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.
Est. Shipping Dimensions	8 in. x 6 in. x 6 in.

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]

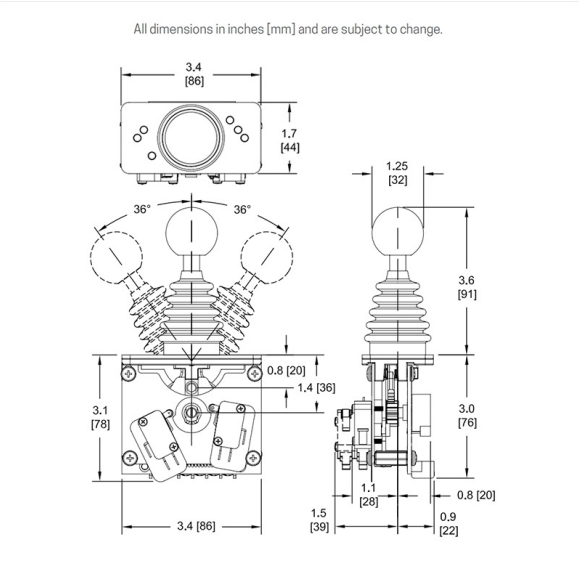
ELECTRICAL DATA

Contact Specifications	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) 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)

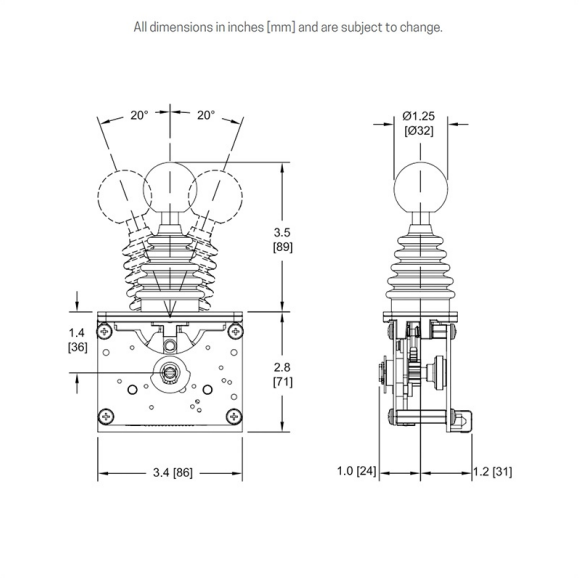
Hall-Effect Specifications	Supply Voltage: 4.5 to 5.5 VDC Output Voltage: Ratiometric 0.5 - 2.5 - 4.5 +/- 0.15V @ 5.0V supply Additional supply and output options available Output Current: 10mA Power Consumption: 20 mA @ full load Termination: 20 AWG wire 6" leads with mini-fit connector EMC Emissions: 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
Can Specifications	CANOpen, J1939 or basic CAN protocols 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

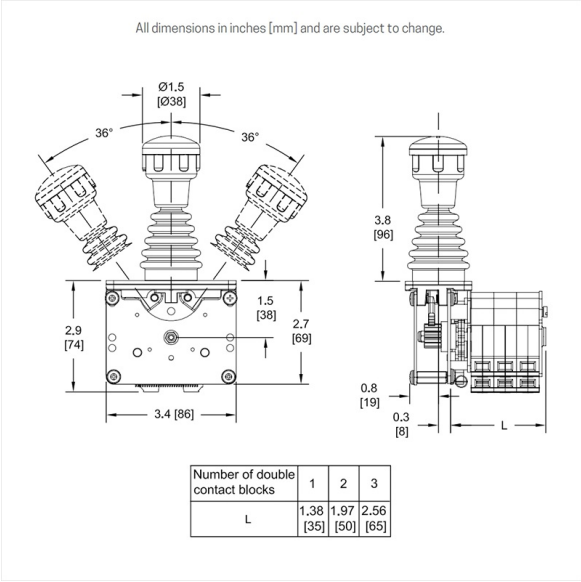
Dimensional



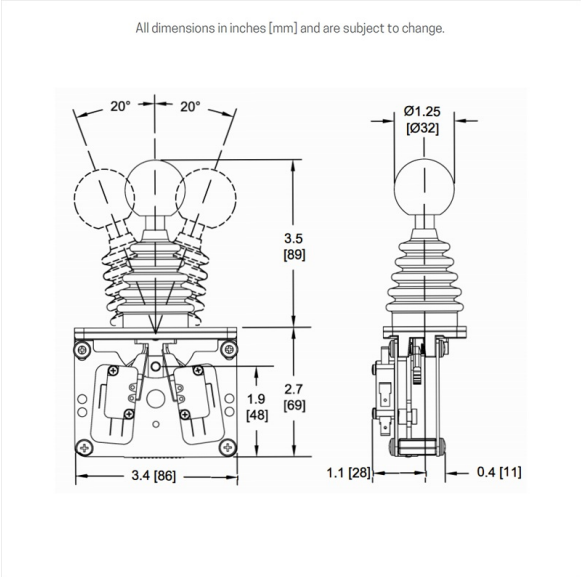
Standard PRO-4 dimensions. Shown with round ball handle.



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



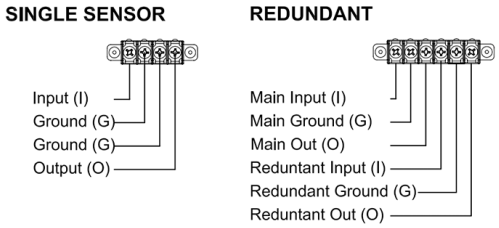
PRO-4N (with contact blocks) dimensions. Shown with 2 piece standard handle.



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

Wiring

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



Hall-effect wiring details