Quick Start Guide
232OPDR
Optically Isolated RS-232 Repeater

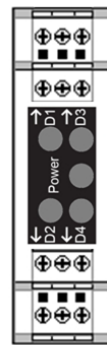## 1 Check for All Required Hardware

- ☐ 232OPDR Optically Isolated Repeater
- ☐ This Quick Start Guide
- ☐ Additional Items Required but not included
  - o Power Supply (10 to 30 VDC, 1.2 W)
  - o Serial Cable.

2 UL Installation Information

Underwriters Laboratories Conditions of Acceptability – When installed in the end-use equipment, consideration should be given to the following:
1. The wiring terminals are suitable for factory wiring only.
2. This device is to be mounted in a suitable enclosure in the end-product.
3. This device is suitable for operation at a maximum surrounding air temperature as described in the documentation.
4. These devices are intended for use in a pollution degree 2 environment.

- Input Voltage: 10 – 30 VDC
- Input Power: 1.2 Watts
- Wire Range: 12 – 24 AWG
- Tightening Torque: 4 kgf-cm
- Temperature rating of field installed conductors is 105 C minimum, sized for 60 C ampacity.
- Use copper wire only
- Maximum surrounding ambient air temperature 80 C.

B&B electronics
MANUFACTURING COMPANY

3 Information – Connectors & Indicators

DIN Rail Clip on this end

Terminals C B A
Terminals M L K
Terminals F E D
Terminals J H G
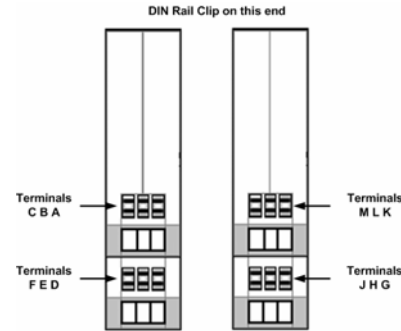
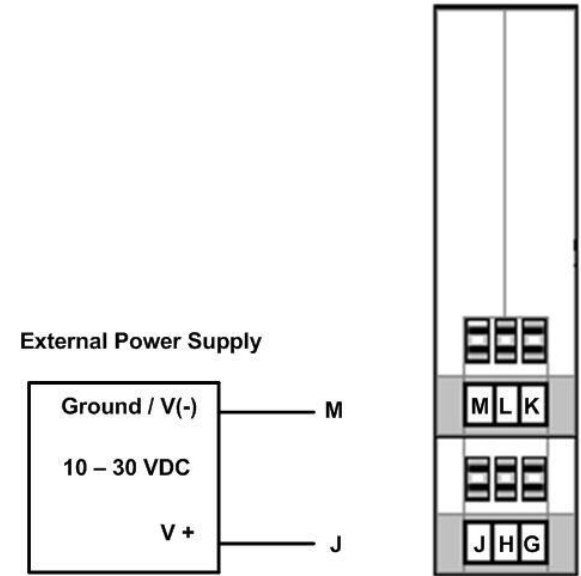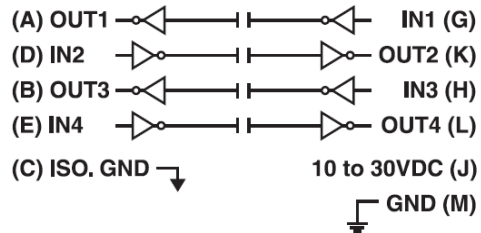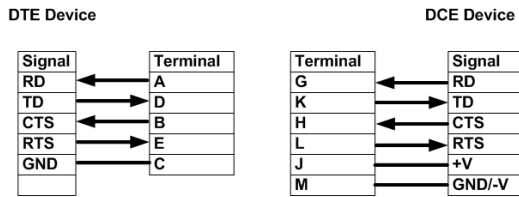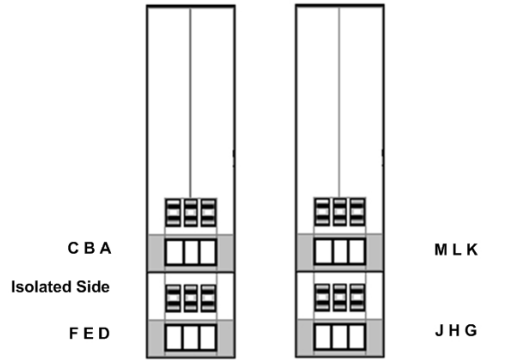| Terminal Block	Signal
A	OUTPUT 1
B	OUTPUT 3
C	ISOLATED GROUND
D	INPUT 2
E	INPUT 4
F	NOT CONNECTED
G	INPUT 1
H	INPUT 3
J	10 TO 30 VDC
K	OUTPUT 2
L	OUTPUT 4
M	GROUND

