



## Ethernet/IP Reference Guide – Dynatronix DTX Power Supplies

### *What is Ethernet/IP?*

Ethernet/IP is an industrial network protocol that adapts the Common Industrial Protocol (CIP) to standard Ethernet. Today it is one of the most developed, proven and complete industrial Ethernet network solution available for manufacturing automation. Ethernet/IP and CIP are managed by ODVA ([www.odva.org](http://www.odva.org)). ODVA publishes the Ethernet/IP specification and ensures compliance through conformance testing. The Dynatronix DTX power supply series have passed ODVA’s conformance testing for Ethernet/IP compliance.

### *How can I implement Ethernet/IP?*

Customers can communicate with the DTX via Ethernet/IP either through an Ethernet/IP enabled PLC or through a software package that supports Ethernet/IP communication. Many applications use a PLC from manufactures that have Ethernet/IP enabled PLCs from vendors like Rockwell/Allen-Bradley, Siemens, Omron, and more. From the PLC an .EDS file is imported that shows the DTX data parameters that can be changed from the PLC. When the EDS file is imported into Rockwell/Allen-Bradley PLC software it has an embedded special EDS key from Rockwell that allows for advanced importing.

### *What power supply parameters are exposed to the Ethernet/IP protocol?*

The standard control parameters – current and voltage setting, current and voltage readings, operate/standby are available to be modified via Ethernet/IP communication. There are also an alarm indicator and totalizer available for more advanced use. The following power supply parameters are exposed to the user via the Ethernet/IP protocol:

Inputs (Readings from DTX to customer application)	Outputs (Control from customer to DTX)
(Bit) Running – 1 = output running, 0 = stopped	(Bit) Run – 1 = go to run, 0 = go to stop
(Bit) Paused – 1 = output is paused	(Bit) Pause – 1 = go to pause (from a run state)
(Bit) Current Tolerance Alarm – 1 = alarm active	(Bit) Clear User Totalizer – 1 = clear user totalizer
(Bit) Voltage Tolerance Alarm – 1 = alarm active	(Bit) Clear Active Alarms – 1 = clear active alarms
(Bit) Current Regulation – 1 = current regulated	(Float) Current – output current setting
(Bit) Voltage Regulation – 1 = voltage regulated	(Float) Voltage – output voltage setting
(Bit) Alarm Active – 1 = alarm active, 0 = no alarms	(Byte) Current Tolerance (0-100) tolerance %
(Bit) Totalizer Cleared – 1 = after totalizer cleared	(Byte) Voltage Tolerance (0-100) tolerance %
(Bit) Alarms Cleared – 1 = after alarms cleared	
(Float) Forward Current – forward current reading	
(Float) Forward Voltage – forward voltage reading	
(Float) Reverse Current – reverse current reading	
(Float) Reverse Voltage – reverse voltage reading	
(Float) Remote Voltage – future implementation	
(Float) Forward Totalizer – forward totalizer value	
(Float) Reverse Totalizer – reverse totalizer value	