

Part number:

HYDROMA

HYDRAULICKÉ SYSTÉMY

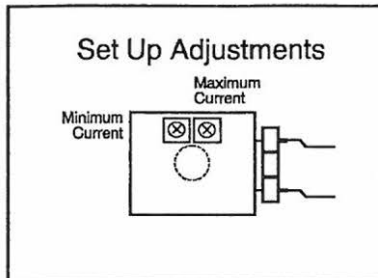
**HIDROMA
SISTEMS**

UKŁADY HYDRAULICZNE

HYDROMA

ГИДРАВЛИЧЕСКИЕ СИСТЕМЫ

Top View of Control Board



Adjustments

Follow the instructions for setting the minimum current and maximum current. To access the trim pots, use a small screwdriver to remove the mounting screw in the transparent lid and lift up the lid.

The single turn trim pots are adjusted with a Phillips #0 screwdriver. (CW = clockwise, CCW = counterclockwise)

Adjusting the maximum current (I-max.) does not affect the minimum current (I-min.) setting. Adjusting the minimum current will shift the maximum current setting.

This economy version has no ramps. Dither frequency and amplitude are fixed values.

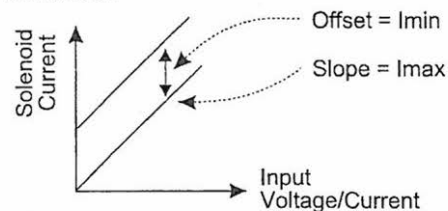
Trim Pots	Range of Adjustment	Factory Setting
Minimum Current (I-min.)	4000172, 4000236: 0 to 500 mA 4000232: 0 to 250 mA	Minimum (CCW)
Maximum Current Setting (I-max.)	4000172, 4000236: 600 to 2000 mA* 4000232: 300 to 1000 mA	Maximum (CW)

* The range of max. current output is 2 A (max. output current = min. current setting + max. current setting)

Setting the Minimum Current (I-min.)

The minimum current setting can be used to take into account the mechanical valve deadband and provide desired offsets from zero to allow full control within the functional range of the specific valve.

Set the minimum current before setting the maximum current. Apply minimum input (control potentiometer at minimum or 0 V). If the desired minimum current is greater, adjust the trim pot CW until the desired current is achieved.



Setting the Maximum Current (I-max.)

The maximum current setting is adjusted to meet the customer's working pressure or flow range to the full scale signal input range. This provides maximum control for a specific application.

Apply maximum control (control pot at maximum or 5 V). Turn the trim pot CCW to adjust the current setting downwards to the desired maximum.

Form: CAPV-HFIS10-11/16/12

INSTALLATION INSTRUCTIONS

Preparation

- Remove and discard the wing nut prior to installation.
- Ensure the lid, compression washer, o-ring and base gasket are correctly in place (for IP65 rating).
- Excess voltage will damage the controller. Match the power supply voltage with the voltage rating of the valve coil. Operating the controller with a lower supply voltage may result in reduced maximum current output.
- The maximum current output of the controller should not exceed the current rating of the valve coil.
- The valve coil should have no polarity or protection diodes for proper operation of the device.
- Do not install the controller near high voltage relays or other sources of electrical interference.
- Ensure that no damage or injury can occur on the machine when the proportional valve is operating.

Specifications

Operating conditions	-40 to +85°C (-40 to 185°F)
Electromagnetic compatibility (EMC)	Emission EN 50081-2 Immunity EN 50082-2
Approvals	CE
Electrical connection	DIN 43650 plug 2 metres jacketed cable, 5 conductor 18AWG
Operating voltage (power supply requirement)	9 to 32 VDC power supply range
Control input signal options	0-5 VDC voltage signal or 10K Potentiometer (accepts 5K to 50K pots)
Input resistance	Voltage mode: 200K Ohms
Maximum output current	4000172, 4000236: 2000 mA 4000232: 1000 mA
Solenoid resistance selection (nominal)	$R_{coil} \leq (V_{power\ supply} - 1.5\ V)/I_{-max}$
Internal supply for setpoint potentiometer	+5 VDC
Response time	<10 mSec. (measured @24V, 5V input, solenoid inductance of <20 mH)
Current Dither Frequency	4000172, 4000232: 90 Hz ($\pm 10\%$ of full scale) (fixed) 4000236: 225 Hz ($\pm 10\%$ of full scale) (fixed)
Dither amplitude	5% of rated maximum current (fixed)

Connection and Power Up

Mount the controller on the proportional valve and tighten the mounting screw. Connect the cable to the power supply and command potentiometer or input signal as shown below. Put isolation sleeves on any unused wires. Switch on the power supply. The unit accepts 9-32 VDC.

