



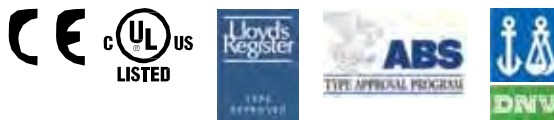
The Power to Control. Anywhere. Anytime.

Power, Performance, Connectivity

Maximize efficiency and cut development time! MicroSmart Pentra PLCs combine advanced networking capabilities with unparalleled power, performance and connectivity. Designed to meet all your communication requirements, now and in the future, MicroSmart Pentra PLCs give you the flexibility to expand your system with as many as fifteen modules! Our new Embedded Ethernet PLC with built-in Modbus TCP also lets you remotely monitor status in real-time, receive email alerts and customize your own web page.

Safety

All MicroSmart Pentra PLCs meet the highest standards for safety including: cULus listed for Class 1 Division 2 hazardous locations*, CE compliant, as well as certified for marine use by ABS, DNV, and Lloyd's Registry*.

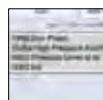


*Not applicable for all models. Visit IDEC website for details.

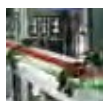
The MicroSmart Pentra PLC Family: Everything you need in a controller



Embedded Ethernet Port



Email and text notifications



ModbusTCP, RTU and ASCII



USB programming port



Seven communication ports



NEW Advanced PID control modules



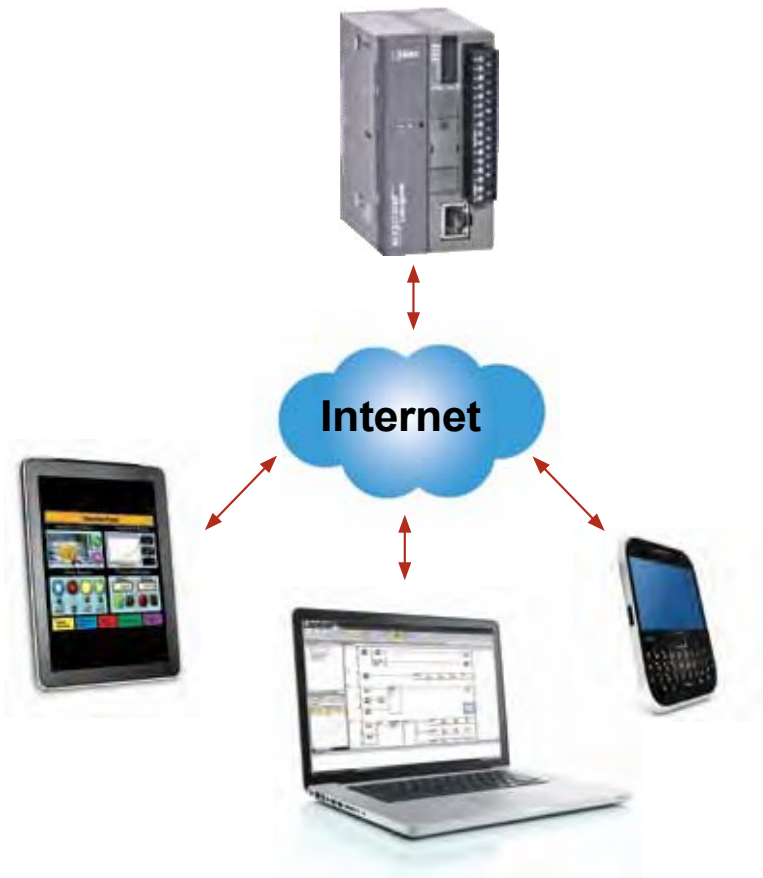
User web page



NEW 4-pt. analog output module

MicroSmart Pentra Performance

Embedded Ethernet Port



Remote Access and Control

The new MicroSmart Pentra PLC with an embedded Ethernet port, you can configure the MicroSmart Pentra PLC for remote monitoring and control. Using WindLDR software, you can remotely monitor or update the PLC programs without having to be near the PLC.

