

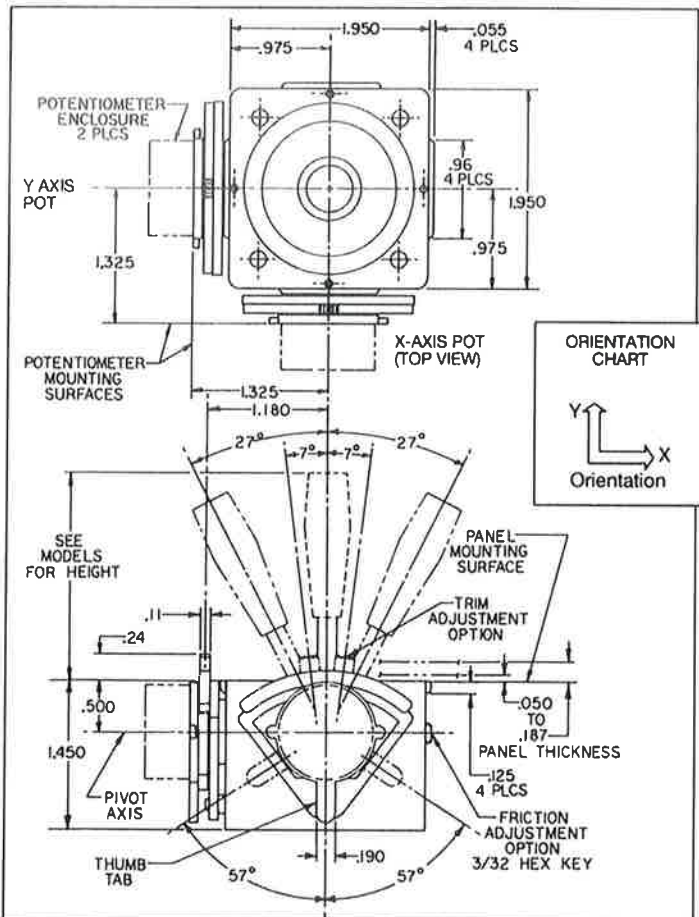
# TRADITIONAL JOYSTICK CATEGORIES

## STANDARD JOYSTICKS

Our most popular and versatile unit, the Standard Joystick is available in a variety of configurations to fit your particular application needs. Optional features include: six different centering options, mounting bezels for front or rear panel mounting, a rubber boot seal, various styles and sizes of stick handles, front panel accessible trim features as well as a wide range of output options types and values, which enable you to design the most optimal joystick for your needs.



**STANDARD OUTLINE DRAWING**



### STANDARD JOYSTICK SPECIFICATIONS

- Joystick travel - 30° from design center in all directions
- Mechanical lifecycle - 5,000,000 (minimum)
- Trim movement (optional) -  $\pm 7^\circ$  (total trim 14°) for each axis
- Main pivot ball - precision ground stainless steel
- Stick shaft - 3/16in. brass plated
- Return to center repeatability -  $\pm 2\%$
- Mounting - front or rear panel (see bezels)
- Panel thickness (mounting) - .050in. to .1875in.
- Deflection force - .14lbs. @ 27° @ 2 7/8in. up from pivot point
- Potentiometer calibration - thumb tab provides 114° of calibration
- Potentiometers - set at center of resistance
- or -
- Non-contacting Hall Effect sensors





# BEZEL'S MOUNTING BEZELS

CH Products offers a variety of textured finish front mount (FM) or rear mount (RM) panel mounting bezels. All front mount bezels are sent with 2 sets (4 screws per set) of mounting screws (1/2in. and 1/4in. with 2/56 threading, Phillips flathead) with optional 3/8in. screws available upon request. All rear mount bezels are sent with two sets of non-anodized mounting screws (1/2in. and 1/4in. with 2/56 threading, Phillips flathead) with optional 5/16in. screws also available upon request. Please note: not all bezels are available with all joystick models. Check configuration guide for availability.



A- Round Bezel Textured (FM)  
Cutout  
Standard- 1.625 in.



C- Split Bezel Textured (FM)  
Cutout  
Standard- 1.50in.  
Miniature- 1.562in.



F- Square Bezel Textured (RM)  
Cutout  
Standard- 1.312in.  
Miniature- 1.187in.



