

NOTES:

- WARNING:** This drawing does not illustrate completely the installation methods required for hazardous locations. Prior to any installation in a Classified Hazardous Location, verify installation methods by the ControlDrawing referenced on the product's name tag and national and local codes.
- WARNING:** Using a non-factory RS485 data cable between UC12 and first unit may result in damage and may void system warranty.
- Jumper is not part of the 210339-001 cable; it must be supplied separately.

Jumper 1 to 2 on J10 to terminate last unit on bus.

Jumper 2 to 3 on J10 for first and intermediate units.
or
If the first unit is the only unit, jumper 1 to 2 to terminate.

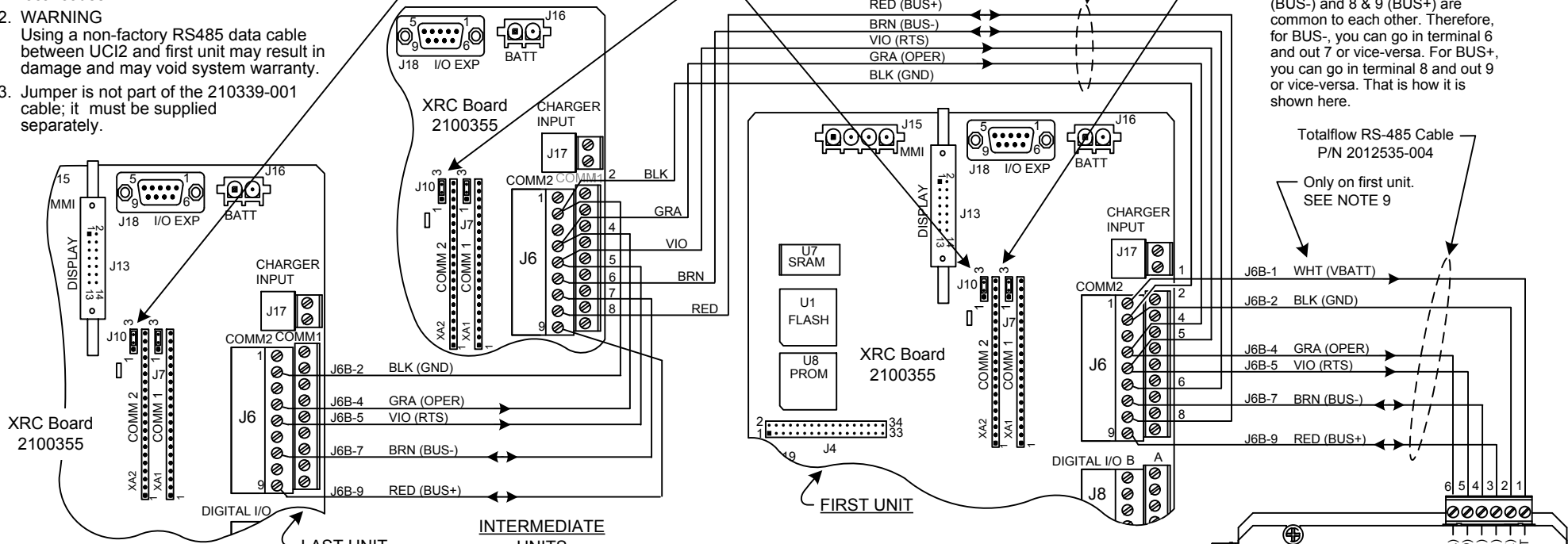
Totalflow RS485 Cable
P/N 2011648-001
Between Each Unit

RS-485 Communications Module
In Comm 1 Of Each Unit.
Totalflow P/N 2015193-002/003