Web Server Functions

Using standard web browsers like Internet Explorer or Firefox, you can remotely log-in and access web pages that are stored directly on the MicroSmart Pentra PLC. Up to 1 MB of memory is dedicated for web page storage! Use the built-in web pages or create your own using an HTML editor.

14 Simultaneous Connections

The new embedded Ethernet Pentra supports up to 14 simultaneous connections through its Ethernet port. Through the Ethernet port, the embedded Ethernet Pentra can be configured to communicate to WindLDR for maintenance communications, to an Operator Interface touchscreen, and to VFD using Modbus TCP communications, all simultaneously.

Embedded USB Maintenance Port



The new MicroSmart Pentra PLC with an embedded Ethernet PLC port also has an embedded mini-B USB port for maintenance.

You can now easily connect your PC to this PLC using a standard USB cable.

Oil Touchscreens

PLCs

Automation Software

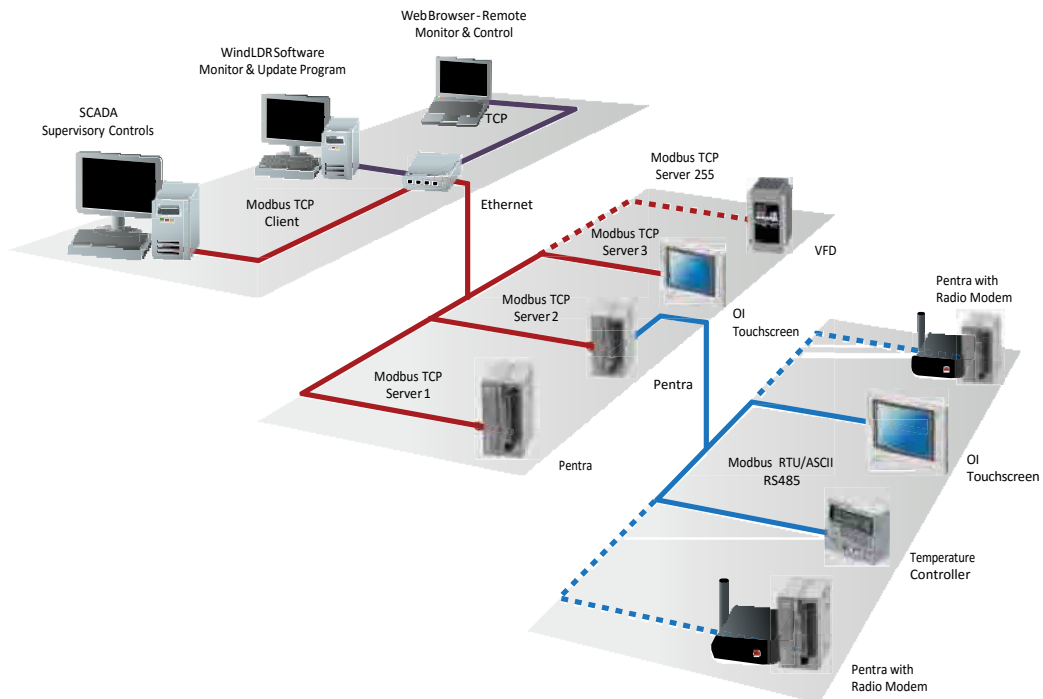
Power Supplies

Sensors

Communication

Barriers

Modbus TCP, RTU and ASCII



Using intuitive WindLDR software, you can configure the MicroSmart Pentra to be a Master or Slave device on a Modbus network. All MicroSmart Pentra PLCs support Modbus RTU/ASCII protocols and our CPU with embedded Ethernet port also supports Modbus TCP protocol.

Email and Text Message



Easily configure the MicroSmart Pentra PLCs to send out system status and alarms to your email or mobile phone. Data registers values in the PLC can also be incorporated in the body of the email. It also supports email login authentication so third party email server like Yahoo can be used. Up to 255 email templates can be configured with multiple recipients can be included.

