NOTES:

1. SWITCHED POWER OUT ON RADIO UCI ONLY
2. GRA WIRE NOT NECESSARY.
3. POWER FOR BARRIER MUST ORIGINATE FROM NON-HAZARDOUS AREA.
4. JUMPER NOT NEEDED ON RS485 MODEM INTERFACE.
5. SPECIAL CASE RETROFIT ONLY IF RS485 MODEM INTERFACE IS USED AS A RETROFIT FOR A RADIO UCI WHEN USED WITH A UPS212 MODM IN CONTINUOUS POWER MODE, THEN TB3-6 AND TB4-9 MUST BE JUMPERED TOGETHER.
6. D1 NOT NEEDED WHEN USING RS485 COMM MODULE 2015193-002.
7. THESE DIODES MAY BE USED:
   D30914 (1N914JANTX)
   D34001 (1N4001)
   D34004 (1N4004)
8. 12 VOLTS VBATT [WHT WIRE] USED TO POWER COMM DEVICE SHOULD ONLY BE ATTACHED TO A SINGLE FCU AND NEVER DAISY CHAINED.
9. FACTORY ALWAYS WIRES DIAL-UP MODEM FOR CONTINUOUS POWER UNLESS CUSTOMER SPECIFIES SWITCHED POWER. TO ENABLE FCU SCHEDULER, REMOVE JUMPER.
10. ALL UNUSED WIRES ARE TO BE BENT BACK AND TAPED SO SHORTING CANNOT OCCUR. NOT PERMISSIBLE TO HAVE ANY UNUSED EXPOSED WIRES.
11. WHEN USING DIAL-UP DUAL PORT MODEM, POWER TO BE CONNECTED TO P1-9 OF MODEM.

INSTRUCTIONS FOR USING THIS DOCUMENT:
SELECT APPROPRIATE DRAWING FROM “REFERENCE INDEX” PAGE 2. SELECT THE DIAGRAM WHICH MATCHES YOUR CONFIGURATION AND GO TO THE SPECIFIED SHEET NUMBER.

PARTS LIST

<table>
<thead>
<tr>
<th>ASSEMBLY/QUANTITY</th>
<th>ITEM NO.</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
<th>REF/ZONE DESIG</th>
<th>MATERIAL</th>
<th>UNIT MEAS</th>
</tr>
</thead>
</table>

TOTALFLOW®

ABB WIRING INTERCONNECT 64XX FCU TO COMM INTERFACE

TOTALFLOW Products

G. HOLLAND 07/23
A. KASTNER 07/23
G. HOLLAND 07/23
G. HOLLAND 07/23

SCALE: B

2017398 AM 1 OF 14
64XX FCU | SEE SH 3
COL A, B, C, D
UCI (RADIO)
(DESKTOP)

64XX FCU | SEE SH 4
COL E, F, G, H
RS485 MODEM INTERFACE

64XX FCU | SEE SH 4
COL E, F, G, H
UCI (MODEM) UCI2 (RADIO)

64XX FCU | SEE SH 4
COL E, F, G, H
UCI2 (DIAL-UP MODEM)
RS485 (DIAL-UP MODEM)
DUAL PORT MODEM

64XX FCU | SEE SH 5
COL J, K, L, M
RADIO MODEM ASSY

64XX FCU | SEE SH 6
COL N, P
RS485/RS232 CONVERTER

64XX FCU | SEE SH 7
COLUMN R
DGH BOX

64XX FCU | SEE SH 13
UCI2 (RS232) (DIAL-UP MODEM)

XFC 64XX FCU | SEE SH 8
COL A, B, C, D
UCI (RADIO)
(DESKTOP)

XFC 64XX FCU | SEE SH 9
COL E, F, G, H
RS485 MODEM INTERFACE

XFC 64XX FCU | SEE SH 9
COL E, F, G, H
UCI (MODEM) UCI2 (RADIO)

XFC 64XX FCU | SEE SH 9
COL E, F, G, H
UCI2 (DIAL-UP MODEM)
RS485 (DIAL-UP MODEM)
DUAL PORT MODEM

XFC 64XX FCU | SEE SH 10
COL J, K, L, M
RADIO MODEM ASSY

XFC 64XX FCU | SEE SH 11
COL N, P
RS485/RS232 CONVERTER

XFC 64XX FCU | SEE SH 12
COLUMN R
DGH BOX

XFC 64XX FCU | SEE SH 14
UCI2 (DIAL-UP MODEM)
[DIAL-UP DUAL PORT MODEM]

