


FIELD ELECTRICAL LIST

CUSTOMER: TBD
 GEOG JOB: TBD

| REFERENCE: | |
|--------------------|-------------|
| ELEC SCHEMATICS | MG129-00900 |
| FIELD ELEC DIAGRAM | MG129-00903 |

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| Revision Summary | | |

| 0 | MKG | 8/22/2014 | | | MKG | 8/22/2014 | INITIAL RELEASE |
|-----|-----|-----------|----|------|-----|-----------|-----------------------|
| REV | DR | DATE | CK | DATE | APP | DATE | DESCRIPTION OF CHANGE |
| | | | | | | | |

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|---|-----|-----|-----------|-------------|-----------------------|-------|--|
|  GE Oil & Gas | DR | MKG | 8/22/2014 | NAME | FIELD ELECTRICAL LIST | | |
| | CK | | | CONTRACT | | | |
| | APP | MKG | 8/22/2014 | SHEET | PART NO | ISSUE | |
| | | | 1/6 | MG129-00902 | | 0 | |

| LIST, FIELD ELECTRICAL | | | | | | | | | | | | |
|-------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|
| GENERAL NOTES: | | | | | | | | | | | | |
| 1 | See Electrical Schematic. | | | | | | | | | | | |
| 2 | Need to separate circuit types: Comm., 24 vdc, 120 vac, 480 vac, 4160 vac | | | | | | | | | | | |
| 3 | Locate conduit seals near transistion to hazardous location | | | | | | | | | | | |
| 4 | Conduit size shown are MINIMUM, larger is allowed for easier install | | | | | | | | | | | |
| 5 | Electricians MUST PROTECT sensitive electronics from wire strands, metal shavings, debris, water, dirt, electro-static discharge (ESD) | | | | | | | | | | | |
| 6 | Every conductor gets a unique wire # labeled at BOTH ends within 1"-2" of terminal. | | | | | | | | | | | |
| 7 | Motor disconnect means MUST have lockout/tagout handles. | | | | | | | | | | | |
| 8 | Sealtite, IMC, and Rigid conduit allowed | | | | | | | | | | | |
| 9 | Prefer Belden communication cables | | | | | | | | | | | |
| 10 | Run # with letter ending (I.e. CP02A, CP02B) indicates shared conduit run with branches at the individual instruments. | | | | | | | | | | | |
| 11 | If it makes conduit runs easier, COMM and LOW POWER INSTRUMENT circuits <u>ONLY</u> may share conduit. | | | | | | | | | | | |
| 12 | Thoroughly deburr ALL conduit to prevent wire/cable damage durring pulling. | | | | | | | | | | | |
| 13 | All conduit runs will have a pulling rope running the longest length to allow for repairs and future pulls. | | | | | | | | | | | |
| 14 | Conduit size shown for SHARED runs are at largest point, branches may be smaller. | | | | | | | | | | | |
| 15 | Conductor size based on copper 75 deg C type THWN wire in Rigid Conduit in free air at 110 deg F. | | | | | | | | | | | |
| 16 | Conductor ampacity based on NEC Table 310-16 plus derating for ambient temperature AND >3 conductors if applicable. | | | | | | | | | | | |
| 17 | Wire numbers used: F0001-F0042, F0050-F0059, F0064-F0065, F0069, F0073, F0075, F0077-F0081, F0083-F0086, F0091-F0116 | | | | | | | | | | | |
| 18 | Parallel conductors allowed if properly sized and derated per NEC. | | | | | | | | | | | |
| 19 | Other NEC Hazardous Location wiring methods allowed (i.e. multiconductor tray cable for control circuits). | | | | | | | | | | | |
| 20 | Color (GN) indicates addition of green OR green/yellow electrical tape required to mark wire as a ground (PE) wire. | | | | | | | | | | | |
| 21 | No penetrations on the top of ANY PANELS. | | | | | | | | | | | |
| 22 | All conduit seals (on skid & field installed by others) to be packed & poured AFTER Guild has approved I/O checkout. | | | | | | | | | | | |
| 23 | Run type legend: MV = Medium Voltage 4160V, LV = Low Voltage 460V, CP = Control Power 120V, IN - Instrumentation 24V, CM = Communications, GN = Ground | | | | | | | | | | | |
| 24 | Shields for instrumentation cable to be grounded at ONE END only closest to the power source. Shrink fit the drain wire NO CONNECT end to prevent short to chassis. | | | | | | | | | | | |
| 25 | Wiring methods for equipment in the hazardous location MUST to conform to NEC for Class 1 Division 2 Group D Methane. | | | | | | | | | | | |
| 26 | IF APPLICABLE, Intrisically safe (IS in yellow) MUST be labelled and run separate from Non-IS circuits per NEC. | | | | | | | | | | | |
| 27 | See also Electrical Schematic LAYOUTS for field conduit hole locations and wire routing. | | | | | | | | | | | |
| 28 | Electrical installer MUST follow conduit spacing guidelines from IEEE Std 518-1982 based on section 6.4.3 Cable Spacing. | | | | | | | | | | | |
| 29 | Field and skid wiring ground connection to be wired to conduit ground bushing then on to ground terminal. | | | | | | | | | | | |
| 30 | Liquid tite flexible connections on circuits > 10 amps require external bonding jumper wire. | | | | | | | | | | | |
| 31 | Electrical installer MUST follow manuf instructions for crimping compression lugs with approved crimper and die. | | | | | | | | | | | |
| 32 | RUN# 's with asterisk (*) indicate supplied by others. | | | | | | | | | | | |
| 33 | RUN# 's with bold tag name (i.e. M-330, H/N/G, etc) are supplied with equipment and only require making connection at one end as indicated in NOTES column. | | | | | | | | | | | |
| | | | | | | | | | | | | |