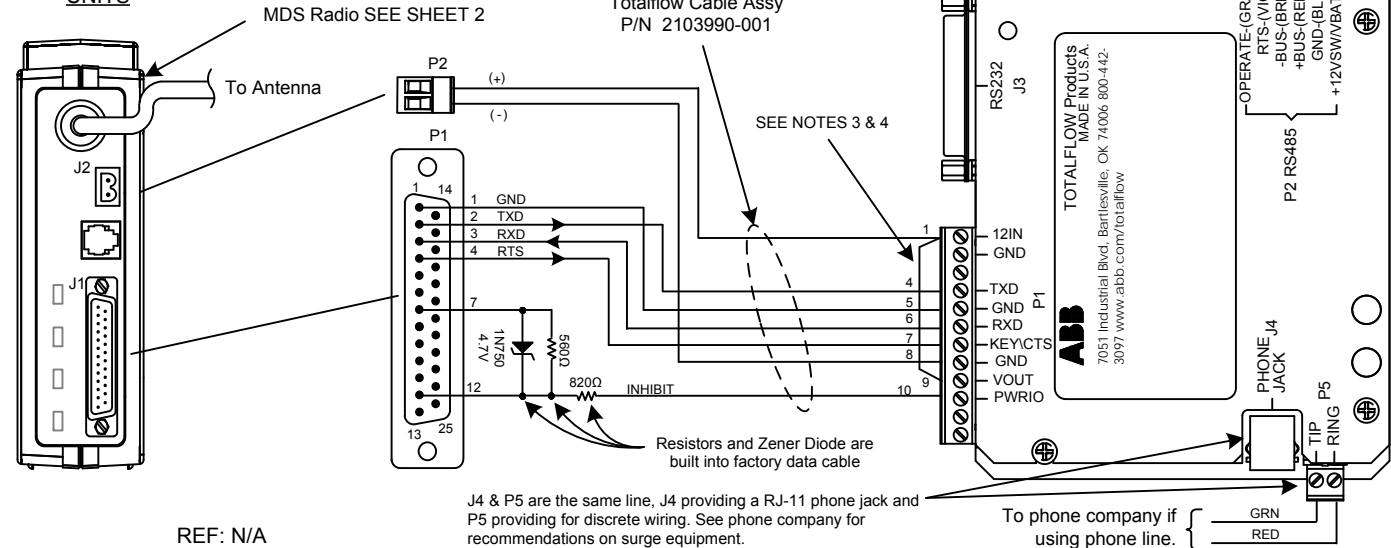
Hint:
In RS-485 Mode, terminals 6 & 7 (BUS-) and 8 & 9 (BUS+) are common to each other. Therefore, for BUS-, you can go in terminal 6 and out 7 or vice-versa. For BUS+, you can go in terminal 8 and out 9 or vice-versa. That is how it is shown here.

Totalflow RS-485 Cable
P/N 2012535-004

Only on first unit.
SEE NOTE 9



- For Switched power or to enable Power Scheduler for UC12, remove the jumper between 1 & 9 on P1 of UC12.
- Maximum length of RS485 bus is 4000 Ft. @9600 baud using Totalflow cable P/N 2011648-001 or equivalent.
- Units must be daisy-chained; No Star Configurations.
- Cable Shielding – Cable segments between units should have their shields terminated on one end only. The RS-485 Cable (P/N 2011648-001) has two shields, each with its own drain wire. When connecting multiple units together, connect the two drain wires on the first unit to one of the two ground screws on the bottom left-hand side of the enclosure. Cut the cable and terminate the wiring on the second unit but do not connect the drain wires. On the next segment between the second and third units, connect the two drain wires to the second unit but not to the third unit. Repeat this process until all units are wired.
- 12 VOLTS VBATT (WHT wire) used to power comm device should only be attached to a single RTU and never daisy-chained.



REF: N/A

J4 & P5 are the same line, J4 providing a RJ-11 phone jack and P5 providing for discrete wiring. See phone company for recommendations on surge equipment.

To phone company if using phone line.

ABB TOTALFLOW Products	ACTION	DOC TYPE	TITLE	DWG NO.	REV	SHEET
	D24127	UD	XRC COMM 2 (2100355 BD) WFCU PWR & UC12 (RS-485) TO MDS 4710/9710B/9810 RADIO (RS-232)	2102933	AD	1 OF 2

PRIMARY SETUP ITEMS FOR THESE MDS RADIOS:

1. Mode R.
2. ADDR XXXX - where (xxxx) is radio's address, which is also the same as the Master Radio's Address.
3. SLEEP ON.
4. BAUD 9600 8n1 - (other baud rates can be used but needs to match flow computer's baud rate).

