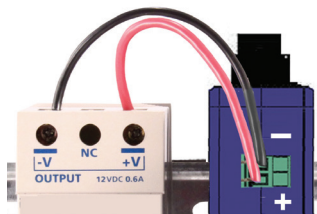


7 | Power the Converter

- Input Voltage 10-48 VDC (56 VDC maximum)
- Power Consumption 0.5 W (typical), 1.3W maximum



8 | UL Class1/Division 2 Warning Information Model# BB-FOSTCDRi only

BB-FOSTCDRi is rated Class 1, Division 2
BB-FOSTCDRi est classé Classe 1, Division 2

POWER, INPUT AND OUTPUT (I/O) WIRING MUST BE IN ACCORDANCE WITH CLASS I, DIVISION 2 WIRING METHODS [ARTICLE 501.10(B) OF THE NATIONAL ELECTRICAL CODE, NFPA 70] AND IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION. LE CÂBLAGE D'ALIMENTATION, D'ENTRÉE ET DE SORTIE (E / S) DOIT ÊTRE CONFORME AUX MÉTHODES DE CÂBLAGE DE CLASSE I, DIVISION 2 [ARTICLE 501.10 (B) DU CODE NATIONAL DE L'ÉLECTRICITÉ, NFPA 70] ET EN ACCORD AVEC L'AUTORITÉ COMPÉTENTE.

WARNING – EXPLOSION HAZARD – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.

ATTENTION - DANGER D'EXPLOSION - LA SUBSTITUTION DE COMPOSANTS PEUT ENTRAÎNER UNE ADÉQUATION À LA CLASSE I, DIVISION 2.

WARNING – EXPLOSION HAZARD – WHEN IN HAZARDOUS LOCATIONS, TURN OFF POWER BEFORE REPLACING OR WIRING MODULES.
ATTENTION - DANGER D'EXPLOSION - LORSQU'IL EST DANS DES ENDROITS DANGEREUX, COUPER L'ALIMENTATION AVANT DE REMPLACER OU DE RACCORDER LES MODULES.

WARNING – EXPLOSION HAZARD – DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NONHAZARDOUS.

ATTENTION - DANGER D'EXPLOSION - NE PAS DÉCONNECTER L'ÉQUIPEMENT PENDANT QUE LE CIRCUIT EST VIVANT OU À MOINS QUE LA ZONE NE SAIT ÊTRE EXEMPTÉ DE CONCENTRATIONS IGNIFIABLES.

Documentation No.: pn710-10577-00_r2_FOSTCDRi_FOSTCDRi-INV_1419qsg

9 | UL 508 Warning Information Model# BB-FOSTCDRi-INV only

BB-FOSTCDRi-INV is rated UL508.
BB-FOSTCDRi-INV est homologué UL508.

MAXIMUM AMBIENT TEMPERATURE: 80 °C
TEMPERATURE AMBIANTE MAXIMALE: 80 °C

WIRING TERMINALS:
TERMINAUX DE CÂBLAGE:

Copper Wire Only
Fil de cuivre seulement

One Conductor Per Terminal
Un conducteur par borne

Wire range: –Wire size appropriate for terminal block rating.
Gamme de fils: Taille de fil appropriée pour l'évaluation du bornier.

Tightening Torque, 1.7 lb-in.
Couple de serrage, 1,7 lb-in.

Temperature rating of field wiring – 105 °C minimum (sized for 60 °C ampacity).
Indice de température du câblage sur site - 105 °C minimum (dimensionné pour une intensité de 60 °C).

+ Recommended Accessories

Multi-Mode ST Fiber Cable
Model# BB-DFMM-STST-1M



Industrial Power Supply
Model# BB-MDR-20-24



ADVANTECH

1 (888) 948-2248 | Europe: +353 91 792444

707 Dayton Road | PO Box 1040 | Ottawa, IL 61350
Phone: 1 (815) 433-5100 | Fax: 1 (815) 433-5109
www.advantech.com | E-mail: support@advantech-bb.com

+ QUICK START GUIDE



Models BB-FOSTCDRi & BB-FOSTCDRi-INV

Industrial Serial to Multi-mode Fiber Converters

Before you begin, be sure you have the following:

- + Serial to MM Fiber Converter
- + Required but not included:
 - 10-48 VDC Power Supply
 - Serial Cable
 - Multi-mode Fiber Optic Cable, ST connectors, 62.5/125 micro-meter

ADVANTECH

Fast and easy on the web: www.advantech.com

Product Overview



- Input voltage 10-48 VDC (56 VDC maximum)
- Power consumption 0.5 W (typical), 1.3W max.
- Duplex multi-mode fiber with ST connectors
- Fiber cable needed, specifications:
62.5/125 micro-meter, 820 nm wavelength

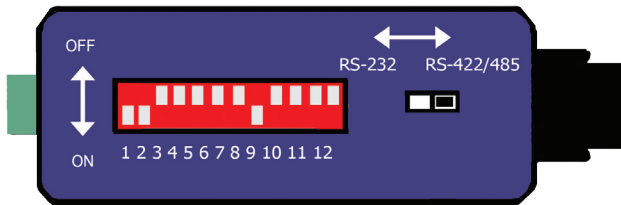
Serial Terminal Block Settings

Terminal	RS-485 2-Wire	RS-422/485 4-Wire	RS-232
A	GND	GND	GND
B	Data B(+)	RD B(+)	*****
C	Data A(-)	RD A(-)	RS-232 Data Input
D	*****	TD B(+)	*****
E	*****	TD A(-)	RS-232 Data Output

