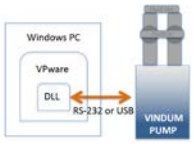
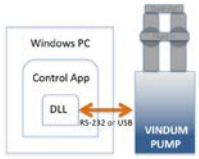
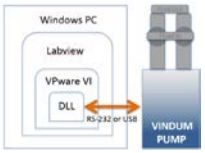
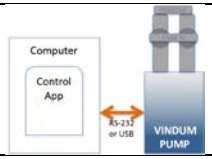
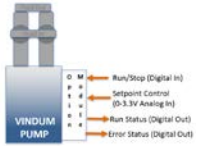
Vindum Pump Control Options

Pump Control System	Description	Control Platform	Pump Control Capabilities	Access to Pump Data	Example Applications	Connection Type
VPware	Proprietary pump-control application developed by Vindum and included in pump pricing.		Full Pump Control, graphing, advanced features, and error/warning notices	Real-time graphing and/or save to CSV file for later analysis.	VPware is capable of controlling 16 pumps from one computer.	• RS232–USB • USB-USB • RS232-RS232 • RS232-Ethernet (3rd party device)
.NET DLL	.NET assembly DLL, handles low-level COM to Vindum Pump. The API to the DLL provides simple interface for pump to interface with custom control apps.		Full library of pump commands, status & errors, communication status, etc.	Full pump data is available.	Python MATLAB	• same as above
LabVIEW VI	Driver includes example pump user interface to speed implementation.		LabVIEW driver access full functionality of .NET DLL	Pump events are registered directly in LabVIEW Event Structure. Full pump data.	LabVIEW 2013+	• same as above
DDE	VPware acts as “server” to a DDE “client” application. Requires VPware & client application to be running on same PC.		Full library of pump commands	Full pump data is available.	LabVIEW or other applications with DDE client capability	• same as above
Binary	Direct binary interface with CRC (cyclic redundancy error check)		All pump functions are available in binary code.	Full pump data is available.	LabVIEW Real-Time	• same as above
Auxiliary Port	15-pin connector on pump uses digital signals for Run/Stop and status & analog voltage input to set pressure/rate.		Wiring can be configured to meet various control requirements.	VPware can be used to capture pump data (pressure, rate, etc.).	Remote control of pump requiring limited control functionality.	HD15 port for Option Module.
HMS Anybus®Communicator™	Protocol converter gateway enables Vindum Pumps to interface with major fieldbus or Industrial Ethernet networks.	All major Fieldbus/ IE systems: Profibus, Profinet, Modbus Ethernet/IP, etc.	Pump commands and status are translated by the Anybus® Configuration Manager for access by the PLC.	Pump data is stored in device memory buffer then intelligently uploaded to network.	All major fieldbus or Industrial Ethernet networks.	RS232 connection to HMS Anybus® Communicator™