RS485
RS232
ON PINS 1 & 2 OF LAST FCU JUMPER ON J11 TO BE PLACED ON RS485 BUS ONLY.
### POWER FROM AIU/RTU/FCU

<table>
<thead>
<tr>
<th>PIN</th>
<th>12V SI</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>1/2 IN</td>
</tr>
<tr>
<td>9</td>
<td>V-OUT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PIN</th>
<th>12V CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/2 IN</td>
</tr>
<tr>
<td>9</td>
<td>V-OUT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PIN</th>
<th>12V SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/2 IN</td>
</tr>
<tr>
<td>9</td>
<td>V-OUT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PIN</th>
<th>12V CE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/2 IN</td>
</tr>
<tr>
<td>9</td>
<td>V-OUT</td>
</tr>
</tbody>
</table>

### CONTINUOUS POWER

- **RS485 MODM INTERFACE**: 2017273-001
- **MODM UC1 ASSY**: 2012630-006/008
- **UC12 (DIAL-UP MODM)**: 2018323-001/002
- **UC12 ASSY**: 2017266-001 PCBA

### SWITCHED POWER

- **RS485 MODM INTERFACE**: 2017273-001
- **MODM UC1 ASSY**: 2012630-006/008
- **UC12 (DIAL-UP MODM)**: 2018323-001/002
- **UC12 ASSY**: 2017266-001 PCBA

### EXT POWER SUPPLY

- **12V SI**
- **12V CI**
- **12V SE**
- **12V CE**
64XX FCU

ELEK BD
2015169-XXX
2015333-XXX

---

**POWER FROM AIU/RTU/FCU**

<table>
<thead>
<tr>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTINUOUS POWER</td>
<td>SWITCHED POWER</td>
<td>CONTINUOUS POWER</td>
<td>SWITCHED POWER</td>
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</tbody>
</table>

- RS485 COMM MODULE
  - 2015193-001/002

JUMPER ON J11 TO BE PLACED ON PINS 1 & 2 OF LAST FCU ON RS485 BUS ONLY.

**EXT POWER SUPPLY**

- RJ45 POWER SUPPLY
- 2015189-XXX
- RADIO MODEM ASSY
- 2011613-001

- TB3
  - 6 OPER
  - 2 GND
  - 4 (-) BUS
  - 3 (+) BUS
  - 5 RTS
  - 1 +12V SW

- TB3
  - 2 GRA
  - 2 BLK
  - 4 BRN
  - 3 RED
  - 5 VIO
  - 7 V-OUT

- J4
  - 16 OPER
  - 1 GND
  - 6 RXD(+)
  - 4 TXD(+)
  - 8 RTS
  - 2 VBAIT
  - 3 SWVBAIT
  - 5 TXD(-)
  - 7 RXD(-)
  - 9 CTS
  - 10 DTR
  - 11 CD
  - 12 TXAO
  - 13 RXAO
  - 14 RISO
  - 15 CTSO

- RS485 COMM MODULE
  - 2015193-001/002

- EXTERNAL POWER SUPPLY
  - (+)
  - (-)
### CONTINUOUS POWER

POWER FROM AIU/RTU/FCU

<table>
<thead>
<tr>
<th>Switched Power</th>
<th>Continuous Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS485/RS232 CONVERTER</td>
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</tr>
<tr>
<td>2011982-003/004</td>
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</tbody>
</table>

### EXT POWER SUPPLY

<table>
<thead>
<tr>
<th>Switched Power</th>
<th>Continuous Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS485/RS232 CONVERTER</td>
<td></td>
</tr>
<tr>
<td>2011982-003/004</td>
<td></td>
</tr>
</tbody>
</table>

---

**Jumper on J11 to be placed on pins 1 & 2 of last FCU on RS485 bus only.**

---

**RS485 COMM MODULE**

- Jumper on J11 to be placed on pins 1 & 2 of last FCU on RS485 bus only.