L- Rubber Boot Kit & Mounting  
Ring Textured (FM)  
Cutout  
Standard- 1.562in.  
Miniature- 1.562in.



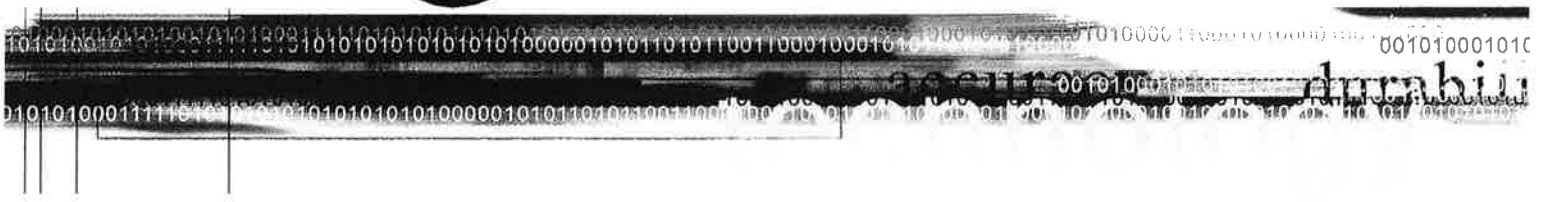
O- Computer Bezel  
Cutout  
Compact- 1.213in.



Q- Square Bezel Snap-on (FM)  
Cutout  
Standard- 1.437in.  
Miniature- 1.250in.



U- Round Bezel Snap-on (FM)  
Cutout  
Standard- 1.625in.



# OUTPUT OPTIONS POTENTIOMETER

## CLAROSTAT 595 (F) AND CLAROSTAT 388 (C)

- Electrical element: Conductive plastic
- Resistance (ohms): 5K (F) & 10K (C)
- Tolerance:  $\pm 20\%$
- Power rating: 0.5W
- Linearity:  $\pm 5\%$
- Temperature range ( $^{\circ}\text{C}$ ):  $-55^{\circ}$  to  $+120^{\circ}$
- CRV (Contact Resistance Variation):  $\pm 1.5\%$
- Electrical travel:  $265^{\circ}$
- Mechanical rotation:  $295^{\circ}$
- Terminals: Solder Lug & J Hooks
- Rotational life cycle: 1,000,000 & 50,000

F 5K



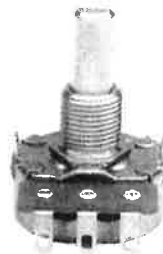
C 10K



## CTS HP SERIES (J, L)

- Electrical element: Conductive carbon
- Resistance (ohms): 100k & 130K
- Tolerance:  $\pm 9\%$ ,  $\pm 5\%$
- Power rating: 0.25W
- Linearity:  $\pm 5\%$
- Temperature Range ( $^{\circ}\text{C}$ ):  $0^{\circ}$  to  $85^{\circ}$
- CRV (Contact Resistance Variation): 1%
- Electrical travel:  $50^{\circ}$
- Mechanical rotation:  $300^{\circ}$
- Terminals: Solder Lug
- Rotational life cycle: 2,000,000

J 100K



L 130K



## SENSORCUBE (R, U)

- Electrical element: Conductive plastic
- Resistance (ohms): Standard : 5K & 10K
- Miniature: 5K
- Tolerance:  $\pm 10\%$
- Power rating: 1W
- Linearity:  $\pm 1\%$
- Temperature Range ( $^{\circ}\text{C}$ ):  $-65^{\circ}$  to  $+125^{\circ}$
- CRV (Contact Resistance Variation): 1%
- Electrical travel: Standard :  $56^{\circ}$  &  $265^{\circ}$   
Miniature:  $50^{\circ}$
- Mechanical rotation: Standard:  $310^{\circ}$  &  $360^{\circ}$   
Miniature:  $360^{\circ}$
- Terminals: Solder Lug
- Rotational Life cycle: 10,000,000

