



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	
	0 None 1 Castle 2 Winged Hat 3 Conical 4 Finger Tip 5 Round Jog 6 Pushbutton 7 Mushroom* 8 Low Profile*	N None D Drop-in R Rear Mount A Drop-in and Rear Mount T Threaded Housing	1 1.00mm (0.039in) Pitch Molex Connector 2 1.00mm (0.039in) Pitch Molex Connector with 10" Mating Harness	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 HS1DXXXXA)

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

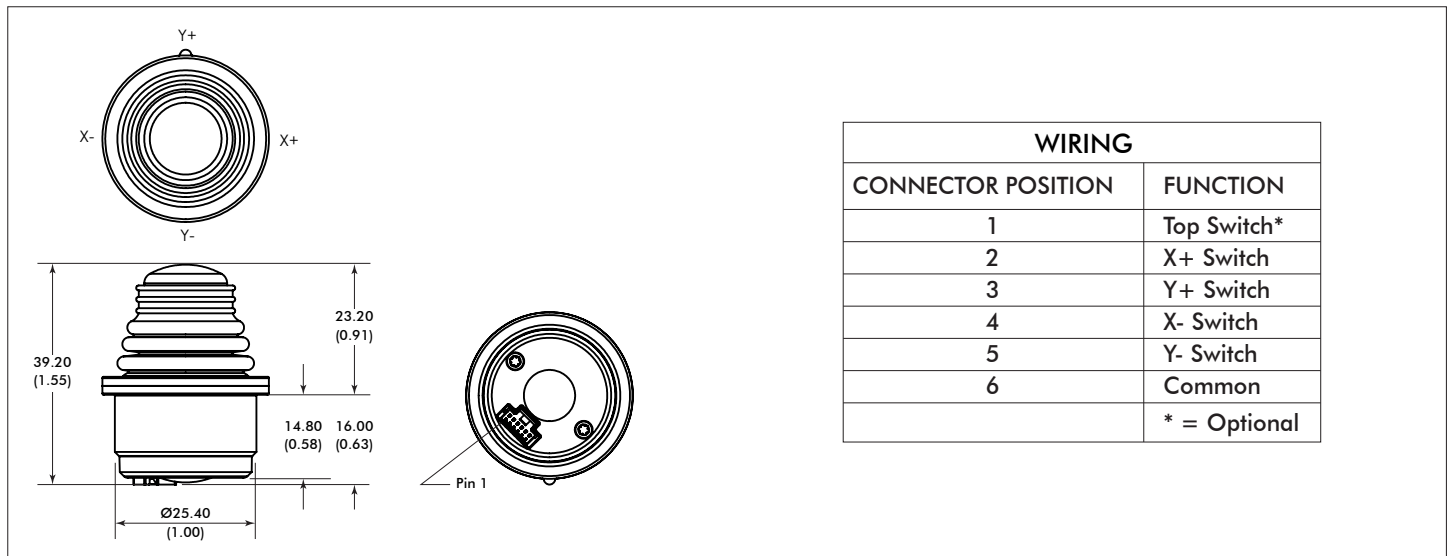
OPTIONAL MATING HARNESS¹

