

Technical Note

ReFlex Power™ Mating Connectors for HPDC-450V Module



Document No. W380271-02 Rev E • 1/23/2009

PURPOSE

Provide mating connector information for the ReFlex Power™ High Power DC, 450V (HPDC-450V) module.

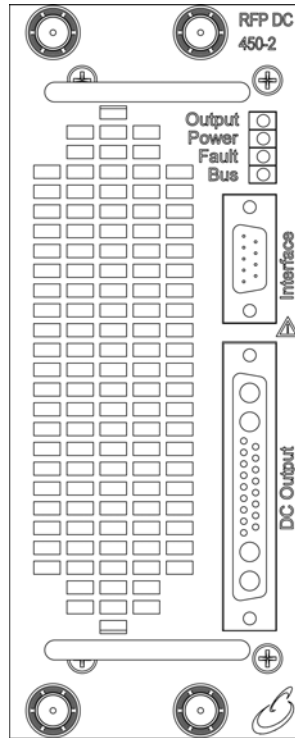


Figure 1. HPDC-450 Front Panel View

MATING CONNECTOR KIT

HPDC-450V Mating Connector Kit - AMETEK Part No. 5380271-02, mates with RFP-D2450-2A3-XXXX, and includes the following for both Interface and DC output connectors:

Bill of Material

Item	AMETEK Part No.	Description	Qty	Manufacturer Part No.	Manufacturer	Suggested Source(s)
1	856-214-04	Conn, 21P, DSUB, 8/20AWG, Male	1	CBC21WA4M1000Z	Positronic Industries	Positronic Ind. http://www.connectpositronic.com/default.cfm
2	856-745-53	Contact, F-Volt, 3600VRMS, 500C, Male	4	MS4820D-50	Positronic Industries	Positronic Ind. http://www.connectpositronic.com/default.cfm
3	856-247-39	Conn, Backshell, 37P, Strt, 2 PC	1	D37000Z00	Positronic Industries	Positronic Ind. http://www.connectpositronic.com/default.cfm
4	856-214-09	Conn, 9P, DSUB, 20-24AWG, Crimp, Male	1	SD9M1000Z	Positronic Industries	Positronic Ind. http://www.connectpositronic.com/default.cfm
5	856-247-10	Conn, Backshell, 9P, DSUB, 2 PC	1	D9000Z00	Positronic Industries	Positronic Ind. http://www.connectpositronic.com/default.cfm

RECOMMENDED TOOLS (NOT INCLUDED WITH MATING CONNECTOR KIT)

Hand crimp: Positronic Industries P/N 9507-0-0-0

Pneumatic crimp: Positronic Industries P/N 9550-0-2

Insertion/extraction: Positronic Industries P/N M81969/1-02

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Pins A1 through A6 insertion/extraction: Positronic Industries P/N 4311-0-0-0

INTERFACE CONNECTOR

External isolated digital and analog control connector.

Connector: Positronic Industries P/N SD9M1000Z, AMETEK P/N 856-214-09

Crimp contacts: Positronic Industries P/N MC7520D (initially supplied with connector)

Backshell: Positronic Industries P/N D9000Z00, AMETEK P/N 856-247-10

Wire size: Maximum gauge 20 AWG (recommended)

Maximum length 10 meters (can be extended subject to the environment, cable type, and interface circuits).

INTERFACE PINOUT

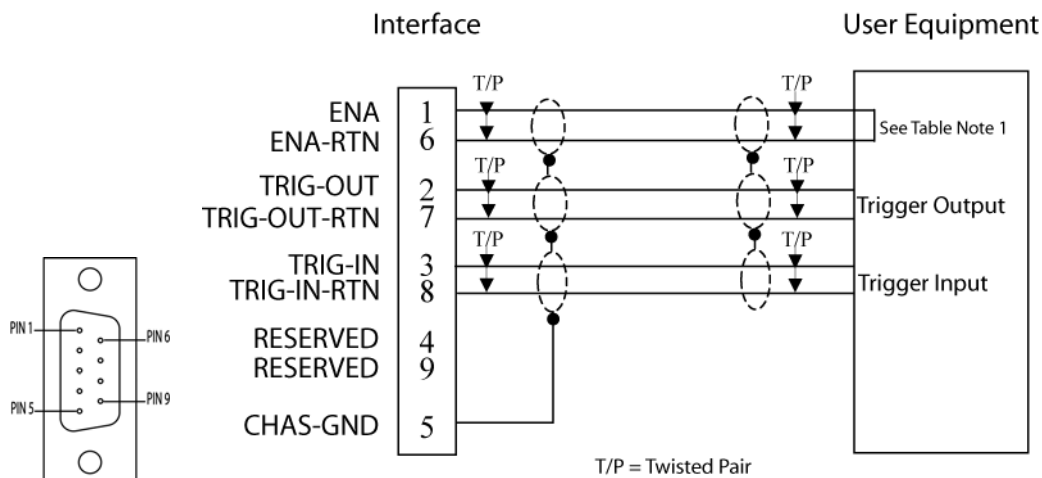


Figure 2. Interface Connector, Front Panel View, and Interface Connector Wiring Diagram

