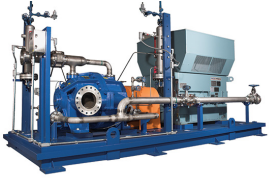# Safely Monitoring & Optimizing Flare Gas Systems

aegex10™ Intrinsically Safe Tablet + ABLE FlareMaster

Flare Gas Monitoring

Flare gas systems are used to burn off and dispose of waste and excess gases in oil and gas production, refining and storage operations worldwide. Flare stacks are installed in oil refineries, chemical process plants, well drilling operations, offshore platforms, transport ships, gas distribution infrastructure and landfills as part of gas waste and safety systems. Accurately and reliably measuring flare gas is critical for maintaining safe working environments that protect people, assets and the environment from potentially hazardous combustible gases.

Flare gas flow meters or flare gas meters (FGM) are intelligent tools that report on flared gases, detecting leaks and alerting personnel about anomalies in processes, in order to comply with safety and environmental reporting. Keeping all relevant personnel informed about flare gas conditions is paramount to safety and efficiency in any oil and gas operation.

With the aegex10™ Intrinsically Safe Tablet and ABLE FlareMaster, oil and gas operators can safely monitor and optimize their flare gas systems.

Improve monitoring accuracy and compliance

Using the aegex10™ intrinsically safe tablet as a hazardous areaapproved interface with the FlareMaster meter, personnel can optimize the performance of ultrasonic flare gas meters by significantly reducing measurement uncertainty and ensuring sustainability of measurement during the most challenging process upsets and anomalies.

The operator can view on the Aegex tablet a real-time display of process data, including:

- ▪ *mass and standard volume flow*
- ▪ *velocity*
- ▪ *process temperature and pressure*
- ▪ *historical records of measured and calculated data*

Typically, this monitoring will improve accuracy by a factor of 5%, consequently preventing over-reporting of greenhouse gas emissions and assisting with Tier 3 compliance.

aegex10™ Intrinsically Safe Tablet

The aegex10™ Intrinsically Safe Tablet enables personnel in ATEX/IECEx Zone 1 or C1D1 hazardous areas to safely manage data and conduct real-time communications. The certified, lightweight, rugged, Windows 10 tablet is purpose-built for hazardous environments.

- **Intrinsically Safe C1D1, ATEX/IECEx Zone 1**
- **4G LTE, WiFi**
- **Bluetooth, NFC, GPS**
- **IP65**
- **10ºC to +50ºC operating temperature**
- **12-hour battery**
- **980g / 2.16lbs**
- **Optional hands-free carrying case, stylus**
- **IoT ready**

ABLE FlareMaster

ABLE Instruments & Controls Ltd.'s FlareMaster DataFlow application running on the Aegex tablet gathers and analyses data in conjunction with the **FlareMaster Enhanced Density Module (EDM)** to provide the flare gas meter with full flare gas density inputs. The application presents a real-time display of flare gas process data, including mass and standard volume flow, totalized flow, velocity, process temperature and pressure.

✓ **Onsite visualisation and control** via aegex10 ATEX Zone 1 / Class I Div 1 Tablet

✓ **Reliable/repeatable** flare gas flow measurement even during process upsets

✓ **Enhanced accuracy** flow velocity measurement up to 1000m/sec

✓ **Remote interrogation and parallel monitoring** of multiple systems

✓ **Customizable graphs** for process parameters

✓ **Remote** alarm setting

✓ **Live process installation** without shutdown

✓ **Service primary meter** without loss of measurement

✓ **Dual redundancy** of measurement

✓ **Flow calibration** curve and linearization functions

✓ **Meter Compatibility**: Any ultrasonic flare gas meter

✓ **Operating Temperature:** -100°C to 350°C

✓ **Pipe Sizes**: 2 inches to 82 inches

Monitoring with FlareMaster results in a significant reduction in flare gas measurement uncertainty.

Aegex Technologies provides intrinsically safe solutions for the world's most hazardous industrial environments in oil and gas, chemical, mining pharmaceutical, public safety, utilities and other industries with explosive environments. Aegex mobile and IoT solutions bring real-time connectivity to hazardous areas, helping organizations harness the power of data to optimize efficiency, safety and productivity.

ABLE provides instrumentation and control systems for the Process, Research, and Environmental Industries by applying the most suitable instrument technologies to meet the demands of the measurement. We affect comprehensive engineering and support capability throughout the process and over the lifetime of the equipment. FlareMaster is able to data-mine and harvest the myriad signals routinely produced by a flare gas meter that are not normally visible or accessible to a standard, associated flow computer.

www.aegex.com

www.able.co.uk