| RUN # | SIZE (") | FROM | FROM TERMINAL | TO | TO TERMINAL | WIRE# | COLOR | TYPE | TEMP (C) | SIZE (AWG) | MFR | EST LG (ft) | NOTES | SCHEM SH |
|-------------------------------------|----------|--------------------|---------------|----------------------|---------------|--------|--------|--------|----------|------------|-----|-------------|--|----------|
| LOW VOLTAGE 460 VAC CIRCUITS | | | | | | | | | | | | | | |
| LV01 * | 3" | Switch Gear | GND (PE) | Remote Power Panel | TB04-GND (PE) | F0001 | GN | THWN | 75 | 1/0 | | | * By OTHERS | 6 |
| | | | T1 | | CB-910 L1 | F0002 | BK | THWN | 75 | 400 MCM | | | | |
| | | | T2 | | CB-910 L2 | F0003 | BK | THWN | 75 | 400 MCM | | | | |
| | | | T3 | | CB-910 L3 | F0004 | BK | THWN | 75 | 400 MCM | | | | |
| LV02 * | 3" | Switch Gear | GND (PE) | Remote Power Panel | TB04-GND (PE) | F0005 | GN | THWN | 75 | 1/0 | | | * By OTHERS | 6 |
| | | | T1 | | CB-910 L1 | F0006 | BK | THWN | 75 | 400 MCM | | | | |
| | | | T2 | | CB-910 L2 | F0007 | BK | THWN | 75 | 400 MCM | | | | |
| | | | T3 | | CB-910 L3 | F0008 | BK | THWN | 75 | 400 MCM | | | | |
| LV08 * | 1.25" | Remote Power Panel | FU-914 TO 916 | DRYER REGEN 460 | TBD | OTHERS | OTHERS | OTHERS | OTHERS | OTHERS | | | * By OTHERS. Conduit and conductor design, sizing, and labeling by others. | 6 |
| M-330 | | Remote Power Panel | GND (PE) | Compressor Container | TB04-GND (PE) | F0010 | GN | G-GC | 90 | 1/0 | | | Field connections made in REMOTE POWER PANEL | 6 |
| | | | GND (PE) | | TB04-GND (PE) | F0010 | GN | | | 1/0 | | | | |
| | | | RVSS-330 T1 | | M-330 L1 | F0011 | BK | | | 350 MCM | | | | |
| | | | RVSS-330 T2 | | M-330 L2 | F0012 | WH | | | 350 MCM | | | | |
| | | | RVSS-330 T3 | | M-330 L3 | F0013 | RD | | | 350 MCM | | | | |
| | | | WIRE NUT | | WIRE NUT | - | YL | | | 8 | | | | |
| M-330 | | Remote Power Panel | GND (PE) | Compressor Container | TB04-GND (PE) | F0014 | GN | G-GC | 90 | 1/0 | | | Field connections made in REMOTE POWER PANEL | 6 |
| | | | GND (PE) | | TB04-GND (PE) | F0014 | GN | | | 1/0 | | | | |
| | | | RVSS-330 T1 | | M-330 L1 | F0015 | BK | | | 350 MCM | | | | |
| | | | RVSS-330 T2 | | M-330 L2 | F0016 | WH | | | 350 MCM | | | | |
| | | | RVSS-330 T3 | | M-330 L3 | F0017 | RD | | | 350 MCM | | | | |
| | | | WIRE NUT | | WIRE NUT | - | YL | | | 8 | | | | |
| M-340 | | Remote Power Panel | GND (PE) | Junct Box #933 | GND (PE) | F0019 | GN | SOOW | 90 | 8 | | | Field connections made in JUNCTION BOX #933 | 6 |
| | | | OL-340 T1 | | TB01-1 | F0020 | BK | | | 8 | | | | |
| | | | OL-340 T2 | | TB01-2 | F0021 | WH | | | 8 | | | | |
| | | | OL-340 T3 | | TB01-3 | F0022 | RD | | | 8 | | | | |
| M-520 | | Remote Power Panel | GND (PE) | Junct Box #933 | GND (PE) | F0040 | GN | SOOW | 90 | 14 | | | Field connections made in JUNCTION BOX #933 | 6 |
| | | | OL-520 T1 | | TB01-4 | F0023 | BK | | | 14 | | | | |
| | | | OL-520 T2 | | TB01-5 | F0024 | WH | | | 14 | | | | |
| | | | OL-520 T3 | | TB01-6 | F0025 | RD | | | 14 | | | | |
| M-511 | | Remote Power Panel | GND (PE) | Junct Box #933 | GND (PE) | F0041 | GN | SOOW | 90 | 14 | | | Field connections made in JUNCTION BOX #933 | 6 |
| | | | OL-511 T1 | | TB01-7 | F0026 | BK | | | 14 | | | | |
| | | | OL-511 T2 | | TB01-8 | F0027 | WH | | | 14 | | | | |
| | | | OL-511 T3 | | TB01-9 | F0028 | RD | | | 14 | | | | |
| H-525 | | Remote Power Panel | GND (PE) | Junct Box #933 | GND (PE) | F0042 | GN | SOOW | 90 | 14 | | | Field connections made in JUNCTION BOX #933 | 6 |
| | | | HC-525 T1 | | TB01-10 | F0029 | BK | | | 14 | | | | |
| | | | HC-525 T2 | | TB01-11 | F0030 | WH | | | 14 | | | | |
| | | | HC-525 T3 | | TB01-12 | F0031 | RD | | | 14 | | | | |

