| Operator Inputs to Onix OS via Weintek Panel |
|---|
| Start / Stop Burner |
| Start / Stop Dryer |
| Enable Fuel Refilling |
| Enable Wet Feed Refilling |

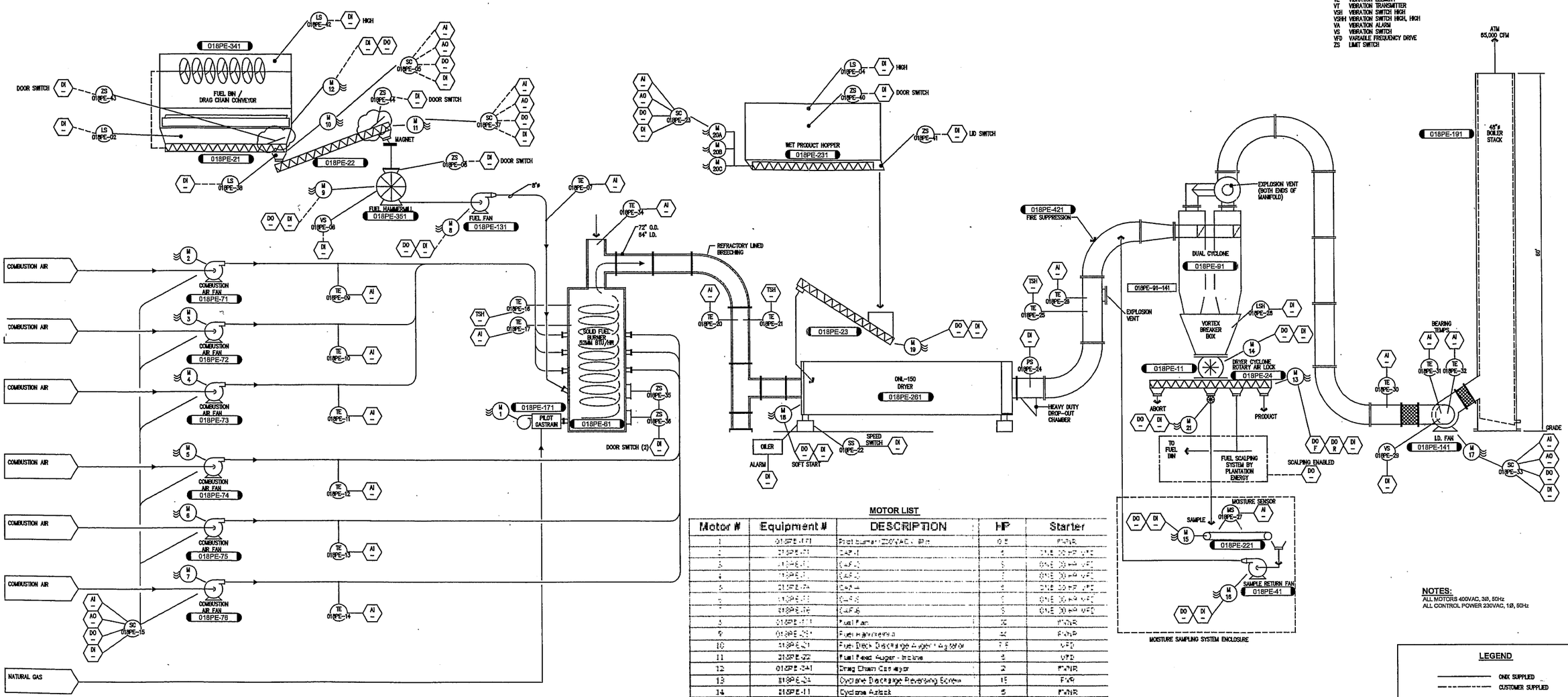
| Serial Hardwired Interface to communicate via Ethernet Network | | |
|---|---|---|
| Onix OS Signals to PE System | | PE System Signals to Onix OS |
| Request Wet Material | | |
| Request Fuel | | |
| Request Downstream RUN to PRODUCTION | <-> | Downstream PRODUCTION Running OK |
| Request Downstream RUN to ABORT | <-> | Downstream ABORT Running OK |
| Dry Material OK for Fuel Scalping | | |
| | | Dryer Running OK |
| | | Send Material to ABORT |

Notes:
(1) Onix OS requires downstream equipment to provide immediate feedback that it is Running OK
Loss of the OK signal will cause Onix equipment to shut-down
(2) PE to set this OK signal and remove the signal when appropriate

| Approval Drawing | |
|---|---|
| Please indicate status, sign and return. | |
| ☐ approved layout as drawn | Company _____ |
| ☐ approved with corrections as shown | Signature _____ |
| ☐ returned for revisions as shown | Date _____ |