IO Touchscreens

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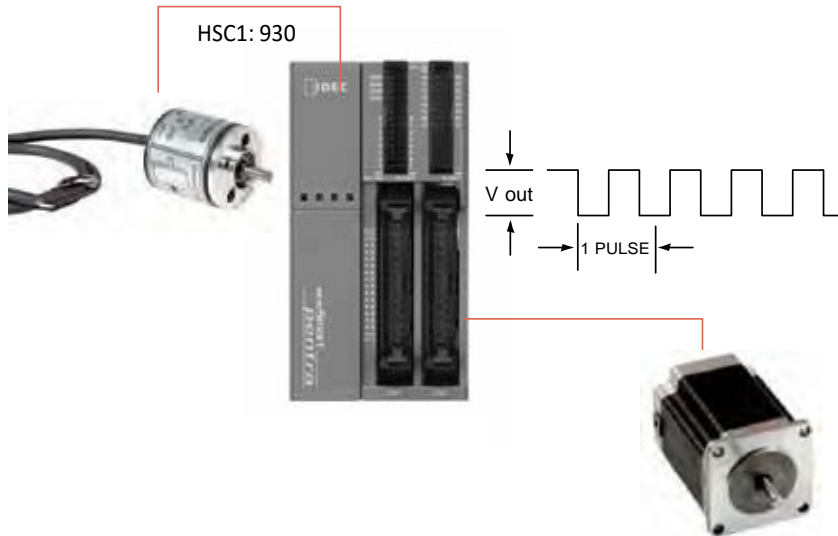
Barriers



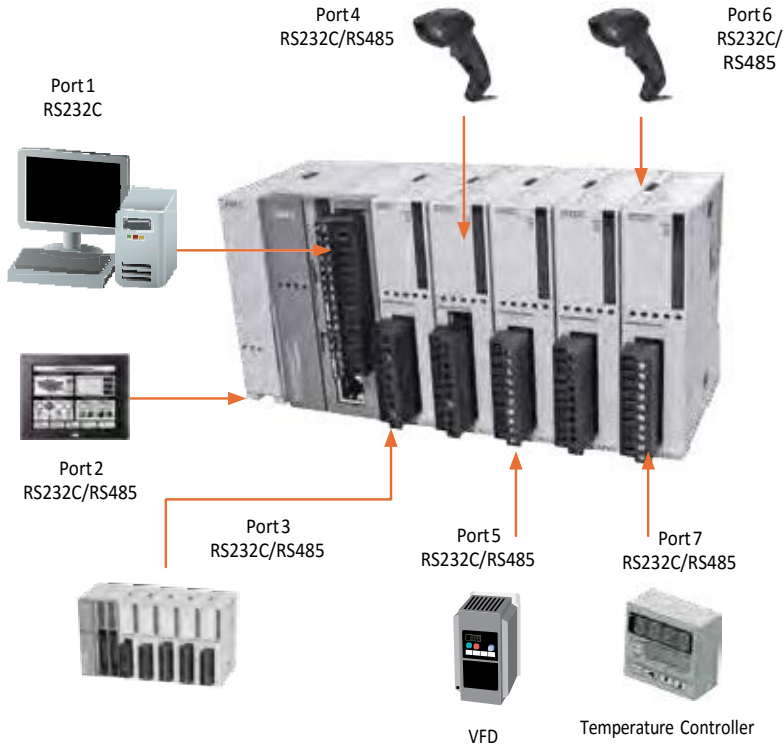
With IDEC MicroSmart Pentra, users do not need to know JAVA programming to embed dynamic values and parts on their PLC web pages. Even novice HTML programmer can take full advantage of the integrated IDEC system library of numerical display/input, horizontal and vertical bar graphs, trend chart, ON/OFF pilot lights and pushbuttons. Up to 1MB of memory is reserved for user web pages.

