

## Valve controller

### 2224



- Front-programmable
- mA, V, and  $\Omega$  programmable input
- Ramp times, jump values, reversal, chopper frequency, and deadband
- 3-digit LED display shows I-valve % value
- 1 or 2 channels



#### Advanced features

- Multifunction user interface consisting of three pushbuttons and a 3-digit LED display.
- All parameters are protected against unauthorized changes with a password.

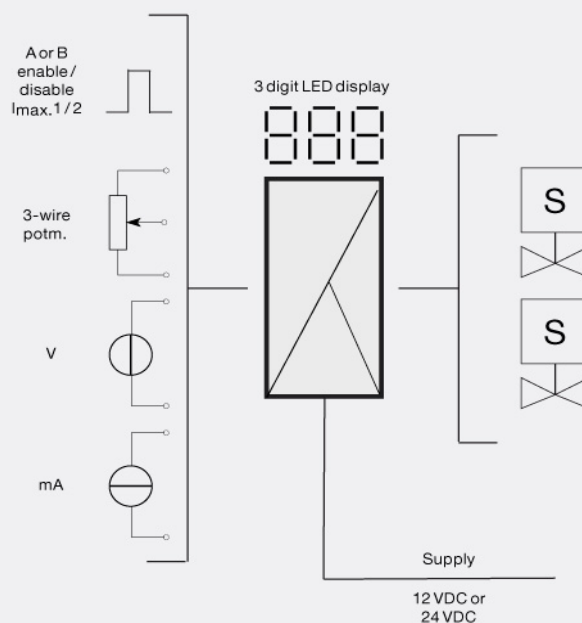
#### Application

- Control and regulation of single- or double-coil hydraulic and pneumatic proportional valves used for accurate oil flow regulation, linear soft acceleration and deceleration, modulated output signal, and programmable deadband.
- Is highly suitable for joystick regulation of A/B movements.
- Where changes to A and B need to be selected directly or according to the value of an input signal.

#### Technical characteristics

- During operation the display shows the present output signal as a % of the I valve.
- Programmable current or voltage input for standard signals acc. to order schedule, joystick / potentiometer or a special non-programmable input.
- Digital inputs for external control functions.
- A pulsating current output prevents the connected valve from sticking.
- Optional programming of the modulation frequency (PWM) between 8 and 400 Hz.
- Multiple adjustable parameters such as output currents, ramp times, jump values, chopper frequency, reversal, deadband, and ON/OFF functions.
- Mounting for a standard 11-pole socket which can be adapted for DIN rail or plate use with PR's 7023 adaptor and 7024 mounting keying.

#### Applications



**Order:**

Type	Input	Supply	Option
2224	0...20 mA : A	12 V : 1	Single valve (A) : A
	4...20 mA : B	24 V : 2	Double valve (A/B) : B
	0...1 V : C		
	0.2...1 V : D		
	0...10 V : E		
	2...10 V : F		
	±10 V potentiometer : G		
	0...10 V potentiometer : H		

**Environmental Conditions**

Operating temperature..... -20°C to +60°C  
Relative humidity..... < 95% RH (non-cond.)  
Protection degree..... IP50

**Mechanical specifications**

Dimensions (HxWxD)..... 80.5 x 35.5 x 84.5 mm (D is without pins)  
Weight approx..... 130 g

**Common specifications**
**Supply**

Supply voltage (nom. 12 V / 24 V)..... 9.6...28.8 VDC  
Internal power dissipation..... 2 W / 24 V  
Internal power dissipation..... 1.8 W / 12 V  
Programming..... Front-programmable  
Updating time..... 30 ms  
Temperature coefficient..... 0.01%/°C  
Accuracy..... Better than 0.2% of selected range  
Linearity error..... 0.2%  
EMC immunity influence..... < 2% of span

**Input specifications**
**Current input**

Measurement range..... 0...20 mA  
Measurement range..... 4...20 mA  
Input resistance..... 50 Ω + PTC (54 Ω)

**Voltage input**

Measurement range..... 0/0.2...1 V and 0/2...10 V  
Input resistance..... 10 MΩ

**Potentiometer input**

Potentiometer min...max..... 0...10 V or ±10 V / 10 kΩ  
Operation / shutdown..... PNP / 2.2 kΩ, 12 / 24 V  
Imax.1 & Imax.2..... PNP / 2.2 kΩ, 12 / 24 V  
A / B channel..... PNP / 2.2 kΩ, 12 / 24 V  
Deadband..... 0...99.9% of input span

**Output specifications**

Output voltage..... Supply voltage-0.5 V (max.)  
Output current..... 3000 mA mean  
Current peak..... 7 A  
Reference voltage..... 10 VDC (A valve)  
Reference voltage..... ±10 VDC (A & B valve)  
Ramp up & down..... Time 0...10.0 s  
PWM frequency..... 8...400 Hz in steps of 1 Hz  
of span..... = of the presently selected range

**Observed authority requirements**

EMC..... 2014/30/EU & UK SI 2016/1091  
RoHS..... 2011/65/EU & UK SI 2012/3032  
EAC..... TR-CU 020/2011