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XP8500 — A/D

The XP8500 is equipped with 11 channels of 12-bit analog-to-digital conversion, providing an easy way to interface to analog signal devices. Seven channels have an input range of 0 V to 2.5 V. Four channels have op-amps for signal conditioning with socketed bias and gain resistors that accommodate the actual input range, allowing operation between –10 V to +10 V.

Two conversion modes are available: ratiometric and absolute. The absolute mode utilizes an onboard voltage reference for accurately reading outside voltages. The ratiometric mode uses the same supply for both the reference and sample voltages, minimizing errors due to supply fluctuations.

Application programs can use library functions supplied in Dynamic C® 32 to change calibration constants stored in the onboard EEPROM.

XP8500 Specifications

Board Size	2.835" x 2.12" x 0.75"
Operating Temp.	–40°C to +70°C
Humidity	5–95%, non-condensing
Power Requirements	12–24 V DC, 32–64 mA
I/O Type	Eleven 12-bit analog inputs. 4 conditioned, default input range 0–10 V. 7 unconditioned, 0–2.5 V

XP8800 — Stepper Motor Controller

The XP8800 is a stepper-motor controller that provides control of a single low-speed, low-current stepper motor. Multiple XP8800 boards can be connected together, providing up to 4 axes of motor control.

The XP8800 board will control motor operations independently, leaving a master controller free to perform other tasks. The onboard circuitry provides an output of 8,000 pulses per second. Either use the built-in current amplifier for full or half-stepping a motor, or route the control signals to an external motor.

Motor acceleration and deceleration are software programmable, providing complete user control of motor functions. Deceleration and end-of-travel limit switch inputs are also provided. A 16-bit quadrature decoder and counter input rated at 3 MHz can be used for position feedback.

XP8800 Specifications

Board Size	2.835" x 4.0" x 0.58"
Operating Temp.	–40°C to +70°C
Humidity	5–95%, non-condensing
Power Requirements	5 V, 40 mA
I/O Type	One-axis stepper motor control rated at 35 V and 1.25 A per phase in full-step mode, and 1.0 A per phase in half-step mode

Versions

XP8800 Specifications listed above

XP8810 Same as XP8800 with optically isolated inputs that share the same ground

XP8900 — D/A

The XP8900 series provides four or eight 12-bit digital-to-analog converters (DACs). Configuration jumpers allow you to address up to eight XP8900 boards on a single PLCBus. The XP8900 consumes little power and has a low-power standby mode.

The 8 output channels with individual grounds and terminals for external analog power (also with individual grounds) appear on the Wago (spring-type) connector.

You may choose to supply ±12 V DC power to the XP8900 instead of deriving it from the PLCBus +24 V DC circuit to prevent bus loading or to have greater control over the DAC output signals.

XP8900 Specifications

Board Size	4.0" x 2.835" x 0.73"
Operating Temp.	–40°C to +70°C
Humidity	5–95%, non-condensing
Power Requirements	24 V DC, 75 mA. Standby current draw is 30 mA. Accepts optional external ±12 V DC for analog power
Outputs	Eight 12-bit DAC channels generating bipolar voltage output in the range –10 V DC to +10 V DC. Relative accuracy: ± 16 LSB (prior to op-amps)

Versions

XP8900 Provides eight 12-bit DAC channels

XP8910 Provides four 12-bit DAC channels