---

**POWER SUPPLY**

- (+) BUS
- (-) BUS
- RTS
- CTS
- DTR
- CD
- TXAO
- RXAO
- RTSO
- CTSO
- 12 IN
- GND
- 12V SW

---

**64XX FCU**

- OPER
- GND
- RXD(+)
- TXD(+)
- RTS
- VBAT
- SWVBATT
- TXD(-)
- RXD(-)
- CTS
- DTR
- CD
- TXAO
- RXAO
- RTSO
- CTSO
- 1 2 3

---

**Diagrams and Tables**

- RS485/RS232 CONVERTER
- 2011982-003/004

---

**Schematic Diagram**

- 64XX FCU
- ELEK BD
- 2015193-001/002
- 2015189-XXX
- 2015333-XXX
- 2011982-003/004

---

**Legend**

- OPER
- GND
- RXD(+)
- TXD(+)
- RTS
- VBAT
- SWVBATT
- TXD(-)
- RXD(-)
- CTS
- DTR
- CD
- TXAO
- RXAO
- RTSO
- CTSO
- 1 2 3

---

**Notes**

- Jumper on J11 to be placed on pins 1 & 2 of last FCU on RS485 bus only.
### 64XX FCU

**ELEK BD**
2015189-XXX
2015333-XXX

<table>
<thead>
<tr>
<th>PIN</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>OPER</td>
</tr>
<tr>
<td>2</td>
<td>RXD(+)</td>
</tr>
<tr>
<td>3</td>
<td>RTS</td>
</tr>
<tr>
<td>4</td>
<td>TXD(+)</td>
</tr>
<tr>
<td>5</td>
<td>VBATT</td>
</tr>
<tr>
<td>6</td>
<td>SWV8ATI</td>
</tr>
<tr>
<td>7</td>
<td>RXD(-)</td>
</tr>
<tr>
<td>8</td>
<td>CTS</td>
</tr>
<tr>
<td>9</td>
<td>DTR</td>
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<tr>
<td>14</td>
<td>CTSO</td>
</tr>
<tr>
<td>16</td>
<td>GND</td>
</tr>
</tbody>
</table>

**RS485 COMM MODULE**
2015193-001/002

**JUMPER ON J11 TO BE PLACED**
ON PINS 1 & 2 OF LAST FCU
ON RS485 BUS ONLY.

---

### POWER FROM AIU/RTU/FCU

|----------------|------------------|----------------|------------------|

**EXT POWER SUPPLY**

DGH BOX (DGHA-1100)

---

<table>
<thead>
<tr>
<th>PIN</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>B</td>
<td>BRN</td>
</tr>
<tr>
<td>G</td>
<td>RED</td>
</tr>
<tr>
<td>Y</td>
<td></td>
</tr>
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</table>

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**DRAWING NO.**
2017398

**REV.**
AM 7
### POWER FROM AIU/RTU/FCU

<table>
<thead>
<tr>
<th>Power Supply Type</th>
<th>Connection Details</th>
</tr>
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<tbody>
<tr>
<td>SWITCHED POWER</td>
<td>RADIO UCI ASSY 2012630-004/007</td>
</tr>
<tr>
<td>CONTINUOUS POWER</td>
<td>DISKTOP UCI ASSY 2012630-005</td>
</tr>
<tr>
<td></td>
<td>RS485 MODEM 2012630-005 PCBA</td>
</tr>
<tr>
<td></td>
<td>DUAL PORT MODEM 201266-004 PCBA</td>
</tr>
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</table>

### EXT POWER SUPPLY

<table>
<thead>
<tr>
<th>Power Supply Type</th>
<th>Connection Details</th>
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<tbody>
<tr>
<td>SWITCHED POWER</td>
<td>RADIO UCI ASSY 2012630-004/007</td>
</tr>
<tr>
<td>CONTINUOUS POWER</td>
<td>DISKTOP UCI ASSY 2012630-005</td>
</tr>
<tr>
<td></td>
<td>UCI ASSY 201726-001 PCBA</td>
</tr>
</tbody>
</table>

