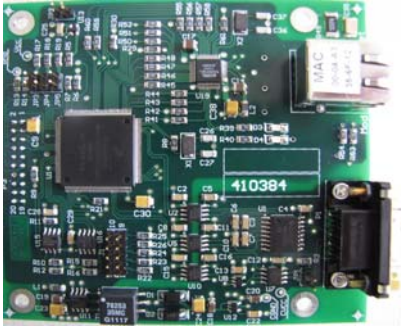# ENTRON™

## Controls for Resistance Welding
# EN6000 Series
## Communication Card Options

### EtherNet/IP and Modbus TCP – EIP/MBTCP Communication Card (730014-013)

**Communication Protocols supported:**

- EtherNet/IP
- Modbus TCP Function Code 04, 16 and 43

### Modbus TCP or Modbus RTU – MBTCP/RTU Communication Card (730014-007)

**Communication Protocols supported:**

- Modbus Function Code 04, 16 and 43 through low-cost serial (RS232 and RS485) or Ethernet interfaces

### Features Common to Both Options

- ENLINK over Ethernet
- Design custom operator interface
- Actuate Weld Control Inputs from PLC, minimal interconnecting wires required
- Use weld control I/O for remote PLC I/O
- **EN6021 Controls**

  – 24 VDC I/O (16 in/16 out) on CPU; for use as remote I/O for PLC

  – 24 VDC I/O (16 in/16 out) and 4 AC out on I/O Expansion Card; for use as remote I/O for PLC
- **EN6041 Controls**

  – 24 VDC I/O (32 in/24 out) on CPU; for use as remote I/O for PLC
- Display on operator interface panels: Secondary amps, Current High, Low and Pre limits
- Remote PLC Program Select of 100 Programs
- Remote access to Weld Log (57,600 entries) and Error Log (1,000 entries)
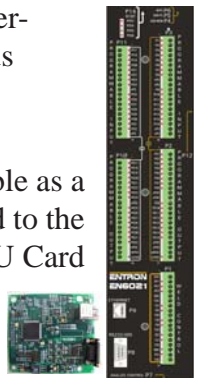- Advanced Error Outputs mapable to PLC

# ENLINK
*Standard with every control !*

Communication software provides PC interface for Ethernet interfaces using Modbus
ENLINK 6021 – P/N 730014-001
ENLINK 6041 – P/N 730015-001

Field installable as a daughter card to the EN6000 Series CPU Card

## *Exclusive ENTRON two year warranty*

# EN6000 Series Communication Card Options Specifications

Date: April 2014          Supercedes: March 2013

## EtherNet/IP and Modbus TCP – EIP/MBTCP Communication Card (730014-013)

Designed to complement and conform to ODVA EtherNet/IP standard
Weld Control parameters read and written via Explicit Commands
Remote I/O read and write via Explicit Commands
Simple interface to Allen-Bradley ControlLogix, Pro-face Touch Screens, Automation Direct C-more and other EIP devices
Ethernet: 10/100 BaseT; Speed: Autodetect 10/100 Mb; Connector: RJ45

Implements Ethernet communication via Modbus TCP/IP protocol
Ethernet: 10/100BASE-T; Speed: Autodetect 10/100 Mb; Connector: RJ45

**Supported** *Modbus function codes*
04 (0x04)  Read Control setting and status
16 (0x10)  Write Control settings
43 (0x2B)  Encapsulated Interface – Read Control setting and status; Transport and write Control settings

Communications Manual fully documents option usage

## Modbus TCP or Modbus RTU – MBTCP/RTU Communication Card (730014-007)

Implements RS232 and RS485 serial communication via Modbus RTU (Remote Terminal Unit) mode protocol

Control ID number: 1 through 99          Coding system: 8-bit binary
Baud rate: 19200                         Bits per byte:  1 start bit
Parity: EVEN                                             8 data bits, least significant bit sent first
Mode: RTU                                                1 bit for parity completion
                                                         1 stop bit

Implements Ethernet communication via Modbus TCP/IP protocol
Ethernet: 10/100BASE-T; Speed: Autodetect 10/100 Mb; Connector: RJ45

**Supported** *Modbus function codes*
04 (0x04)  Read Control setting and status
16 (0x10)  Write Control settings
43 (0x2B)  Encapsulated Interface – Read Control setting and status; Transport and write Control settings

Communications Manual fully documents option usage