

# Technical Note

## ReFlex Power™ Mating Connectors for HPDC-33V/50V Module



Document No. W380271-01 Rev F • 1/23/2009

### PURPOSE

Provide mating connector information for the ReFlex Power™ High Power DC, 33V/50V (HPDC-33V, -50V) module.

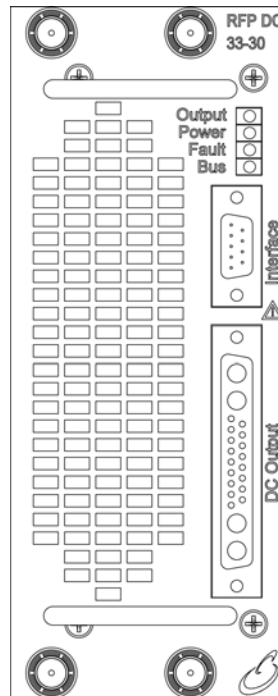


Figure 1. HPDC-33 Front Panel View

### MATING CONNECTOR KIT

HPDC-33V/50V Mating Connector Kit - AMETEK Part No. 5380271-01, mates with RFP-D2033-030-XXXX or RFP-D2050-025-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. <a href="http://www.connectpositronic.com/default.cfm">http://www.connectpositronic.com/default.cfm</a>
2	856-745-51	Contact, 10AWG, 30A, CL ETRY, Male	4	MC4010D	Positronic Industries	Positronic Ind. <a href="http://www.connectpositronic.com/default.cfm">http://www.connectpositronic.com/default.cfm</a>
3	856-247-39	Conn, Backshell, 37P, Strt, 2 PC	1	D37000Z00	Positronic Industries	Positronic Ind. <a href="http://www.connectpositronic.com/default.cfm">http://www.connectpositronic.com/default.cfm</a>
4	856-214-09	Conn, 9P, DSUB, 20-24AWG, Crimp, Male	1	SD9M1000Z	Positronic Industries	Positronic Ind. <a href="http://www.connectpositronic.com/default.cfm">http://www.connectpositronic.com/default.cfm</a>
5	856-247-10	Conn, Backshell, 9P, DSUB, 2 PC	1	D9000Z00	Positronic Industries	Positronic Ind. <a href="http://www.connectpositronic.com/default.cfm">http://www.connectpositronic.com/default.cfm</a>

### 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

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

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### INTERFACE CONNECTOR

External isolated digital and analog control interface.

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 environment, cable type, and interface circuits).

### INTERFACE PINOUT

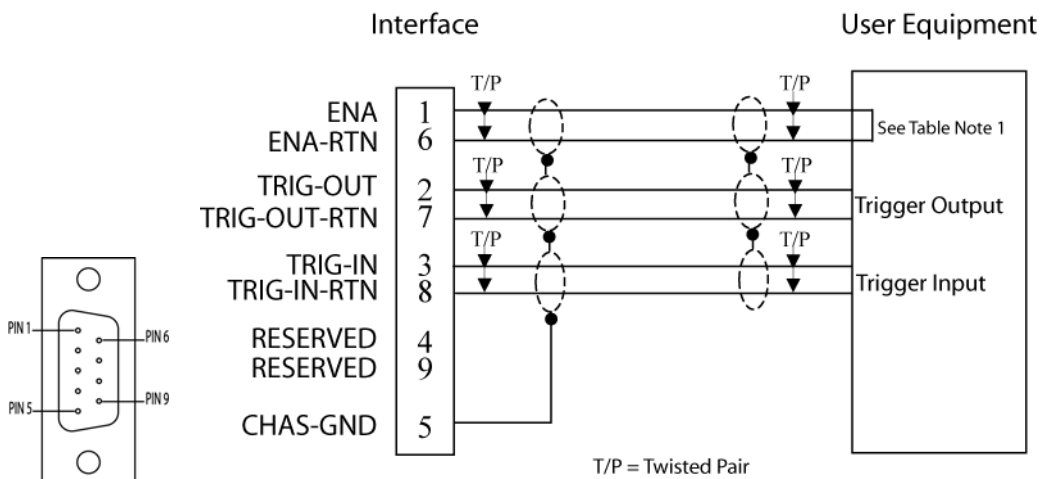


Figure 2. Interface Connector, Front Panel View, and Interface Connector Wiring Diagram

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

<sup>1</sup> 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. Underterminated Interface Cable Assembly. Use when interfacing to an external system.
- AMETEK P/N 5380443-03, Power Module, Right Angle, 9ft. Underterminated Interface Cable Assembly. Use when interfacing to an external system.

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## ReFlex Power™ Mating Connectors for HPDC-33V/50V Module

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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: Positronic Industries P/N MC4010D, AMETEK P/N 856-745-51

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

Wire size: Refer to table for recommended wire gauge/length.

### DC OUTPUT PINOUT

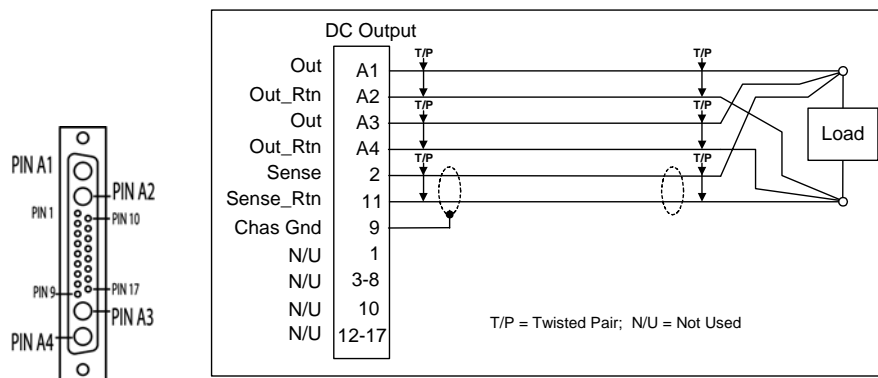


Figure 3. DC Output Connector, Front Panel View and DC Output Connector Wiring Diagram

Pin	Name	Function	Signal Level	Maximum Wire Gauge, AWG	Maximum Wire Length, ft
A1	OUT	Output: module output source; connected to A3	±50V; ±200V, maximum to chassis	10	75, for 1.5V line drop at 15A
A2	OUT-RTN	Output: return for output source, OUT; connected to A4	±50V; ±200V, maximum to chassis	10	75, for 1.5V line drop at 15A
A3	OUT	Output: module output source; connected to A1	±50V; ±200V, maximum to chassis	10	75, for 1.5V line drop at 15A
A4	OUT-RTN	Output: return for output source, OUT; connected to A2	±50V; ±200V, maximum to chassis	10	75, for 1.5V line drop at 15A
2	SNS	Input: remote sense connection for OUT	±50V; ±200V, maximum to chassis	20	75
11	SNS-RTN	Input: remote sense connection for OUT-RTN	±50V; ±200V, maximum to chassis	20	75
9	CHAS-GND	Shield ground	Chassis ground	20	75
1,3-8,10,12-17	-	Reserved	-	-	-

### DC OUTPUT CONNECTOR ACCESSORIES

- AMETEK P/N 5380446-01, HPDC 33V/50V Module, 9ft. Unterminated DC Output Cable Assembly.
- AMETEK P/N 5380446-03, HPDC 33V/50V Module, right angle, 9ft. Unterminated DC Output Cable Assembly.