### Diagram Details

- **RS485**
  - For COM1: J11
  - For COM2: J12
- **COMM2**
  - P4
- **COMM1**
  - P4
- **COMM MODULE**
  - 2015193-001/2015193-002
- **COMM MODULE**
  - 2017266-003 PCBA
- **DUAL PORT MODEM**
  - 2017266-004 PCBA
- **P2-UCI**
  - TB3-UCI
- **P1-UCI**
  - TB4-UCI
- **COMM MODULE**
  - 2015193-002
- **SCALE**
  - size
- **DOC TYPE**
  - drawing number
- **REV**
  - sheet
- **NOTE**
  - jumper on J11 or J12 to be placed on pins 1 & 2 of last FCU on RS485 bus only.
POWER FROM AIU/RTU/FCU

CONTINUOUS POWER

SWITCHED POWER

- RS485 MODEM INTERFACE
  201733-001
- MODM UCI ASSY
  2012630-006/008
- UCI2 (DIAL-UP MODEM)
  2018323-001/002
  2017379-001/002
- (DIAL-UP DUAL PORT MODEL)
  2017397-008/009
- UCI2 ASSY
  2017266-001 PCBA
  2017266-0001 PCBA

EXT POWER SUPPLY

CONTINUOUS POWER

SWITCHED POWER

- RS485 MODEM INTERFACE
  201733-001
- MODM UCI ASSY
  2012630-006/008
- UCI2 (DIAL-UP MODEM)
  2018323-001/002
  2017379-001/002
- (DIAL-UP DUAL PORT MODEL)
  2017397-008/009
- UCI2 ASSY
  2017266-001 PCBA
  2017266-0001 PCBA

12V SI

12V CI

12V SE

12V CE

JUMPER ON J11 OR J12 TO BE PLACED ON PINS 1 & 2 OF LAST FCU ON RS485 BUS ONLY.
### POWER FROM AIU/RTU/FCU

<table>
<thead>
<tr>
<th>TB3</th>
<th>RS485/RS232 CONVERTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRA</td>
<td>6 OPER</td>
</tr>
<tr>
<td>BLK</td>
<td>2 GND</td>
</tr>
<tr>
<td>BRN</td>
<td>4 (-) BUS</td>
</tr>
<tr>
<td>RED</td>
<td>3 (+) BUS</td>
</tr>
<tr>
<td>VIO</td>
<td>5 RTS</td>
</tr>
<tr>
<td>WHT</td>
<td>1 +12V SW</td>
</tr>
</tbody>
</table>

### EXT POWER SUPPLY

<table>
<thead>
<tr>
<th>TB4</th>
<th>RS485/RS232 CONVERTER</th>
</tr>
</thead>
<tbody>
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<td>GRA</td>
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<td>BLK</td>
<td>2 GND</td>
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<td>BRN</td>
<td>4 (-) BUS</td>
</tr>
<tr>
<td>RED</td>
<td>3 (+) BUS</td>
</tr>
<tr>
<td>VIO</td>
<td>5 RTS</td>
</tr>
<tr>
<td>WHT</td>
<td>1 +12V SW</td>
</tr>
</tbody>
</table>

*Jumper on J11 or J12 to be placed on pins 1 & 2 of last FCU on RS485 bus only.*
POWER FROM AIU/RTU/FCU

<table>
<thead>
<tr>
<th>SWITCHED POWER</th>
<th>CONTINUOUS POWER</th>
</tr>
</thead>
</table>

EXT POWER SUPPLY

<table>
<thead>
<tr>
<th>SWITCHED POWER</th>
<th>CONTINUOUS POWER</th>
</tr>
</thead>
</table>

- RJ45 Jack
- ELEK PCBA

**Diagram Details**

- **COMM2 P4**
  - 16 OPER
  - 1 GND
  - 13 BUS-
  - 12 BUS+
  - 14 RTS
  - 2 VBATT

- **COMM1 P4**
  - 16 OPER
  - 1 GND
  - 6 BUS-
  - 4 BUS+
  - 8 RTS
  - 2 VBATT

- **RS485**
  - BRN
  - RED

- **For COM1 and COM2**
  - Pin 1 & 2 of last FCU
  - Jumper on J11 or J12 to be placed on RS485 bus only.

- **DGH BOX (DGHA-1100)**
  - BRN
  - G
  - Y

**Notes**

- On RS485 bus only.
- For COM2
- For COM1
- Jumper on J11 or J12 to be placed on pins 1 & 2 of last FCU.