Integrated 100KHz Fast Inputs and Outputs

Configure up to four high-speed inputs from high-speed output devices such as rotary encoders or proximity switches at a maximum frequency of 100KHz, independent of the scan time. Up to three high-speed outputs can be used for simple positioning controls for stepper or servo motors.



Maximum 7 Communication Ports



With MicroSmart Pentra PLCs, you don't have to worry about limited communication capabilities. It doesn't matter if you're just starting out or a current user expanding your MicroSmart Pentra PLC, you can rest assured that these communication modules will provide reliable and seamless communication. If RS485 modules are used for all six ports, up to 186 RS485 slave devices can be connected with as high as a 115K baud rate available for fast transmission.

OI Touchscreens

Choose a CPU for every application

With three controller types to choose from, MicroSmart Pentra PLCs offer the features you need for your applications. Built to allow you the flexibility to expand when you need to, MicroSmart Pentra PLCs are the best way to get everything you need in just one controller.

PLCs

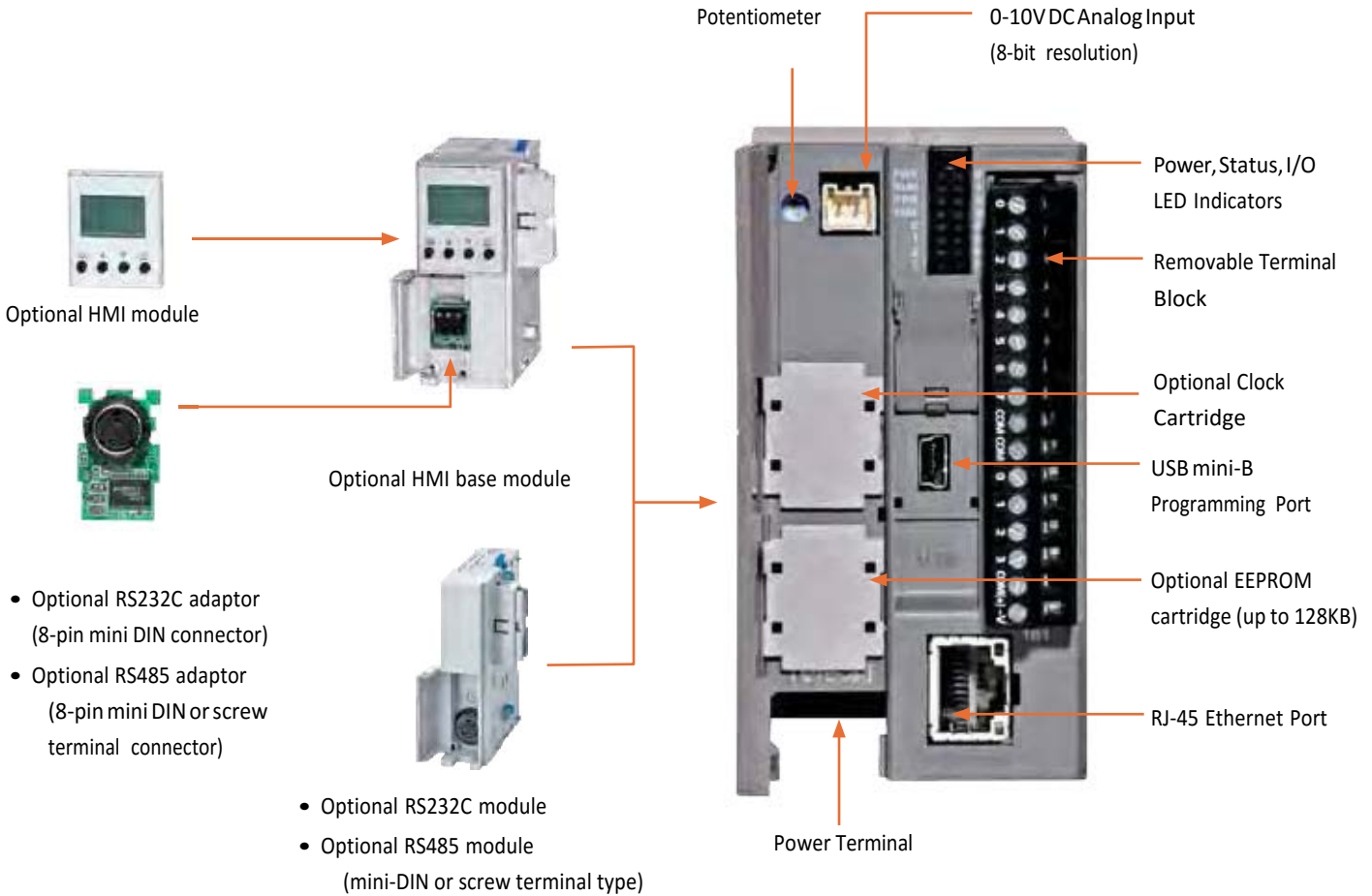
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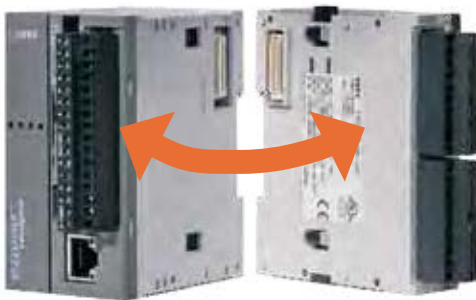
Communication