| RUN # | SIZE (") | FROM | FROM TERMINAL | TO | TO TERMINAL | WIRE# | COLOR | TYPE | TEMP (C) | SIZE (AWG) | MFR | EST LG (ft) | NOTES | SCHEM SH |
|--|----------|--|-----------------------|----------------|---------------|-------|-------|------|----------|---------------|-----|-------------|--|-------------|
| LOW VOLTAGE 460 VAC CIRCUITS (cont) | | | | | | | | | | | | | | |
| H-350 | | Remote Power Panel | GND (PE) | Junct Box #933 | GND (PE) | F0035 | GN | SOOW | 90 | 8 | | | Field connections made in JUNCTION BOX #933 | |
| | | | CB-350 T1 | | TB01-13 | F0032 | BK | | | 8 | | | | 6 |
| | | | CB-350 T2 | | TB01-14 | F0033 | WH | | | 8 | | | | |
| | | | CB-350 T3 | | TB01-15 | F0034 | RD | | | 8 | | | | |
| M-36X | | Remote Power Panel | GND (PE) | Junct Box #933 | GND (PE) | F0039 | GN | SOOW | 90 | 14 | | | Field connections made in JUNCTION BOX #933 | 6 |
| | | | SC-360 T1 | | TB01-16 | F0036 | BK | | | 14 | | | | |
| | | | SC-360 T2 | | TB01-17 | F0037 | WH | | | 14 | | | | |
| | | | SC-360 T3 | | TB01-18 | F0038 | RD | | | 14 | | | | |
| CONTROL POWER 120 VAC CIRCUITS | | | | | | | | | | | | | | |
| CP03 * (optional) | 1" | Remote Power Panel | TB02-11 | DRYER REGEN | XXX | F0091 | RD | THWN | 75 | 14 | | | * By OTHERS. 1" Seal Required | 7 |
| | | | TB02-12 | | XXX | F0092 | RD | THWN | 75 | 14 | | | Recommend 45 deg liq tite elbow at Panel holes to jog over leg foot. | |
| | | | TB03-4 | BEACON HORN | X1 | F0108 | RD | THWN | 75 | 14 | | | | 13 |
| | | | TB02-N1 | | X2 | F0109 | WH | THWN | 75 | 14 | | | | |
| CP04 * (optional) | 1" | Remote Power Panel | GND (PE) | ESD-90X(s) | GND (PE) | F0110 | GN | THWN | 75 | 14 | | | * By OTHERS. 1" Seal Required | 7 |
| | | | TB02-13 | | XXX | F0093 | RD | THWN | 75 | 14 | | | | |
| | | | TB02-14 | | XXX | F0094 | RD | THWN | 75 | 14 | | | Recommend 45 deg liq tite elbow at Panel holes to jog over leg foot. | |
| | | | GND (PE) | | XXX | F0095 | GN | THWN | 75 | 14 | | | | |
| | | | TB03-27 | DISP-801/802 | XXX | F0096 | RD | THWN | 75 | 12 | | | 1" Seal Required | 7 |
| | | | TB03-28 | | XXX | F0097 | WH | THWN | 75 | 12 | | | | |
| | | | GND (PE) | | XXX | F0098 | GN | THWN | 75 | 12 | | | | |
| | | | TB03-29 | DISP-803/804 | XXX | F0114 | RD | THWN | 75 | 12 | | | 1" Seal Required | |
| | | | TB03-30 | | XXX | F0115 | WH | THWN | 75 | 12 | | | | |
| | | | GND (PE) | | XXX | F0116 | GN | THWN | 75 | 12 | | | | |
| H/N/G | | H/N/G Connector (outside bottom right Remote Power Panel) | PIN 7 (TB02-GND (PE)) | Control Panel | TB01-GND (PE) | F0050 | GN/YL | TC | 90 | 14 | | | GND. Field connections made at REMOTE POWER PANEL via bulkhead electrical connector located outside under bottom right area. | 9 |
| | | | PIN 1 (TB02-H1) | | TB01-H1 | F0051 | BK(1) | | | 14 | | | H1 | |
| | | | PIN 2 (TB02-H1SW) | | TB01-H1SW | F0052 | BK(2) | | | 14 | | | H1SW | |
| | | | PIN 3 (TB02-N1) | | TB01-N1 | F0053 | BK(3) | | | 14 | | | N1 | |
| | | | PIN 4 (TB03-H2) | | TB05-1 | F0054 | BK(4) | | | 14 | | | H2 | |
| | | | PIN 5 (TB03-N2) | | TB05-N2 | F0055 | BK(5) | | | 14 | | | N2 | |
| | | | PIN 6 (TB02-4) | | TB01-4 | F0059 | BK(6) | | | 14 | | | spare | |

