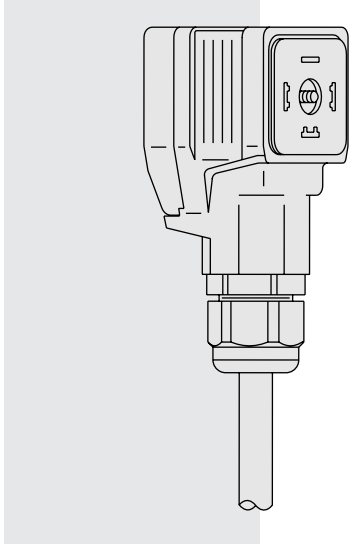


# Proportional Valve Controller—DIN Coil Mount—



**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.

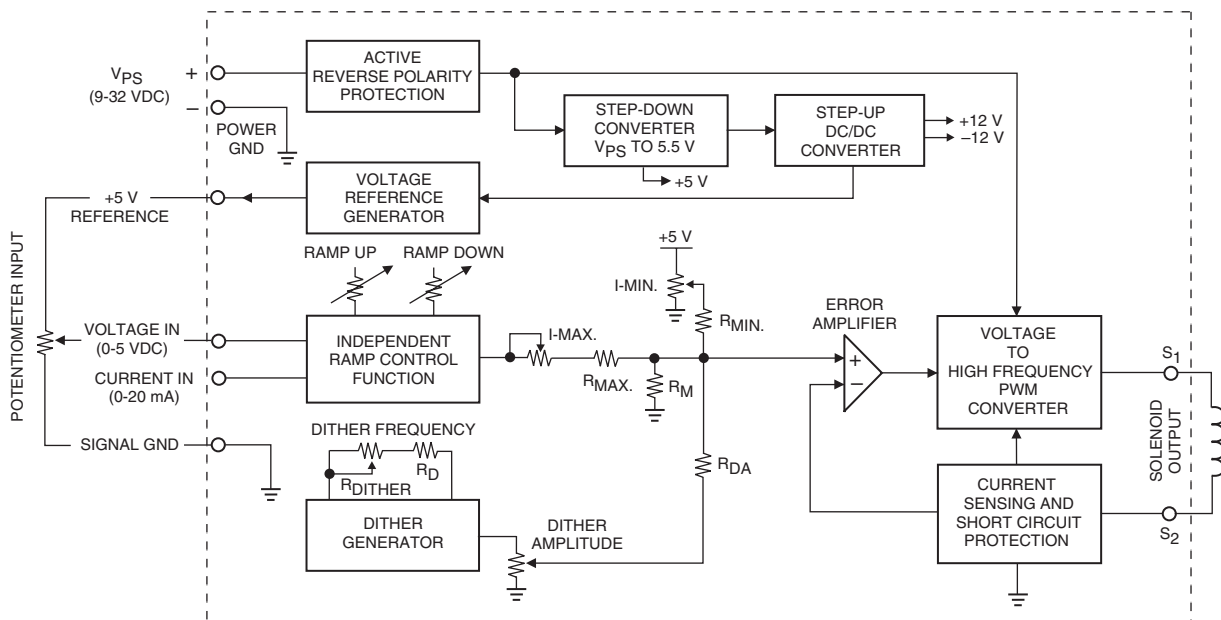
**GENERAL SPECIFICATIONS**

- 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**

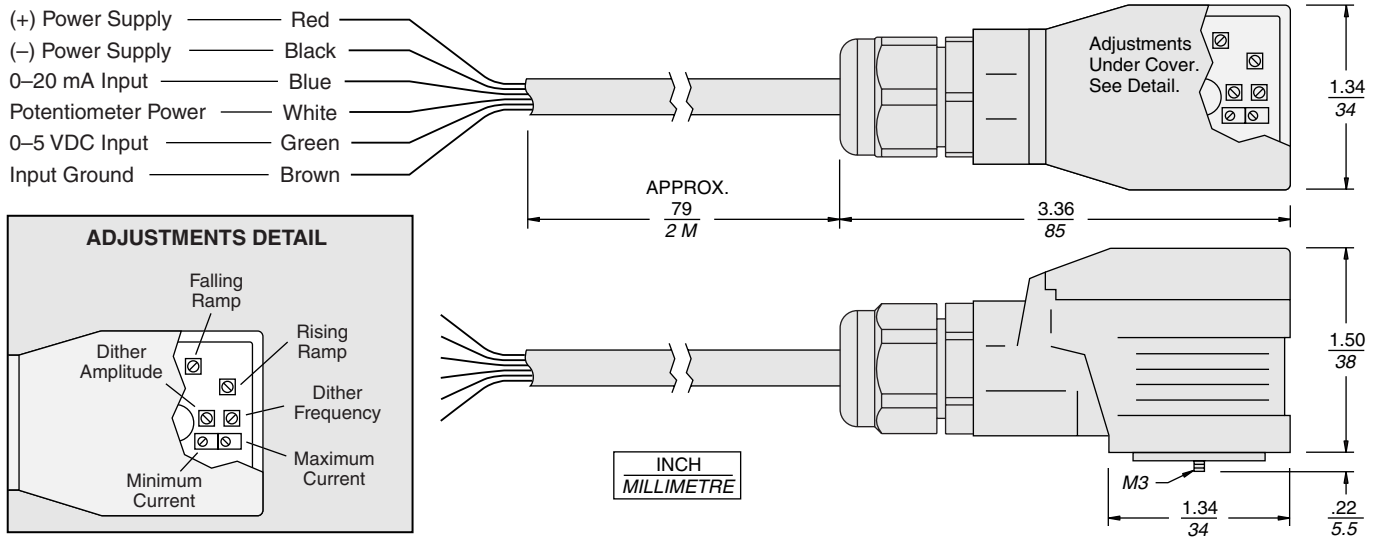
- Supply Voltage:** 9–32 VDC  
 Coil rating must be matched with supply voltage:  $R_{COIL} \leq (V_{SUPPLY} - 1.5 V) / I_{MAX}$ .
- Control Input Signal Options:** 10K external potentiometer (accepts 5K to 50K pots), or 0–5 VDC signal, or 0–20 mA current signal (see connection diagrams)
- Input Resistance:** 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