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

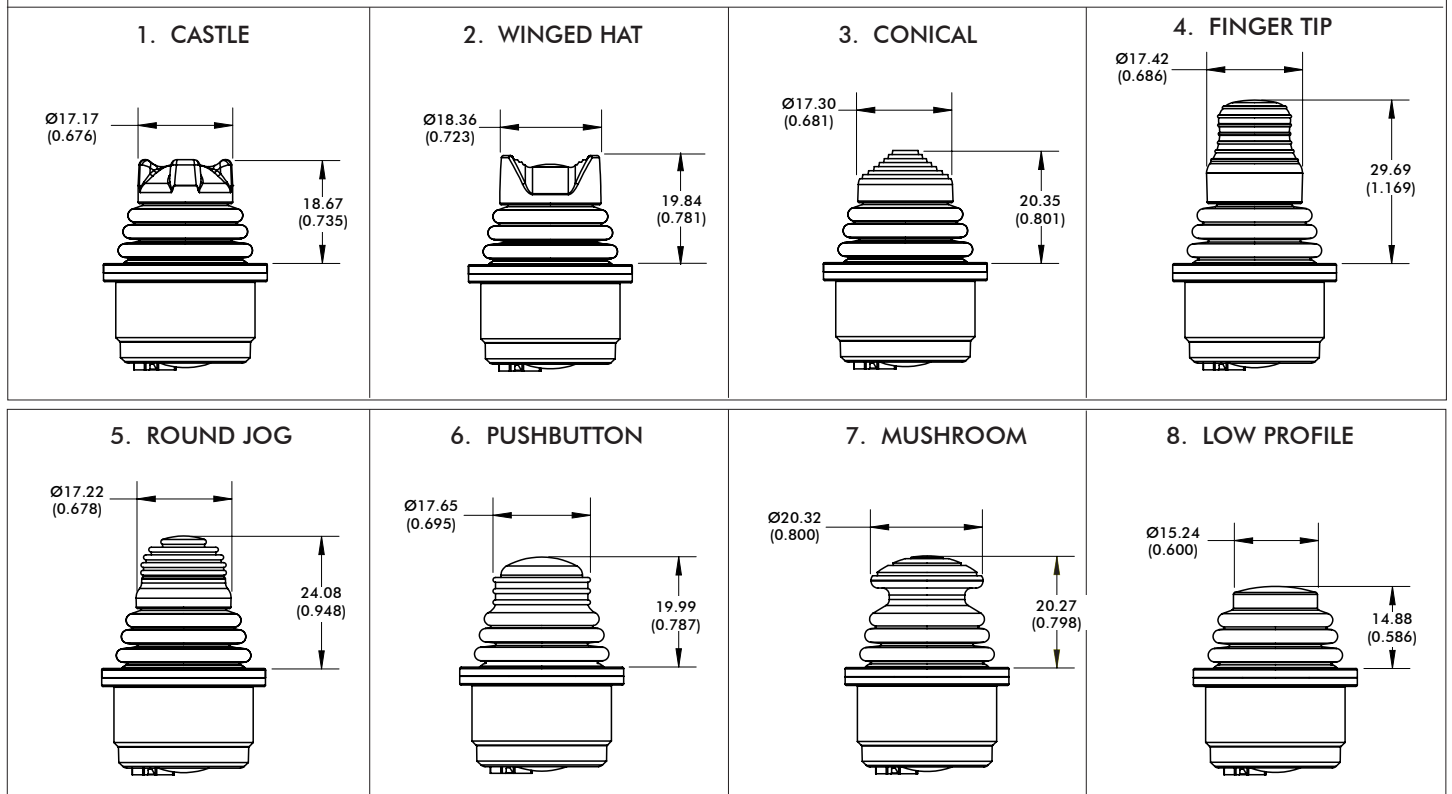
NOTE:

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)

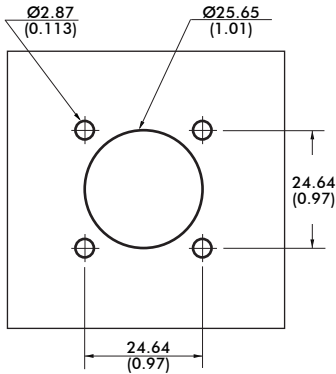
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MOUNTING OPTIONS AND MOUNTING ACCESSORIES

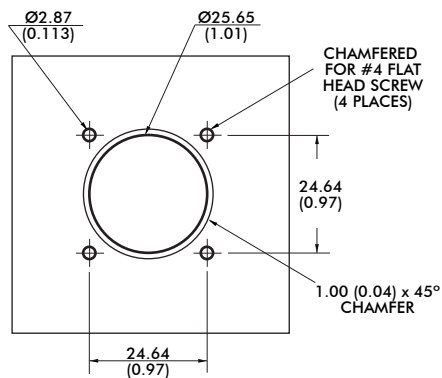
PLASTIC HOUSING – DROP-IN OPTION CUTOUT DIMENSIONS



4 x PUSH IN CONNECTORS



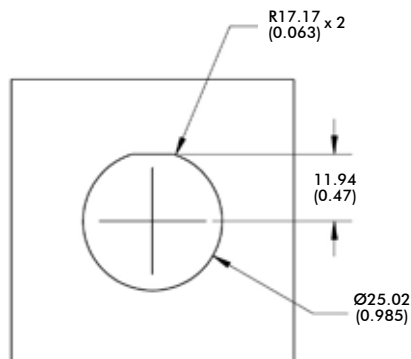
PLASTIC HOUSING – REAR MOUNT OPTION CUTOUT DIMENSIONS



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).