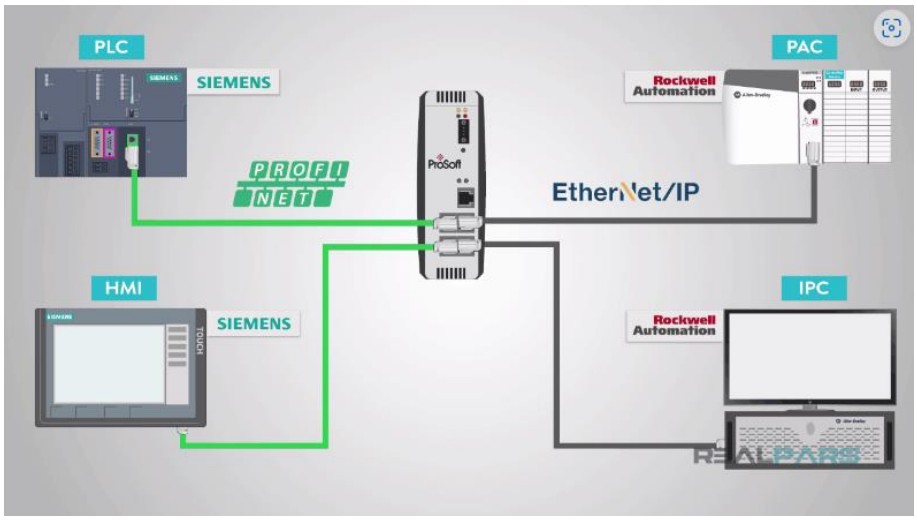
INTEGRATION OF VFD WITH PLC

Automation often requires communication between heterogeneous systems from different manufacturers. Each manufacturer offers a proprietary or an open form of a communication protocol.

It is the responsibility of the Automation Engineer or Technician to configure devices and develop program logic to communicate between systems.

Let us consider how a Rockwell Automation ControlLogix 5000 PLC using ControlNet network media and CIP protocol will overall communicate with a Siemens Robicon VFD using Profibus protocol.

However, these two systems will need a device to help translate the two heterogeneous protocols; this device is called a “proxy” or “gateway”.

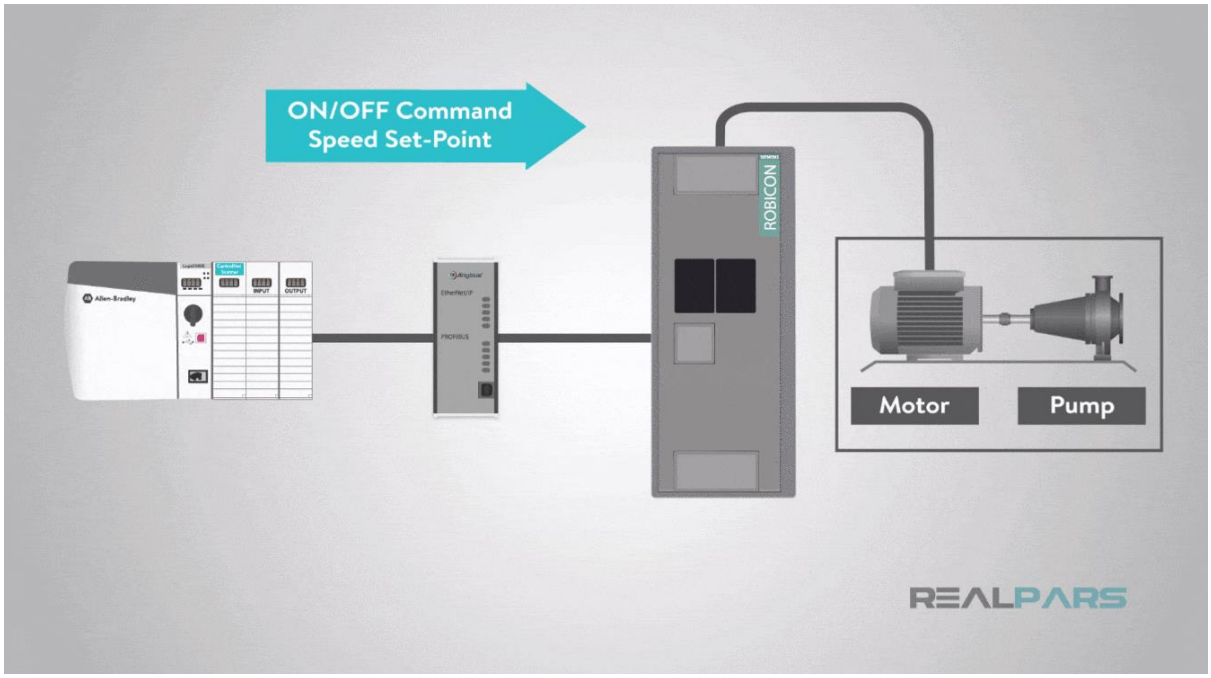


Let us allow communication between the “ControlLogix PLC” and “Siemens Robicon VFD” using the “HMS Gateway”.

The ControlLogix PAC will be controlling a pump with a simple ON/OFF command and its velocity by setting a speed set-point to the VFD (variable frequency device).

In response, the Siemens VFD will return the actual speed reference and VFD status information controlling the pump.

This exchange of control data and status information is all performed by the HMS gateway. The HMS Gateway also performs an important responsibility as “Profibus Master”, controlling the Pump VFD.


ON/OFF Command
Speed Set-Point
ROBICON
Motor
Pump
REALPARS