

## PRO-4 JOYSTICK

The ultra-rugged PRO-4 provides precise proportional or discrete control for electro-hydraulic valves and AC/DC variable speed drives. Your specific control requirements can be accommodated by a variety of standard and custom engineered configurations. The PRO-4 is available with a variety of outputs including 11A microswitches, potentiometers, hall-effect, PWM, CAN, and VNSO contact blocks.



## SPECIFICATIONS

### GENERAL DATA

# of Axis	Single
Output Options	Contacts, Microswitches, Potentiometer, Hall-Effect, PWM & CAN
Joystick Action	Spring Return or Friction Brake
Handle Travel	+/- 36 degrees for potentiometer +/- 20 degrees for Bang/Bang and Hall-effect
Max # of Steps	Up to 3-0-3 with microswitches Up to 5-0-5 with NSO contact blocks
Handle Compatibility	2 Piece, Round Ball, Mechanical Interlock, RH, RHS, BH, FG-2, FG-3, FG-4, FG-5, MG1, MG2, MG13, MG27, TH30, G56
Life	10 million cycles
Materials	Cast Aluminum body with plated steel side plates with self lubricating bearings, hard nickel chromium spring return arms, compression style return spring and brass gears.

Est. Shipping Weight	2 lbs.
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Est. Shipping Dimensions	8 in. x 6 in. x 6 in.
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MOUNTING DATA

Mounting Style	Drop-in or Panel (from below)
Mounting Footprint	2.56" x 2.56" See literature for additional mounting specifications

ENVIRONMENTAL DATA

IP Rating	IP55
Operating Temperature	-13 to +158 degrees F [-25 to +70 degrees C]
Storage Temperature	-40 to +158 degrees F [-40 to +70 degrees C]

ELECTRICAL DATA

	Switch Type: SPDT (Form C) V Series Microswitches Double Pole Snap-In Contact Blocks (PRO-4N)
	Max. Number: Up to 4 with potentiometer Up to 6 without potentiometer Up to 3 contact blocks (PRO-4N)
Contact Specifications	Current Rating (AC): 11A 16A (PRO-4N)  Voltage Rating (AC): 250 240 (PRO-4N)

Termination:  
.187" x .20" male quick connect  
Saddle clamps (PRO-4N)

Max. Wire Size:  
18 AWG for microswitch  
12AWG for contact block (PRO-4N)

Supply Voltage:  
4.5 to 5.5 VDC

Output Voltage:  
Ratiometric 0.5 - 2.5 - 4.5 +/- 0.15V @ 5.0V supply  
Additional supply and output options available

Output Current: 10mA

Power Consumption: 20 mA @ full load

#### Hall-Effect Specifications

Termination:  
20 AWG wire 6" leads with mini-fit connector

EMC Emissions: Complies with EN61000-6-4:2007 Class A Group 1, 80-1000 MHz

EMC Immunity: Complies with or exceeds EN61000-6-2:2005, expanded to include:

RFI Immunity of 100 V/M @ 80-1000 MHz

ESD Immunity of 15Kv air, 8Kv contact

CANOpen, J1939 or basic CAN protocols

#### Can Specifications

4 analog inputs  
8 digital inputs  
2 digital outputs

See a complete listing of CANbus technical data in ESS408 CAN Based Interface Module Board literature

