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APPLICATION NOTE

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Closing The Loop

Remote Controlled Excavator Mounted Line Drilling Machine



The general-purpose programmable controllers are designed to withstand the real-world environmental demands of the off-highway mobile market. They can be used as stand-alone controllers, or for integrating into a CAN network with other devices. They feature flexible input and output configuration, and are capable of driving up to 3.0 Amps per output pin

Customer: APL Drilling and Mining Equipment's Tiruchengode T.N

Year of Commissioning of system: October 2015

The Remote Controlled Excavator Mounted Line Drilling Machine consists of such 3 ECU's. Like Excavator ECU, Trimming ECU & Drilling ECU.

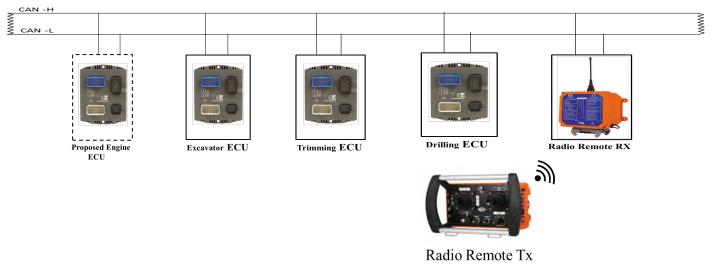
In Excavator ECU eight proportional valve and some Solenoids are controlled using Radio Remote. Eight proportional outputs like Swing Left, Swing Right, Stick Boom-In, Stick Boom-Out, Tilt Front, Tilt Behind, Boom Up, Boom Down.

In Trimming ECU fourteen Digital Outputs, like Left Vertical Leg Up, Left Vertical Leg Down, Right Vertical Leg Up, Right Vertical Leg Down, Vertical Swing Left, Vertical Swing Right, Zoom In, Zoom Out, Tilt In, Tilt Out, Horizontal Swing Left, Horizontal Swing Right, Left Leg Selector Valve, Right Leg Selector Valve.

In Drilling ECU Digital Outputs, like Side Movement Right, Side Movement Left, Flushing Drill 1 & 2, Feed Pressure Drill 1 & 2, Drill 1 Feed Extension Up & Down, Drill 2 Feed Extension Up & Down, Feed return Drill 1 & 2, Rotation CCW Drill 1 & 2, Rotation CW Drill 1 & 2, Drill Steel Open & Close Drill 1 & 2.

The Electronic Control Unit and Radio Remote Receiver is configured Using CAN Protocol.

System Configuration



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Remote Controlled Excavator Mounted Line Drilling Machine

The signal from Radio Remote Transmitter is transmitted through radio waves, which is received in Radio Remote Receiver , and then passed on to specific ECU through CAN Bus.

Depending upon the signal received from CAN Bus specific functions are executed.

Scope of Supply

- ♦ Electronic Control Unit (ECU)
- Manifold Blocks.
- ♦ Pressure Sensors
- ♦ Temperature Sensors
- ♦ Control Cabinet
- ♦ Radio Remote



Radio Remote Reciever



Electronic Control Unit (ECU)



Radio Remote Transmitter



Setting the system for Drilling using Radio Remote

Contact Details:

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