# CAN *Newsletter Online*

HYDRAULIC VALVE CONTROLLER

## *With automatic shutdown function*

**The PR2301 by Pran Systems (Canada) is a hydraulic valve controller. It can be used as a stand-alone unit or within a CAN multiplexed communication network. It is available with J1939 and also CANopen for slave applications.**



*The unit provides an accuracy of 0,01 % in variable valve controls (Photo: Pran Systems)*

THE UNIT'S OPERATING VOLTAGE RANGES between 9 V $_{DC}$ and 32 V $_{DC}$ and its operating temperature between -40 °C and +80 °C. The product is a programmable hydraulic control unit to manage many inductive or resistive loads that can match many types of valves and drives. It is designed for applications requiring high precision control, such as hydrostatic transmission, braking systems and power steering.

The unit has a power-saving sleep-mode function with a power consumption of 14 mA and can wake-up from dedicated inputs or by CAN communication. The device also features a programmable automatic shutdown function, allowing the user to choose the right moment for the shutdown.

This device can communicate with other CAN devices, such as diesel engines, transmission systems, and more. It can retrieve any available parameters, DTC, and send special commands to ECM or other CAN devices. The product is IP67-rated, making it dust-tight and waterproof (immersion up to 1 m). It is also shock and vibration resistant and designed in accordance with SAE J1455, J1113-11-12-13 specifications. The device can be provided with J1939 or CANopen (CiA 301 and CiA 401) for slave applications. It is designed with an open architecture, which allows software designers to create their own software for master (stand-alone) applications.

The unit has a 16-input capability for logic signals and most common analog signal types. It also features 16 outputs, of which 6 can be used as source or sink to allow a so-called H-bridge control. The controller is able to handle 40 A nominal total output current under worst conditions. It is designed to offer possibilities to drive proportional and standard valves. It can drive up to 3 bi-directional proportional valves (PVG style) or up to 12 proportional valves in closed loop with high precision current control. Moreover, it can be configured to drive up to 16 valves independently. All outputs are designed with state relays suitable for any inductive or resistive load. The control unit offers pulse width modulation (PWM) for variable intensity control and open-load detection. Outputs can even be bridged in pairs to double current capability without affecting the protection features.