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Technical Bulletin #TB114

Date: July 31, 2017

Subject: 140B Methane Monitor Solid-State Control Relay Application

The CSE 140B Methane Monitor power supply contains a control relay (K1) that is used to de-energize mining machinery when methane concentrations exceed the allowable threshold. The power supply may be configured with one of two types of K1 control relays: mechanical or solid-state. A 140B Methane Monitor containing a solid-state K1 control relay must only be installed on alternating current (AC) control powered machinery. The solid-state K1 relay is not rated for switching direct current (DC). **A 140B Methane Monitor power supply containing a solid-state K1 control relay installed on DC powered equipment may fail to de-energize equipment when methane concentrations exceed the allowable threshold.**

For applications that require de-energizing machinery utilizing DC control power, the 140B Methane Monitor must be equipped with a mechanical K1 control relay.

NOTES:

The 140B Methane Monitor Owners' Manual must be read and understood completely before operating or servicing. Operating and servicing must be done by qualified personnel only. Service by unqualified personnel or substitution of components may compromise the intrinsic safety of the 140B Methane Monitor.

Service personnel must always verify compatibility of the 140B Methane Monitor and machinery prior to installation. After installation, service personnel must also initiate a system diagnostic test (automatically after system start-up or by pressing the test button on the right side of the control unit) to verify that the 140B Methane Monitor de-energizes the machinery at the high alarm setpoint. If the 140B Methane Monitor does not de-energize the machinery power the system may not be compatible and should not be used on the machinery without first consulting CSE Corporation.

If you have any questions please contact customer service at 412-856-9200.