Pin	Name	Function	Signal Level
1	ENA ¹	Input: module output enable	TTL logic level
6	ENA-RTN ¹	Input: return for ENA signal; connected to Pin-7/8	Signal common
2	TRIG-OUT	Output: trigger output signal	TTL logic level
7	TRIG-OUT-RTN	Output: return for TRIG-OUT; connected to Pin-6/8	Signal common
3	TRIG-IN	Input: trigger input signal	TTL logic level
8	TRIG-IN-RTN	Input: return for TRIG-IN; connected to Pin-6/7	Signal common
4	Reserved		
9	Reserved		
5	CHAS-GND	Shield ground	Chassis ground

¹ Enable signal is internally pulled up to +5 V with a 10 K resistor. To enable the module, the signal is pulled low (<= 0.5 V) with respect to the ENA RTN signal; this may also be accomplished by shorting Pin 1 to Pin 6.

OPTIONAL INTERFACE CONNECTOR ACCESSORIES

- AMETEK P/N 5380508-01, 9-pin Loop-back Connector Assembly. Includes a jumper wire between Pins 1 and 6 to enable the module outputs.
- AMETEK P/N 5380443-01, Power Module, 9ft. Unterminated Interface Cable Assembly. Use when interfacing to an external system.
- AMETEK P/N 5380443-03, Power Module, Right Angle, 9ft. Unterminated Interface Cable Assembly. Use when interfacing to an external system.

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DC OUTPUT CONNECTOR

Connector: Positronic Industries P/N CBC21WA4M1000Z, AMETEK P/N 856-214-04

Crimp contacts: Positronic Industries P/N MC6020D

Pins A1-A4: Positronic Industries P/N MS4820D-50, AMETEK P/N 856-745-53

Backshell: Positronic Industries P/N D37000Z00, AMETEK P/N 856-247-39

Wire size: Maximum gauge 20 AWG (recommended)

Refer to table for recommended wire gauge/length.

DC OUTPUT PINOUT

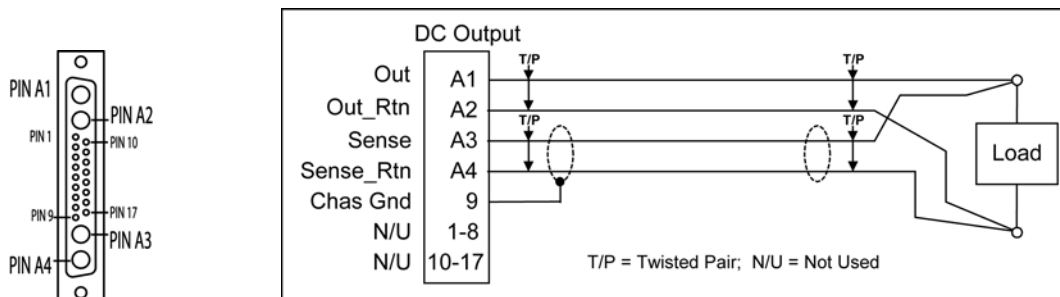


Figure 3. DC Output Connector, Front Panel View

Pin	Name	Function	Signal Level	Maximum Wire Gauge, AWG	Maximum Wire Length, ft
A1	OUT	Output: module output source; connected to A3	±450V; ±450V, maximum to chassis	20	45, for 1.5V line drop at 15A
A2	OUT-RTN	Output: return for output source, OUT; connected to A4	±450V; ±450V, maximum to chassis	20	45, for 1.5V line drop at 15A
A3	SNS	Input: remote sense connection for OUT	±450V; ±450V, maximum to chassis	20	45
A4	SNS-RTN	Input: remote sense connection for OUT-RTN	±450V; ±450V, maximum to chassis	20	45
9	CHAS-GND	Shield ground	Chassis ground	20	45
1-8, 10-17	-	Reserved	-	-	-

DC OUTPUT CONNECTOR ACCESSORIES

- AMETEK P/N 5380447-01, HPDC 450V Module, 9ft. Unterminated DC Output Cable Assembly.
- AMETEK P/N 5380447-03, HPDC 450V Module, right angle, 9ft. Unterminated DC Output Cable Assembly.