R 5K



U 10K



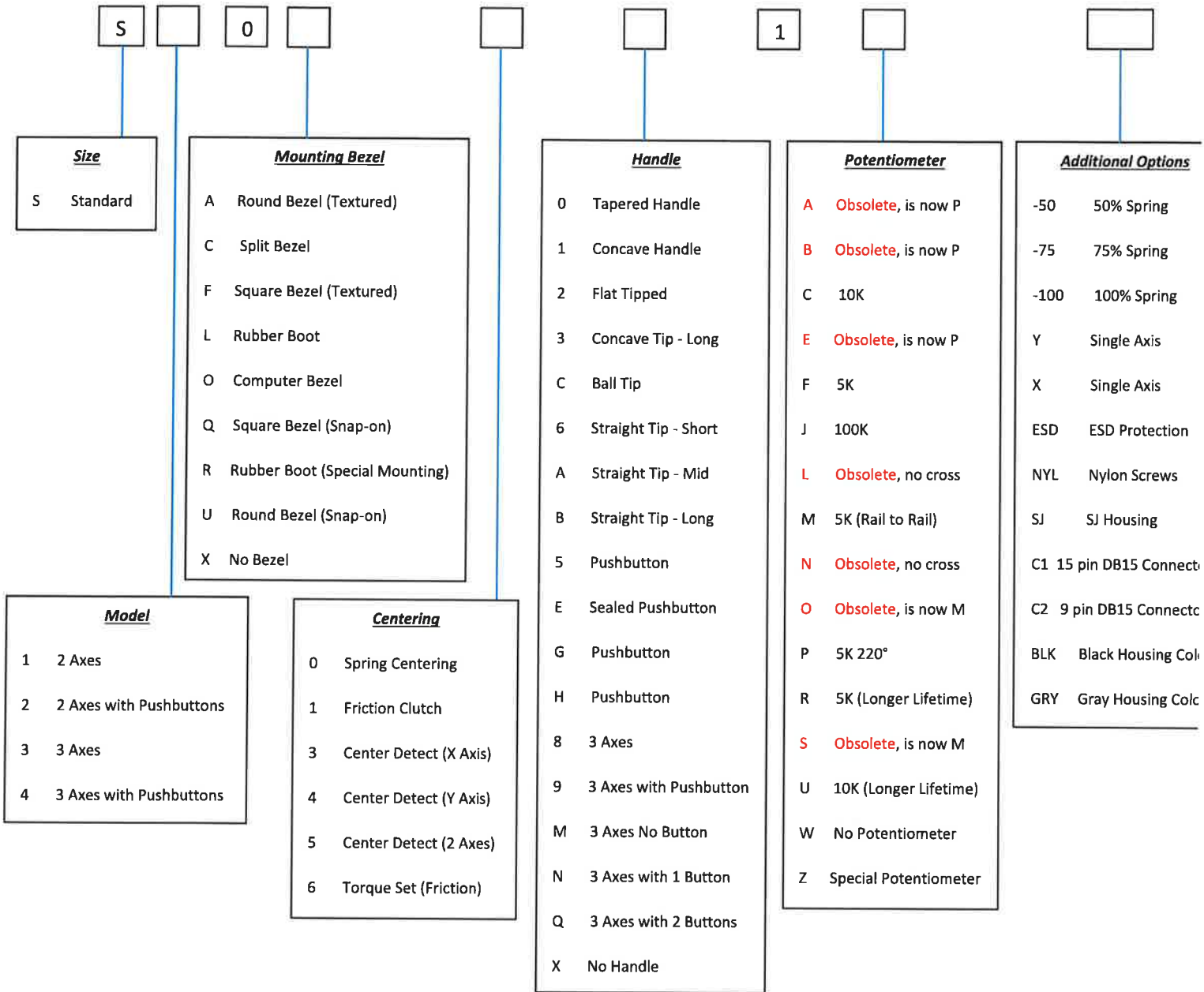
### AVAILABLE RESISTANCE CALCULATION

Total available resistance depends on a combination of potentiometer type and joystick model selection. The available resistance range can be obtained using the formula below:

