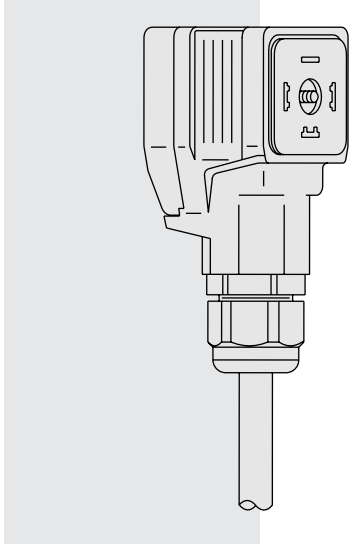


Proportional Valve Controller—DIN Coil Mount—



DESCRIPTION *0–5 VDC, 10K Pot or 0–20 mA Input*

A convenient, plug-mounted control amplifier for controlling HydraForce proportional valves that have solenoids with DIN 43650A/ISO 4400 electrical connectors.

OPERATION

This control module uses closed-loop current control with superimposed dither to supply a proportional valve solenoid with a proportional control signal. The input signal to this controller can be from a 10K potentiometer, 0–5 VDC, 0–20 mA, or from other pre-set levels.

FEATURES

- Mounts directly to solenoid coils with DIN 43650A connectors.
- IP65 weather resistant when used with base gasket (supplied).
- Adjustments accessible with a removable cover.
- One unit covers supply voltages from 9 to 32 VDC.
- No internal fuses; circuit limits current electronically.
- Short circuit proof and reverse polarity protected.
- Connector can be disconnected from coil when powered.
- Maximum current adjustment does not affect minimum current setting.
- Independent ramp adjustments and internal supply for potentiometer.
- Dither frequency and amplitude are adjustable for maximum valve performance.

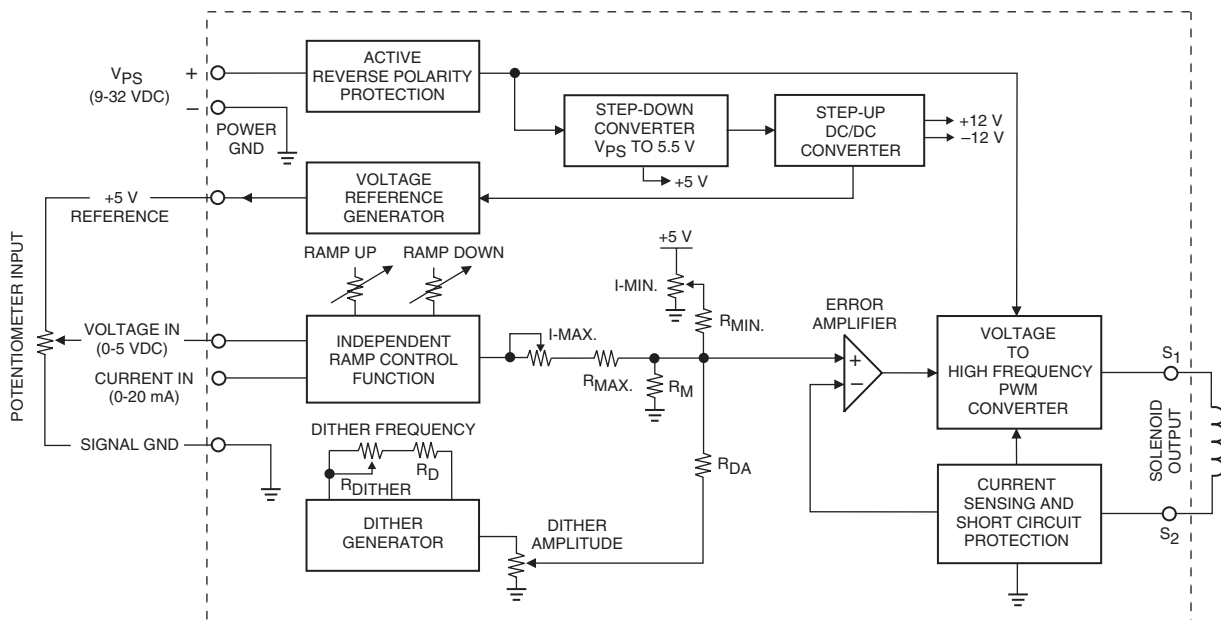
GENERAL SPECIFICATIONS

- Plug Housing:** Polyamide
Plug Lid: Polycarbonate
Weight: 30 g (1.06 oz.) without cable
Connections: Mounted cable with unterminated wires provided; Length: approximately 2 meters (79")