LED	Flash
D1	Data Out Terminal A
D2	Data Out Terminal K
D3	Data Out Terminal B
D4	Data Out Terminal L

LED's are RED
Power LED is ON when power applied

If control signals are used, associated data LED will be ON when the signal is high

4 Power Connection

External Power Supply
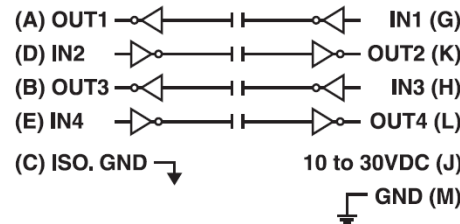
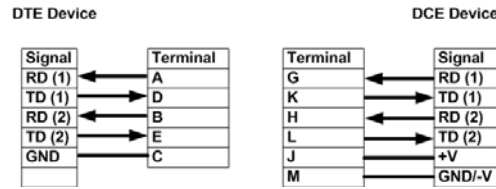Ground / V(-)   M
10 – 30 VDC
V +   J

M L K
J H G

Isolated Repeater uses 1.2 W

5 RS-232 Isolated Repeater with Control Signals

C B A
Isolated Side
F E D

M L K
J H G

DTE Device

DCE Device

Signal	Terminal
RD	A
TD	D
CTS	B
RTS	E
GND	C

Terminal	Signal
G	RD
K	TD
H	CTS
L	RTS
J	+V
M	GND/-V

(A) OUT1 ———◁——|———◁— IN1 (G)

(D) IN2 ——▷———|———▷— OUT2 (K)

(B) OUT3 ———◁——|———◁— IN3 (H)

(E) IN4 ——▷———|———▷— OUT4 (L)

(C) ISO. GND ⌐↓   10 to 30VDC (J)

⌐ GND (M)

6 RS-232 Isolated Repeater – Two sets of data lines without control signals

C B A
Isolated Side
F E D

M L K
J H G

DTE Device

DCE Device

Signal	Terminal
RD (1)	A
TD (1)	D
RD (2)	B
TD (2)	E
GND	C

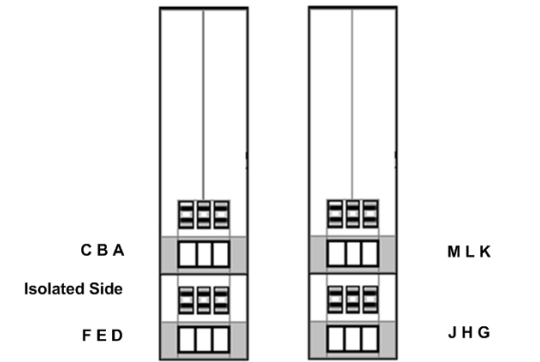| Terminal	Signal
G	RD (1)
K	TD (1)
H	RD (2)
L	TD (2)
J	+V
M	GND/-V

(A) OUT1 ———◁——|———◁— IN1 (G)

(D) IN2 ——▷———|———▷— OUT2 (K)

(B) OUT3 ———◁——|———◁— IN3 (H)

(E) IN4 ——▷———|———▷— OUT4 (L)

(C) ISO. GND ⌐↓   10 to 30VDC (J)

⌐ GND (M)

7 Test Setup

C B A
Isolated Side
F E D

M L K
J H G

DTE Device

Signal	Terminal
RD	A
TD	D
CTS	B
RTS	E
GND	C
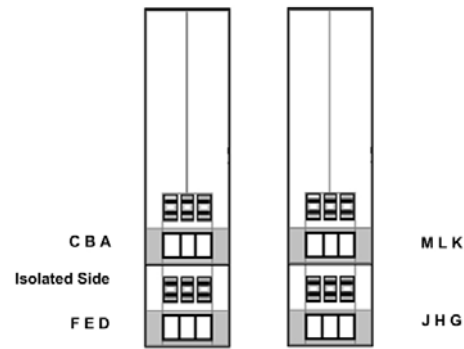
Terminal	
G	
K	
H	
L	
J	+V
M	GND/-V
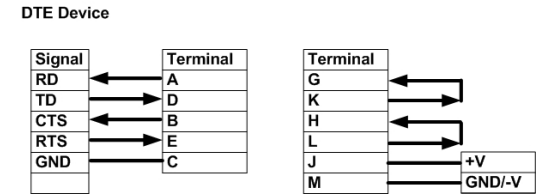
- ❑ Connect a PC to the DTE side.
- ❑ Place a jumper between Terminal G & K and Terminal H & L
- ❑ Using hyper terminal or similar program, connect to the appropriate COM port. Turn off hyper terminal local echo.
- ❑ Transmit data. The same data should be returned. Data LED will indicate data being transmitted (see step 2).