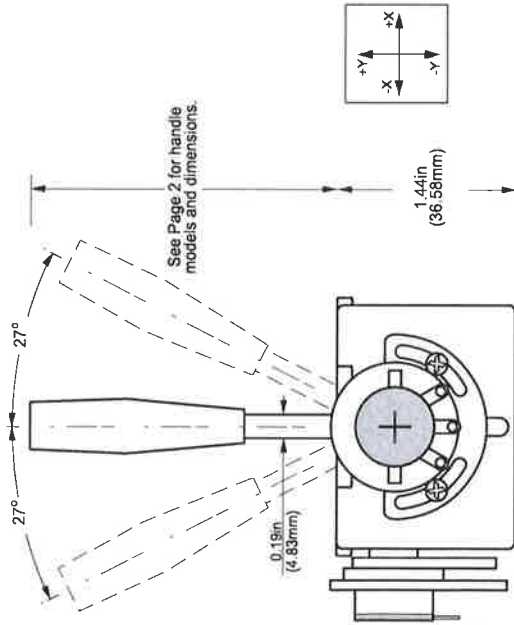
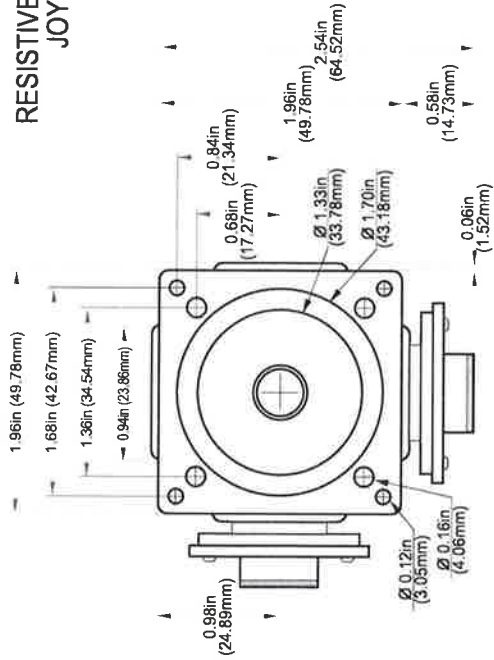
$$\frac{\text{Total Potentiometer Resistance (ohms)}}{\text{Potentiometer Electrical Travel (degrees)}} \times \text{Joystick Mechanical Travel (degrees)} = \text{Available Resistance Range (ohms)}$$



# Standard "S" Series Legacy Configuration Guide

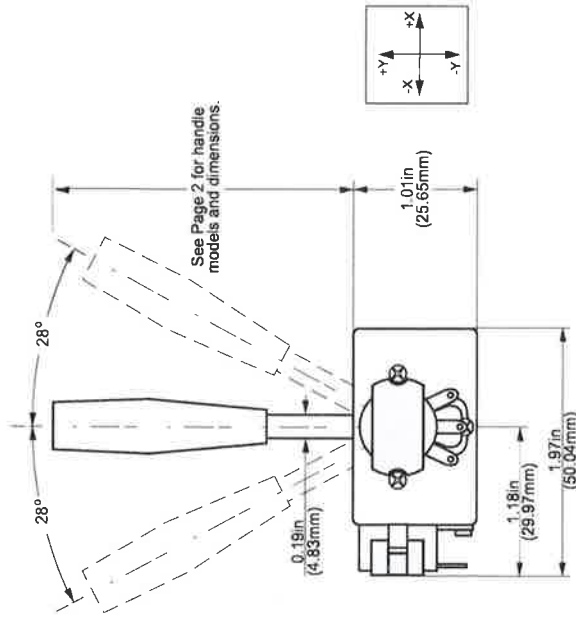
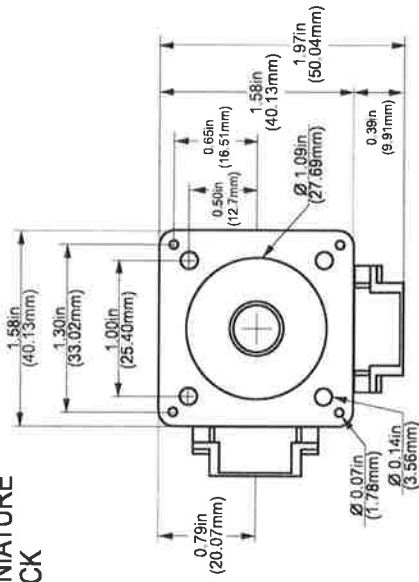


