOUT DIMENSIONS



4 x 1/2 FH SS PHIL SCREW



METAL THREADED HOUSING – DROP-IN OPTION CUTOUT DIMENSIONS



NOTES:

- 1 The maximum panel thickness for the Rear Mount configuration is 2.032mm (0.08in)
- 2 The under panel depth for the Drop-in configuration is 16.02mm/(0.631in).
- 3 The under panel depth for the Metal Threaded Housing configuration is 14.55mm/(0.573in).
- 4 Dimensions are in mm/(inch).