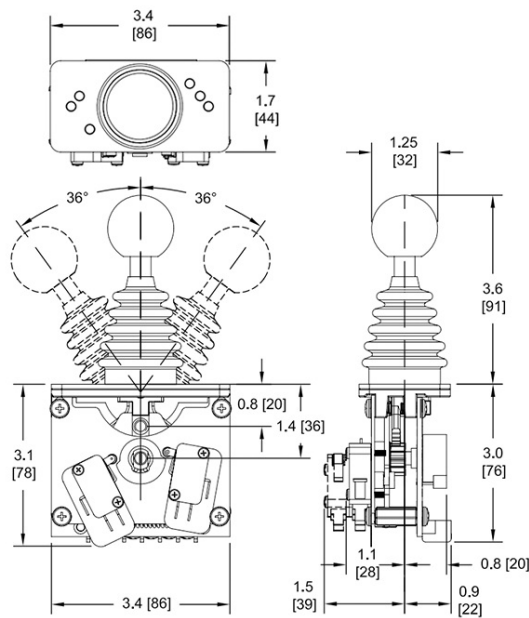
#### Additional Specifications

Reference product literature for additional specifications

# Technical Drawings

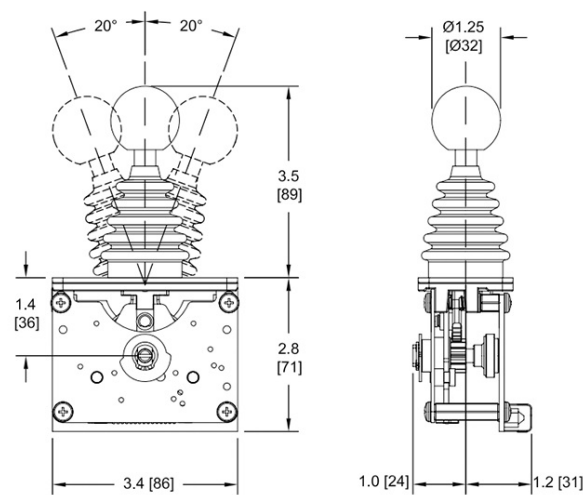
## Dimensional

All dimensions in inches [mm] and are subject to change.



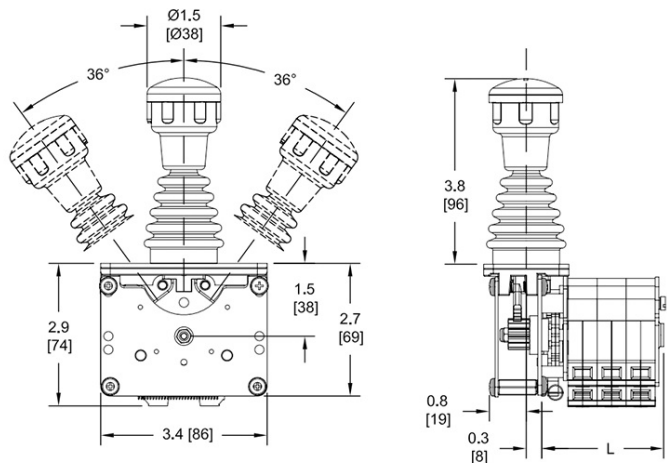
Standard PRO-4 dimensions. Shown with round ball handle.

All dimensions in inches [mm] and are subject to change.



Hall-effect PRO-4 dimensions. Shown with round ball handle.

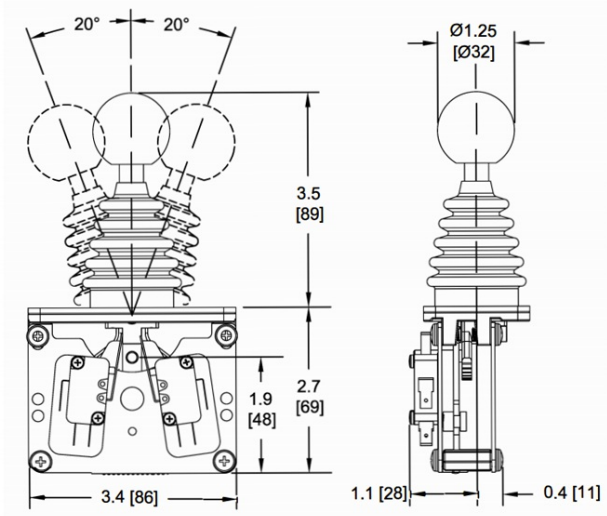
All dimensions in inches [mm] and are subject to change.



Number of double contact blocks	1	2	3
L	1.38 [35]	1.97 [50]	2.56 [65]

PRO-4N (with contact blocks) dimensions. Shown with 2 piece standard handle.

All dimensions in inches [mm] and are subject to change.

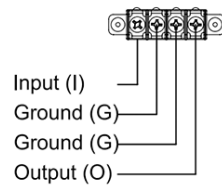


PRO-4BB (with microswitches) dimensions. Shown with round ball handle.

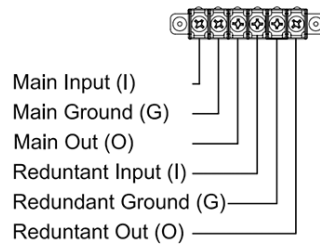
## Wiring

All dimensions in inches [mm] and are subject to change.

### SINGLE SENSOR



### REDUNDANT



### Hall-effect wiring details