## RESISTIVE STANDARD JOYSTICK



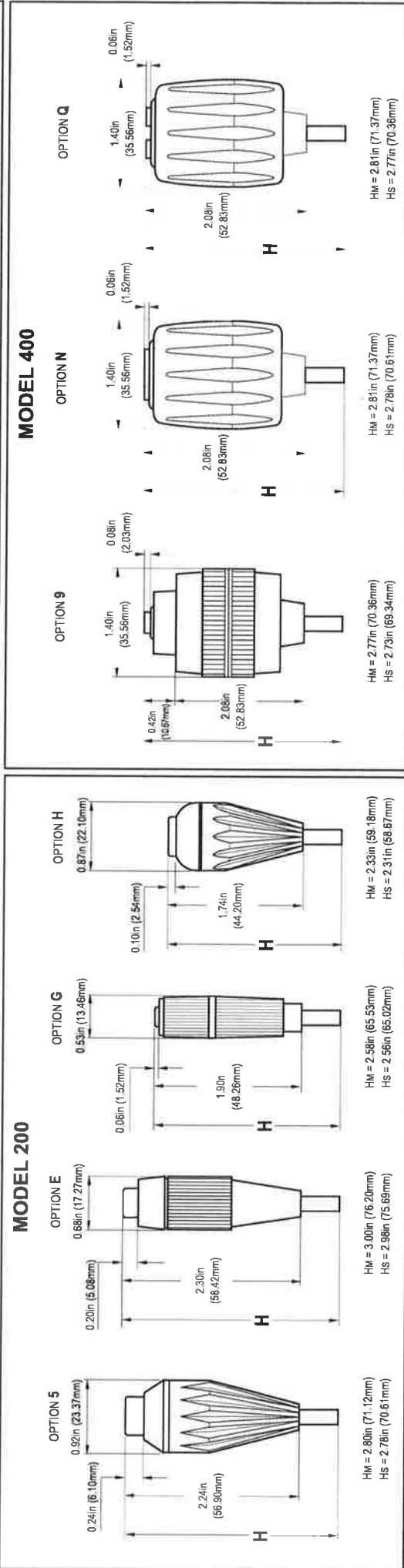
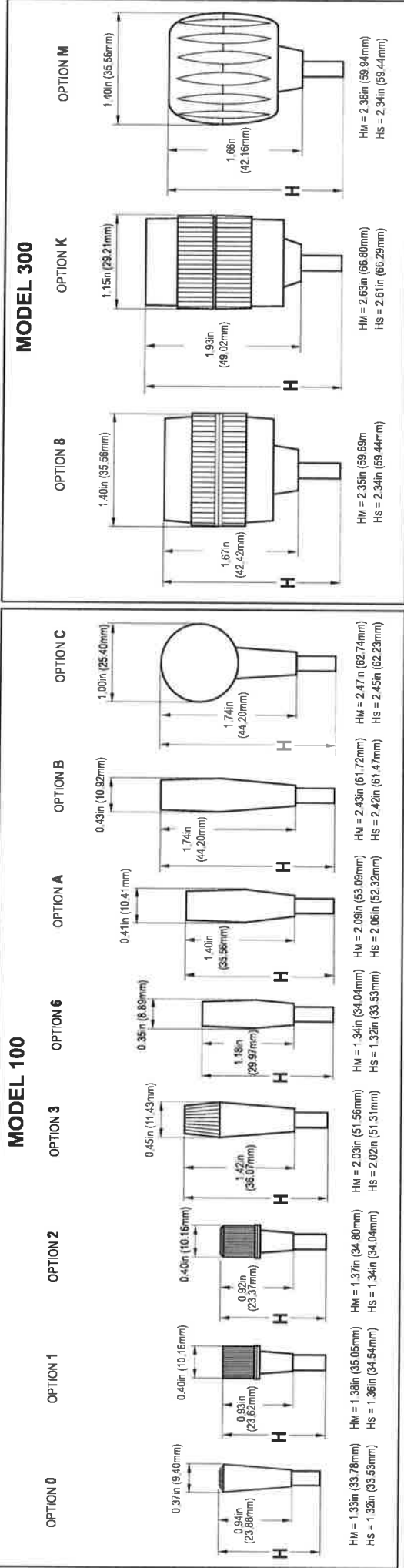
See Page 2 for handle models and dimensions.

## RESISTIVE MINIATURE JOYSTICK



See Page 2 for handle models and dimensions.

# RESISTIVE JOYSTICKS HANDLES



**CH PRODUCTS**  
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**NOTES:** HM = height above the housing dimension (H) for Miniature Joysticks  
 HS = height above the housing dimension (H) for Standard Joysticks  
 The drawings are not to scale, but are proportional.

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