

PROGRAMMABLE CONTROLLERS | RPC-90x

Control and monitor single/multi-sensor systems in severe or hazardous conditions.

The RPC-90x is a next-generation Rugged Programmable Controller (RPC) designed for advanced signal processing and dependable performance even in the most demanding environments.

Its intuitive onboard programming and configurable inputs/outputs support a wide range of measurement types, including tension, torque, weight, and pressure, and its high-visibility display ensures clear readouts regardless of light, angle, or weather conditions.

Engineered for versatility and performance, the RPC-90x fits seamlessly into both new and retrofit projects.

FEATURES & BENEFITS



- ▶ **Electroluminescent (EL) display** offers bright and clear visibility at angles up to 179°.
- ▶ **Heavy-duty 316 stainless steel** front panel with five fully-sealed, tactile buttons for superior durability to withstand harsh environments.
- ▶ **Onboard browser interface** allows for remote measurement viewing, remote access and control, downloading internal data files, and upload/download of settings profiles. Firmware can be upgraded remotely or via USB.
- ▶ **Real-time data** available to users and other Rugged Controls devices via RS-485, RS-232, and (2) ethernet ports. Internal and external data logging options for internal memory, USB, and PC applications.
- ▶ **Full programmability** via English language menus. Configurable measurements, alarms, and any other standard setting. No custom firmware required. 4 key functions configurable from menu system provide ultimate flexibility for operators.
- ▶ **Multiple sensor input channels (rotational, analog, and digital)** support high-level and strain gauge analog inputs and a variety of serial or ethernet enabled sensors. Configurable counter input channels are available for quadrature, pulse, or sinusoidal signals.



- ▶ Up to 20 alarms, independently linked to any measurement, to ensure the highest degree of safety for personnel and equipment.
- ▶ Timestamp measurements and alarms. Configurable measurements with no custom firmware required. On-screen diagnostics /alarm log.
- ▶ Displays can be set up as either local or remote. Configure up to four run-time screens and easily toggle between screens with front-panel button.
- ▶ Network configurable data ports. High speed data capture up to 1000 Hz.
- ▶ Each unit is pre-loaded with a wide variety of application specific profiles (for example: single winch, single cement, safe load indicator, dual nitro, and more) that don't require the user to be a software expert.
- ▶ Password enabled security to prevent unwanted configuration tampering.
- ▶ RPC-LINK protocol allows connection between RPC-90x or 80x products for seamless data exchange. Optional data logging and report generating software available.
- ▶ Class 1, Division 2 hazardous certification.

SPECIFICATIONS

Display	320x240 resolution. Electroluminescent (EL).
Enclosure Size	Height: 5.7" x Width: 7.6" x Depth: 3.1".
Panel Cutout	Height: 5.25" x Width: 7.15"
Operating Temperature	-40° C (low threshold) to 75°C (high threshold).
Environmental	Waterproof front panel with silicon mounting gasket.
Power	0.41 Amp @ 24VDC (9.5-36 VDC).
Analog Input High Level	4 channels 4-20 mA, 0-5VDC, 0-10VDC, ± 5VDC, ± 10VDC.
Analog Input Low Level	4 channels ± 20 mV, ±100 mV.
Analog Output	4 channels 4-20 mA, 0-10VDC, 0-5 VDC, ± 5VDC.
Sensor Excitation	Regulated +5/+12/+24VDC. NAMUR sensor interface. Precision strain gauge excitation.
Count Input	4 channels Quadrature x1, x2, x4. Count/direction. Up/down counter. 1 channel differential. 10kHz bandwidth.
Output Relays	4 channels, isolated SPDT dry contact: 125VAC 60VDC @ 1Amp.
Digital Input	4 channels 0-60VDC, trigger level: 2.5V. Functions are menu-selectable.
Serial Communication	RS-485, isolated, half-duplex RS-232.
Alarms	Measurement parameters high and low set-points (any measurement). Accessible via front panel menu interface: filtering, delay, deadband, adjustments.
Approvals	NEMA 4X per NEMA-250:2018 hosedown/impact. UL certified. Class 1, division 2. Groups A, B, C, and D, T5.
Ethernet	Ethernet: 10base T, TCP/UDP.