Barriers

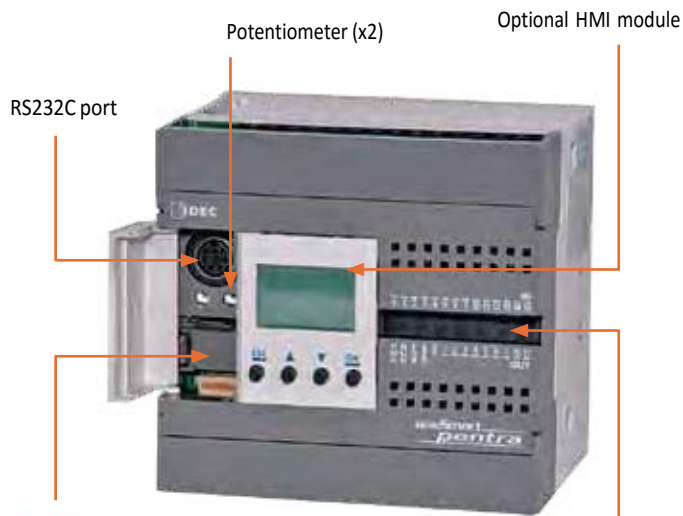
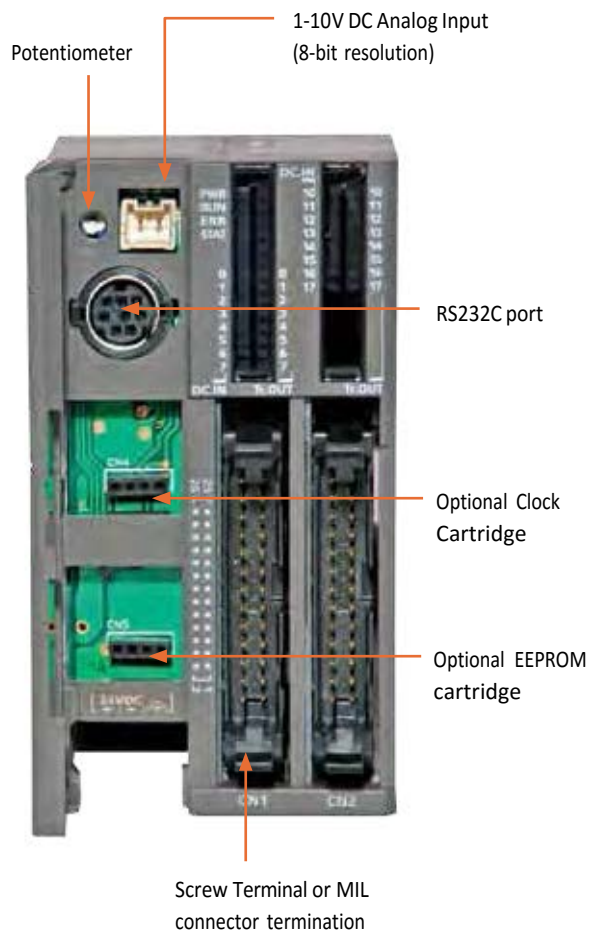