Note: Typically, all other setup items can be left in their default state, except for the following radio-specific changes:

Recommended changes for X710 "A" model GE MDS radios

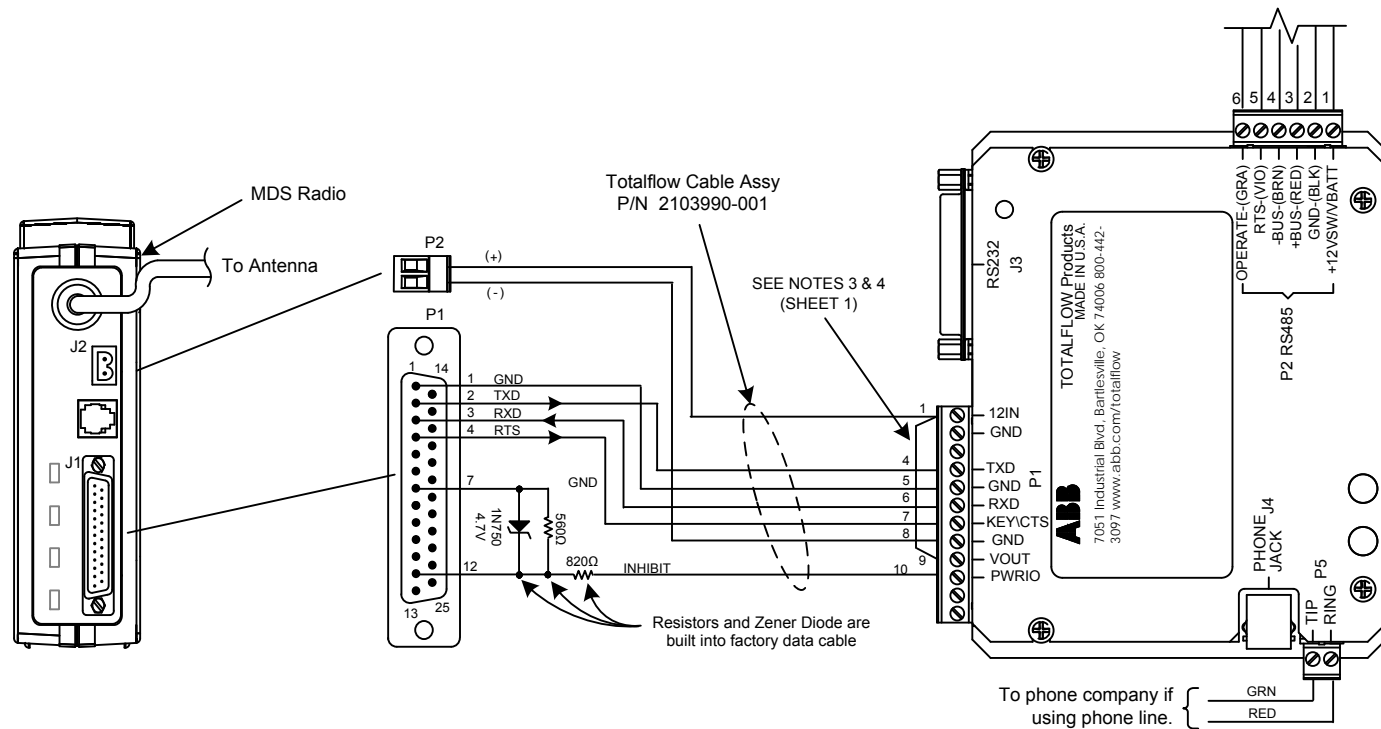
Remove Request to Send (RTS) wire from the Totalflow connected device. RTS is not required on "A" radios and could be a source for spurious unintended transmissions (chirping). Tie this wire back and tape so that it doesn't make electrical contact with any other electrical wiring or ground source.

GE MDS software setting changes:
 DATAKEY = ON, set to on so that the radio will key on data without the need for RTS from the Totalflow device.
 PTT delay = 30 milliseconds, defaults to 0, change to 30 to eliminate the spurious unintended transmissions (fast chirping) in the 5-25 milliseconds range.

Recommended changes for X710 "B" model GE MDS radios

GE MDS software setting changes:
 PTT delay = 30 milliseconds, defaults to 0, change to 30 to eliminate the spurious unintended transmissions (fast chirping) range in duration from 5-25 milliseconds

NOTE: Request to Send (RTS) must be utilized on all "B" radios for proper operations.



REF: N/A

ABB TOTALFLOW Products	ACTION	DOC TYPE	TITLE	DWG NO.	REV	SHEET
	D24127	UD	XRC COMM 2 (2100355 BD) WFCU PWR & UC12 (RS-485) TO MDS 4710/9710B/9810 RADIO (RS-232)	2102933	AD	2 OF 2