LED Indicators

Receive	Red = ON when data received on fiber
Transmit	Red = ON when data sent on fiber
Power	Red = ON when power applied

1 Set DIP Switches for RS-232/422/485 Mode



Mode	DIP Switch Position						
	1	2	3	4	5	6	7
RS-485 2-Wire, Half-duplex	ON	ON	ON	ON	OFF	ON	OFF
RS-485 4-Wire, Full-duplex	ON	OFF	OFF	OFF	OFF	OFF	OFF
RS-422 Full-duplex	OFF	OFF	OFF	OFF	OFF	ON	OFF

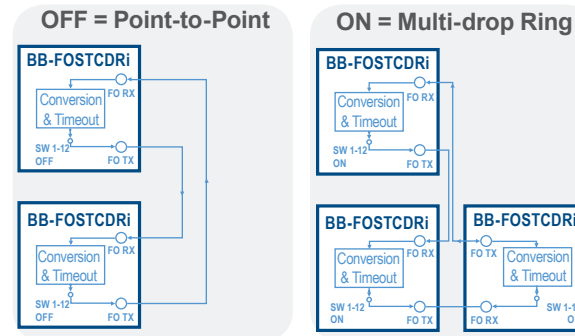
+ Additional termination information are available on Advantech website: support.advantech-bb.com

2 Set DIP Switches for Baud Rate

Baud	Switch Selectable Timeouts				Timeout
	DIP Switch Position				
	8	9	10	11	
9.6 K	OFF	OFF	OFF	ON	1.3 ms
19.2 K	OFF	OFF	ON	OFF	0.56 ms
38.4 K	OFF	ON	OFF	OFF	0.27 ms
57.6 K	ON	OFF	OFF	OFF	0.22 ms
76.8 K	ON	OFF	ON	ON	0.14 ms
115.5 K	ON	ON	ON	OFF	0.10 ms

+ For baud rates not listed above, refer to Advantech website: support.advantech-bb.com

3 Set DIP Switch 12



4 RS-422/485 Mode, Termination & Bias DIP Switch Settings

MODE	DIP Switch Position			
	1	2	3	4
RS-485, 2-wire, half-duplex	ON	ON	ON	ON
RS-485, 4-wire, full-duplex	ON	OFF	OFF	OFF
RS-422, full-duplex	OFF	OFF	OFF	OFF

TERMINATION	DIP Switch Position
	5
Use 120Ω built-in termination	ON
Do Not use the built-in termination	OFF

TRANSMIT BIAS	DIP Switch Position
	6
Use the built-in 1.2kΩ bias	OFF
Do Not use the built-in bias	ON

RECEIVE BIAS	DIP Switch Position
	7
Use the built-in 1.2kΩ bias	OFF
Do Not use the built-in bias	ON

5 Multi-drop Mode

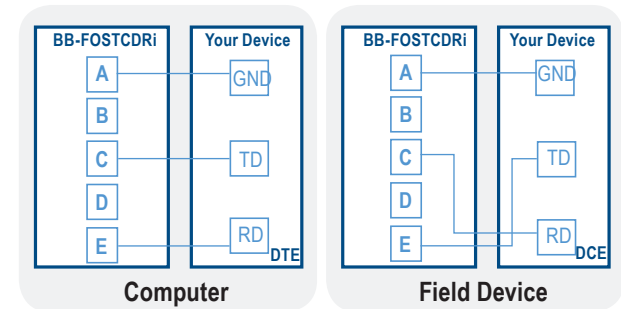
Multi-drop mode allows one serial device to communicate with up to 31 others around a fiber optic ring. Data will repeat around the ring until it finally reaches its source. When the data is received by the originator, timeout circuitry prevents it from being re-transmitted.

Maximum Converters in a Fiber Ring

Baud Rate	RS-232	RS-422/485
19.2 kbps and lower	32	32
38.4 kbps	16	24
115.2 kbps	2	8

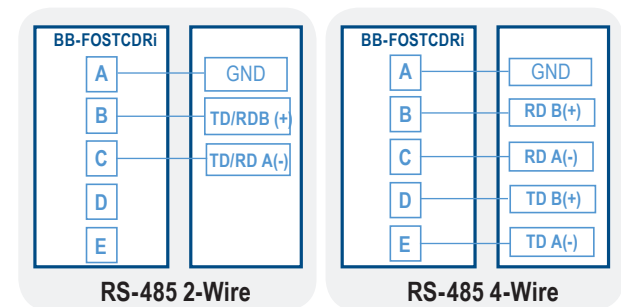
6 Wire the Converter

RS-232



+ Additional tech notes on RS-232 DTE/DCE connections are available on Advantech website: support.advantech-bb.com

RS-422/485



+ Additional tech notes on RS-422/485 connections are available on Advantech website: support.advantech-bb.com