RATINGS

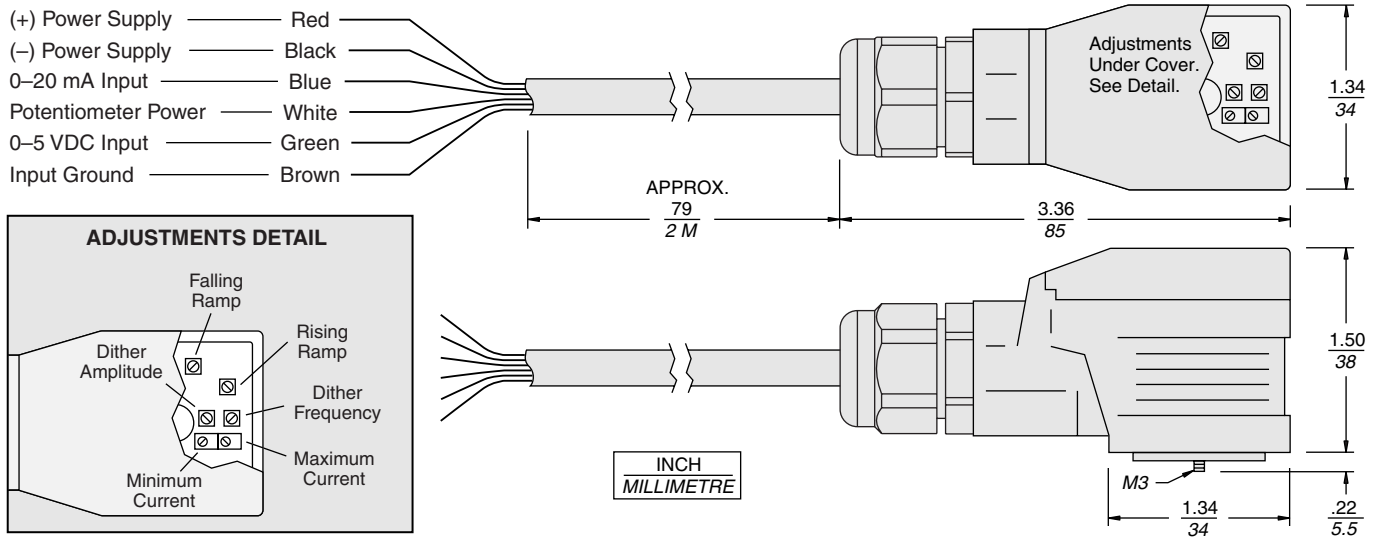
- Supply Voltage:** 9–32 VDC
 Coil rating must be matched with supply voltage: $R_{COIL} \leq (V_{SUPPLY} - 1.5 V) / I_{MAX}$.
Control Input Signal Options: 10K external potentiometer (accepts 5K to 50K pots), or 0–5 VDC signal, or 0–20 mA current signal (see connection diagrams)
Input Resistance: Voltage Control: 125K Ohms; Current Control: 50 Ohms
Output Current: up to 2000 mA (see ordering info.)
Minimum Current Range: 0–500 mA (adjustable; see ordering info.)
Maximum Current Range: 600–2000 mA (adjustable; see ordering info.)
Ramp Up and/or Down: 0.01–5.0 seconds (independently adjustable)
Dither Frequency: 70–350 Hz (adjustable)
Dither Amplitude: 0–10% of maximum current (adjustable)
Operating Conditions: –40° to 85°C; 0 to 85% relative humidity
Environmental Protection: IP65 with cover and base gasket installed

SCHEMATIC



0-5 VDC, 10K Pot or 0-20 mA Input

DIMENSIONS



CONNECTIONS

For Complete Set-Up Instructions, see page 3.439.1

For Either 0-20 mA or 0-5 VDC Control:

Turn ramp screws fully counterclockwise to eliminate ramping.
Use I-Min. screw to set minimum speed with minimum control input.
Use I-Max. screw to set maximum speed with 100% of control input.

10K Potentiometer (Pot.) Control

Supplied by User	Wire Color
(+) Power	Red
(-) Power	Black
Not Used	Blue
(+) Pot.	White
10K Pot.	Green
(-) Pot.	Brown

0 to 20 mA Control

Supplied by User	Wire Color
(+) Power	Red
(-) Power	Black
(+) 0-20mA	Blue
Not Used	White
Not Used	Green
(-) 0-20mA	Brown

0 to 5 VDC Control

Supplied by User	Wire Color
(+) Power	Red
(-) Power	Black
Not Used	Blue
Not Used	White
(+) 0-5V	Green
(-) 0-5V	Brown

TO ORDER

Part Number	Output	I-Min. Setting	I-Max. Setting	Cable Length
7114950	2000 mA Max.	0 to 500 mA	600 to 2000 mA	2 meters
4000161	1200 mA Max.	0 to 150 mA	400 to 1200 mA	2 meters