

FOR IMMEDIATE RELEASE

### **Locally Developed Intrinsically Safe Barriers Pave The Way For Safe Communication In Hazardous Mine Areas**

Stringent occupational health and safety (OHS) regulations prohibit the use of non-compliant equipment on coal mines, chemical and petro-chemical plants. With the risk of explosions always top of mind, management complies with legal requirements by use of intrinsically safe (IS) technology within the working environment.

“Booyco Electronics supplies a range of intrinsically safe barriers, tailored to the specific needs of these extremely safety conscious industries. As demands increase for more advanced technology, we are now implementing more Ethernet-based equipment in the mining, chemical and petro-chemical environments,” says managing director of Booyco Electronics, Anton Lourens.

This new range of intrinsically safe barriers, which are approved for ETH, USB and RS485 based equipment, complement the company’s ISS (Intrinsically Safe Solutions) product range for customers with a high requirement for IS equipment.

Lourens points out that these barriers are designed, engineered and built specifically for the South African mining industry. “It is important to consider the idiosyncrasies and rugged conditions of the local mining sector. Most available barriers are fully imported and are not specifically designed for local conditions. Not only do we custom manufacture our barriers, but we are able to contain costs and provide instantaneous support for our products.”

The intrinsically safe barriers are suitable for use in all hazardous areas and are engineered to be compact, easy to use and robust enough for the surface and underground mining sectors.

“A major advantage of the Booyco range of barriers is that they are a single-device barrier as opposed to other available options where two devices are used to create a barrier. In essence, each unit serves as an isolation barrier on a communication bus between a non-hazardous and hazardous area in a mine or plant environment,” Lourens explains.

The barriers, approved for Group I and IIC, are powered from an 8 to 36 Volt DC power supply and suitable for use in Zone 1 and Zone 0. The Ethernet barriers are configured to accept one input and two outputs, which allows a single barrier to be connected to more than one piece of equipment.

Three connection variations are available on the Booyco Electronics intrinsically safe barriers: IS RS485 barrier, IS USB barrier and IS Ethernet barrier. Any RS485 based communication can be isolated by the first unit, as it is protocol independent. The IS USB barrier is powered by a computer's USB port, which eliminates the need for an additional power supply. One would typically use these barriers to connect non-IS USB type devices to IS USB based equipment.

The IS Ethernet barrier facilitates Ethernet communication between IS areas and non-IS areas. "These barriers enable the user to secure a connection between a PC and an IS rated machine or a PLC in a hazardous area. For example, the unit could be used to connect an IS rated laptop to IS rated equipment to provide programming or to perform condition monitoring," Lourens says.

"Because of the legislation governing applications in hazardous areas, communication with computers in these areas was previously extremely problematic. The IS Ethernet barrier from Booyco Electronics overcomes this issue and allows normal operations to be performed with computers in these previously inaccessible areas," according to Lourens.

The IS Ethernet infrastructure allows the options of adding wireless access points to connect to IS mobile computers, cameras for operations, safety and security, RFID for asset and people tracking and VoIP telecommunications as required at a future date.

"We foresee that as technology progresses, our intrinsically safe barrier product range will advance accordingly. We will remain ahead of international competitors by anticipating and meeting the very specific local requirements. Booyco Electronics is geared towards producing products that fully comply with local and international OHS regulations and quality standards, a factor that places us in a favourable light with our mining customers," Lourens concludes.

INTRINSICALLY SAFE BARRIERS PIC 01 : The Booyco IS certified USB to RS485 converter is readily available from Booyco Electronics.

INTRINSICALLY SAFE BARRIERS PIC 02 : Booyco's RS 485 Barrier.

INTRINSICALLY SAFE BARRIERS PIC 03 : Booyco's Ethernet Barrier (top) and USB Barrier (bottom).

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