| RUN # | SIZE (") | FROM | FROM TERMINAL | TO | TO TERMINAL | WIRE# | COLOR | TYPE | TEMP (C) | SIZE (AWG) | MFR | EST LG (ft) | NOTES | SCHEM SH |
|---|----------|--|---------------------------|---------------|---------------|-------|------------|------|----------|---------------|-----|-------------|--|-------------|
| CONTROL POWER 120 VAC CIRCs (cont) | | | | | | | | | | | | | | |
| HEAT/ESD | | HEAT/ESD Connector (outside bottom right Remote Power Panel) | PIN 1 (TB02-1) | Control Panel | TB01-1 | F0056 | BK(1) | TC | 90 | 14 | | | ESD. Field connections made at REMOTE POWER PANEL via bulkhead electrical connector located outside under bottom right area. | 7, 9 |
| | | | PIN 2 (TB02-2) | | TB01-2 | F0057 | BK(2) | | | 14 | | | ESD | |
| | | | PIN 3 (TB02-3) | | TB01-3 | F0058 | BK(3) | | | 14 | | | H-330 | |
| | | | PIN 4 (TB02-9) | | TB01-9 | F0064 | BK(4) | | | 14 | | | Heat Trace | |
| | | | PIN 5 (TB02-10) | | TB01-10 | F0065 | GN/YL (WH) | | | 14 | | | N2 | |
| STARTS | | STARTS Connector (outside bottom right Remote Power Panel) | PIN 1 (TB03-4) | Control Panel | CRLT-915-14 | F0069 | BK(1) | TC | 90 | 18 | | | LT-915. Field connections made at REMOTE POWER PANEL via bulkhead electrical connector located outside under bottom right area. | 13 |
| | | | PIN 2 (TB03-8) | | CRY-330-14 | F0073 | BK(2) | | | 18 | | | M-330 | |
| | | | PIN 3 (TB03-10) | | CRY-340-14 | F0075 | BK(3) | | | 18 | | | M-340 | |
| | | | PIN 4 (TB03-12) | | CRY-520-14 | F0077 | BK(4) | | | 18 | | | M-520 | |
| | | | PIN 5 (TB03-13) | | TB10-GND (PE) | F0078 | BK(5) | | | 18 | | | SPARE | |
| | | | PIN 6 (TB03-14) | | CRY-511-14 | F0079 | BK(6) | | | 18 | | | M-511 | |
| | | | PIN 7 (TB03- GND (PE)) | | TB10-GND (PE) | F0113 | GN/YL | | | 18 | | | | |
| STATUS' | | STATUS' Connector (outside bottom right Remote Power Panel) | PIN 6 (TB03-15) | Control Panel | TB02-46 | F0080 | GN/YL (RD) | TC | 90 | 18 | | | H1. Field connections made at REMOTE POWER PANEL via bulkhead electrical connector located outside under bottom right area. | 12 |
| | | | PIN 1 (TB03-16) | | CRJSL-901-A1 | F0081 | BK(1) | | | 18 | | | JSL-901 | |
| | | | PIN 2 (TB03-18) | | CRYS-330-A1 | F0083 | BK(2) | | | 18 | | | YS-330 | |
| | | | PIN 3 (TB03-19) | | CRYS-340-A1 | F0084 | BK(3) | | | 18 | | | YS-340 | |
| | | | PIN 4 (TB03-20) | | CRYS-520-A1 | F0085 | BK(4) | | | 18 | | | YS-520 | |
| | | | PIN 5 (TB03-21) | | CRYS-511-A1 | F0086 | BK(5) | | | 18 | | | YS-511 | |