Slim CPU with Ethernet Port

The perfect design when you need Ethernet capability, this slim CPU with embedded Ethernet port is available with 24V DC power and equipped with eight DC inputs and four transistor outputs (sink or source). Up to seven functional modules, including analog and communication modules can be mounted on the right-hand expansion bus. Using an expansion interface module, an additional eight discrete expansion modules can be mounted.



Modules snap together easily without the need for additional tools.



- Optional RS232C adaptor (8-pin mini DIN connector)
- Optional RS485 adaptor (8-pin mini DIN or screw terminal connector)



- Optional EEPROM cartridge
- Optional Clock Cartridge



Slim CPU

If you don't need Ethernet, but still want a high-performance CPU, the MicroSmart Pentra slim CPU is your best choice! Available with 24V DC power, this controller has all the functionalities you need in 16 and 32 I/O configurations. Each 16 I/O CPU is equipped with eight DC inputs, two transistor outputs (sink or source) and six relay outputs, while the 32 I/O CPU is equipped with 16 DC inputs and 16 transistor outputs (sink or source).


All-in-One CPU

Available with 12VDC, 24V DC and 100-240V AC power, you can choose from 10, 16 and 24 I/O configurations. The 10 I/O CPU is equipped with six DC inputs and four relay outputs, while the 16 I/O CPU is equipped with nine DC inputs and seven relay outputs. The 24 I/O CPU is equipped with 14 DC inputs and ten relay outputs. The 24 I/O CPU (24V DC and 100-240V AC models) can also be expanded with a maximum of four functional or discrete expansion modules.

MicroSmart Pentra CPU Part Numbers



OI Touchscreens

Slim Base Module with Embedded Ethernet

Style	Part Number	Embedded I/Os	Operating Voltage	Ethernet & USB Port	Output	Maximum No. of Expansion Modules
	FC5A-D12K1E	12 (8in/4out)	24V DC	Yes	Transistor Sink	15 (Maximum 492 digital I/Os)
	FC5A-D12S1E				Transistor Source	

PLCs

Slim Base Module

Style	Part Number	Operating Voltage	Ethernet & USB Port	Output	Maximum No. of Expansion Modules	
	FC5A-D16RK1	16 (8in/8out)	24V DC	—	6 Relays, 2 Trans. Sink	15 (Maximum 496 digital I/Os)
	FC5A-D16RS1				6 Relays, 2 Trans. Source	
	FC5A-D32K3	32 (16in/16out)	24V DC	—	Transistor Sink	15 (Maximum 512 digital I/Os)
	FC5A-D32S3				Transistor Source	

Automation Software

Power Supplies

All-in-One Base Module

Style	Part Number	Operating Voltage	Ethernet & USB Port	Output	Maximum No. of Expansion Modules	
	FC5A-C10R2	120-240V AC	—	Relay	—	
	FC5A-C10R2C	10 (6in/4out)				24V DC
	FC5A-C10R2D	12V DC				
	FC5A-C16R2	120-240V AC	—	Relay	—	
	FC5A-C16R2C	16 (9in/7out)				24V DC
	FC5A-C16R2D	12V DC				
	FC5A-C24R2	120-240V AC	—	Relay	4 (Maximum 88 digital I/Os)	
	FC5A-C24R2C	24 (14in/10out)				24V DC
	FC5A-C24R2D	12V DC				

Sensors

Communication

Barriers