## Overview

The RDP180 is a unique "open architecture" rail-mounted PLC equipped with an ARM processor. Ideal for use in all industries, the RDP180 supports industry standard Modbus ASCII, RTU and TCP protocols. The RDP180 features limited onboard I/O for smaller applications. For larger applications, the RDP180 can be used in conjunction with an I/O device, such as the RIO128/RIO032, to provide distributed process automation over wide-area Wireless and Ethernet networks.
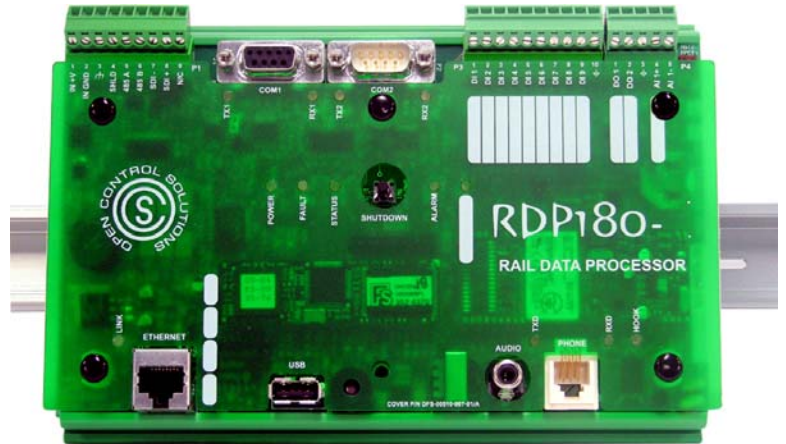
Programmed "on-the-fly" using the supplied ladder logic software and featuring local I/O (9 digital inputs, 2 digital outputs, and one analog input), an RS-232/RS-485 serial port and an Ethernet port, the RDP180 is suitable for just about any application. The RDP180 can be ordered with either an additional RS-232 serial port for I/O expansion or a cellular modem for DFS Cloud-SCADA.

This open architecture device not only ensures interoperability with other devices, it also provides compatibility with hundreds of popular SCADA / DCS software packages, process controllers and instrumentation.

Key Features

- ARM Processor
- Flash default memory as well as local RAM for program operating environment
- "On-the-fly" programming with supplied ladder logic software
- 9 Digital Inputs
- 2 Digital Outputs
- 1 Analog Input
- 10/100 Mbps Ethernet Port
- RS-232 /RS-485 Serial Port
- Optional additional RS-232 serial port (for additional I/O) or cellular modem (for DFS Cloud-SCADA)

- Modbus ASCII, RTU, TCP Protocols
- 1200-38400 Baud Rate
- Configurable I/O-to-Modbus Register Map
- Programmed via Ladder Logic
- Real Time Clock for Time Functions
- Watch Dog Timer
- Power Source Monitoring
- Non-Isolated 0-24V Single-Ended I/O
- Standard Din Rail Mounted Device
- Size: 7.375"W x 5"H x 3"D
- 3 Year Parts & Workmanship Warranty

RDP180

RDP180 TECHNICAL SPECIFICATIONS

General Specifications

Input power	11.5-14.0 VDC; 250mA
Power up time	16.0 seconds
Temperature range	32° to 140° F (0° to 60° C)
Humidity	Not to exceed 95% (noncondensing)
Dimensions	7.375"W x 5"H x 3"D
Method of programming	PC via network interface
Field I/O wiring terminations	Removable terminal block
Wire size	#28 - #16

Communications

Serial port interfaces	
COM1	RS-232 DB-9 female or RS-485 9-pin pluggable screw terminal; supports up to 16 daisy-chained devices
COM2 (optional)	RS-232 DB-9 male
Ethernet	10/100 Mbps
Modem (optional)	V.92 voice modem for autodialer functionality
Protocols	Modbus ASCII, Modbus RTU, Modbus TCP
Serial port data rates	1200-38400 baud

Digital Inputs

Quantity of digital inputs	9
Input type	Closure-to-ground for on; biased with 11.5-14.0 VDC raw power via 5.6 Kohm resistor
On/Off threshold	1.5 VDC
Input current	2.5mA
Conversion rate	120 samples-per-second with 100 mSec debouncing for on/off status

Digital Outputs

Quantity of digital outputs	2
Output type, configuration	Darlington array sinking to common
Output switch current rating	Current capability to drive 12 or 24 VDC, 80mA constant duty, 300mA in-rush current, ice-cube type relays

Analog Input

Quantity of analog inputs	1
Signal input levels, nominal	0-5V; 4-20mA externally with external 249 ohm .02% resistor
Resolution	12-bit
Maximum ratings	0-5V +/- .2V
Input impedance	511 Kohms
Overload / transient protection	None
Conversion rate	10-samples-per-second
Noise rejection (50/60Hz)	-30dB
Accuracy	Less than 1% error for 0-5V and 4-20mA inputs