| RUN # | SIZE (") | FROM | FROM TERMINAL | TO | TO TERMINAL | WIRE# | COLOR | TYPE | TEMP (C) | SIZE (AWG) | MFR | EST LG (ft) | NOTES | SCHEM SH |
|---|----------|--|----------------------|---------------------|----------------------|-------|-------|-----------------|----------|---------------|-----|-------------|---|-------------|
| COMMUNICATION CIRCUITS RS-485 ETHERNET | | | | | | | | | | | | | | |
| CM03 * (optional) | 1" | Remote Power Panel | RVSS-330 RS485 D- | DISP-801/802 | RS485 (-) | F0102 | BK | PLTC | 105 | 20 | | | * By OTHERS. Link "G". | 7 |
| | | | RVSS-330 RS485 D+ | | RS485 (+) | F0103 | RD | PLTC | 105 | 20 | | | | |
| | | | RVSS-330 RS485 SG | | RS485 (G) | F0104 | SH | PLTC | 105 | 20 | | | | |
| CM04 * (optional) | TBD | DISP-801/802 | RS485 (-) | DISP-803/804 | RS485 (-) | F0105 | BK | PLTC | 105 | 20 | | | * By OTHERS. Link "H". | 7 |
| | | | RS485 (+) | | RS485 (+) | F0106 | RD | PLTC | 105 | 20 | | | | |
| | | | RS485 (G) | | RS485 (G) | F0107 | SH | PLTC | 105 | 20 | | | | 7 |
| RS-485 | | RS-485 Connector (outside bottom right Remote Power Panel) | RVSS-330 RS485 D- | Control Panel | HMI-921 RS485 (-) | F0099 | BK | PLTC | 105 | 20 | | | Link "C". RS-485. Field connections made at REMOTE POWER PANEL via bulkhead electrical connector located outside under bottom left area. | 7 |
| | | | RVSS-330 RS485 D+ | | HMI-921 RS485 (+) | F0100 | RD | | | | | | | |
| | | | RVSS-330 RS485 SG | | HMI-921 RS485 (G) | F0101 | SH | | | | | | | |
| ENET | | ENET Connector (outside bottom right Remote Power Panel) | SC 360 | Control Panel | SWITCH-921-3 | C | NA | PLTC (CAT5e) | | | | | Link "C". Ethernet. Field connections made at REMOTE POWER PANEL via bulkhead electrical connector located outside under bottom left area. | |
| GROUNDING CIRCUITS | | | | | | | | | | | | | | |
| GN01 * | NA | Compressor Container | GND tab 1 | Grounding Grid * | GND (PE) * | F0111 | GN | | | 1/0 | | | * By OTHERS. | 6 |
| | NA | | GND tab 2 | | GND (PE) * | F0112 | GN | | | 1/0 | | | | |