**NOMENCLATURE LEGEND**

| | |
|---|---|
| AI | ANALOG INPUT |
| BS | BURNER SWITCH |
| BFS | BURNER FAILURE SWITCH |
| DI | DIGITAL INPUT |
| DO | DIGITAL OUTPUT |
| DPT | DIFFERENTIAL PRESSURE |
| FT | FLOW TRANSMITTER |
| FM | FLOW METER |
| GV | GATE VALVE |
| LCV | LEVEL CONTROL VALVE |
| LE | LEVEL ELEMENT |
| LSL | LEVEL SWITCH LOW |
| LSH | LEVEL SWITCH HIGH |
| LSLL | LEVEL SWITCH LOW, LOW |
| M | MOTOR |
| MS | MOISTURE SENSOR |
| OS | OPTICAL SENSOR |
| PE | PRESSURE ELEMENT |
| PIT | PRESSURE INDICATING TRANSMITTER |
| PS | PRESSURE SWITCH |
| PSV | PRESSURE SAFETY VALVE |
| PSL | PRESSURE SWITCH LOW |
| PSH | PRESSURE SWITCH HIGH |
| SC | SPEED CONTROL |
| SG | SIGHT GLASS |
| TCV | TEMPERATURE CONTROL VALVE |
| TE | TEMPERATURE ELEMENT |
| TSH | TEMPERATURE SWITCH HIGH |
| TI | TEMPERATURE INDICATOR |
| VE | VIBRATION ELEMENT |
| VT | VIBRATION TRANSMITTER |
| VSH | VIBRATION SWITCH HIGH |
| VSHH | VIBRATION SWITCH HIGH, HIGH |
| VA | VIBRATION ALARM |
| VS | VIBRATION SWITCH |
| VFD | VARIABLE FREQUENCY DRIVE |
| ZS | LIMIT SWITCH |




**MOTOR LIST**

| Motor # | Equipment # | DESCRIPTION | HP | Starter |
|---|---|---|---|---|
| 1 | 018PE-171 | Pilot Burner (230VAC, 1Ø) | 0.5 | FVNR |
| 2 | 018PE-71 | Combustion Air Fan | 7.5 | 6PLE 30 HP VFD |
| 3 | 018PE-72 | Combustion Air Fan | 7.5 | 6PLE 30 HP VFD |
| 4 | 018PE-73 | Combustion Air Fan | 7.5 | 6PLE 30 HP VFD |
| 5 | 018PE-74 | Combustion Air Fan | 7.5 | 6PLE 30 HP VFD |
| 6 | 018PE-75 | Combustion Air Fan | 7.5 | 6PLE 30 HP VFD |
| 7 | 018PE-76 | Combustion Air Fan | 7.5 | 6PLE 30 HP VFD |
| 8 | 018PE-131 | Fuel Fan | 20 | FVNR |
| 9 | 018PE-351 | Fuel Hammermill | 25 | FVNR |
| 10 | 018PE-21 | Fuel Bin Discharge Auger Agitator | 7.5 | VFD |
| 11 | 018PE-22 | Fuel Feed Auger - Incline | 5 | VFD |
| 12 | 018PE-341 | Drag Chain Conveyor | 2 | FVNR |
| 13 | 018PE-24 | Cyclone Discharge Reversing Screw | 15 | FVR |
| 14 | 018PE-11 | Cyclone Airlock | 5 | FVNR |
| 15 | 018PE-221 | Moisture Meter Belt (230VAC / 3PH) | 1 | FVNR |
| 16 | 018PE-41 | Return Fan | 5 | FVNR |
| 17 | 018PE-141 | Dryer ID Fan | 350 | VFD |
| 18 | 018PE-261 | Dryer Drum | 35 | 55 |
| 19 | 018PE-23 | Dryer Inlet Screw | 15 | FVNR |
| 20 | 018PE-231 | Wet Product Feeder | 3 x 5 HP | VFD (21 HP) |
| 21 | 018PE-12 | Moisture Sample Airlock | 3/4 | FVNR |

**NOTES:**
ALL MOTORS 460VAC, 3Ø, 60Hz
ALL CONTROL POWER 230VAC, 1Ø, 50Hz

**LEGEND**
ONIX SUPPLIED
CUSTOMER SUPPLIED
018PE-41 EQUIPMENT I.D.
M 8 MOTOR AND MOTOR NUMBER REFER TO MOTOR LIST FOR HORSEPOWER

| REV | BY | APP | DATE | DESCRIPTION |
|---|---|---|---|---|
| E | MLB | RWA | 12/12/07 | FUEL DELIVERY AND SCALPING BY PLANTATION, ADDED MOTOR LIST |
| F | MLB | CV | 12/13/07 | CHANGED FUEL FEED SYSTEM |
| G | MLB | CV | 12/19/07 | ISSUED FOR APPROVAL |
| H | MLB | CV | 1/2/08 | CYCLONE DISCHARGE REVERSING SCREW CHANGED FROM 5 TO 15 HP |
| J | MLB | CV | 1/11/08 | ADDED SENSORS, CHANGED FUEL INCLINE AUGER TO VFD |
| K | MLB | CV | 5/9/08 | CHANGED I.D. FAN TO 350 H.P. |
| L | MLB | CV | 6/27/08 | ADDED LS TO FUEL BIN |
| M | MLB | CV | 9/10/08 | ADDED INTERLOCK SIGNAL TABLES |
| N | DK | CV | 5/01/09 | CONTROL ENHANCEMENT |

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| | |
|---|---|
| SCALE | N.T.S. |
| DATE | 10/20/07 |
| DRAWN | MLB |
| CHKD | RA |
| APPD | CV |

PLANTATION ENERGY

P&ID

DRAWING No. 018PE-002

REV. N

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