

## DATA LOGGING SYSTEM: INTRINSICALLY SAFE SINGLE CHANNEL UNIT

A versatile instrument option for applying CEION<sup>®</sup> technology that allows data to be collected at low cost, with minimal effort and in all types of location without permanent cabling.

Ideal for use where optimum performance is required on off-line applications such as inhibitor testing and corrosion rate auditing. Also ideal for locations where installing power/data cabling is not cost effective

- Requires no power and data cabling
- Logs metal loss and temperature measurements
- Simple data recovery system
- Simple configuration method
- ATEX certified for Intrinsically Safe service in hazardous areas
- Battery pack may be changed in hazardous area

### DESCRIPTION

The Data Logger System comprises an intrinsically safe data logger instrument that is field mounted within 3m (10ft) of the intrusive probe. Battery power is supplied by an internally mounted battery pack containing Alkaline, Lithium or rechargeable battery cells. This pack may

be removed and replaced in the hazardous area to allow safe battery change without dismantling the instrument. Measurements of the corrosion rate of the sensor element are made using high sensitivity CEION<sup>®</sup> metal loss technology. Measurements are made and stored, with the associated temperature values, in the on-board memory. The resolution is in excess of 100 times that of conventional ER, giving either very fast response or long sensor life.

The continuous temperature measurement gives an easily verified record to provide confirmation that the instrument has been operating correctly during periods when no corrosion has taken place.

The instrument is configured using a simple plug-in module, supplied with the probe, to ensure maximum resolution and accuracy. The unit auto-configures to the module coefficients each time it is powered up.

Data recovery is via a hand held data upload (HHU) device. The HHU is connected to the instrument data port and uploads all stored files. When all instrument uploads are completed the resulting files are downloaded to a PC in the safe area. The output consists of a metal loss and temperature file with time/date. The HHU upload kit, which includes data display software and cables, is compatible with other Cormon instruments. See data sheet CMEI 022. HHU kits and other accessories must be ordered separately.



## PROBES

Probes may be selected from the options set out in data sheet CMEP 023. Only CEION® compatible probes may be used. Probes and other accessories must be ordered separately.

### CEION® TECHNOLOGY

- Very high resolution metal loss measurement from intrusive probes
- Real-time rate changes detected even in low corrosion environments
- Works in hydrocarbons, does not require conductive phase
- Direct temperature measurement
- Advanced sensor design and temperature compensation
- Compatible with standard on-line process access systems
- Carbon steel or alloy elements, wide range of thicknesses

### SPECIFICATIONS

*Battery:* (logger) Alkaline, Lithium or Rechargeable (Nickel Metal Hydride) packs.  
*Temperature:* ambient -40C to +50C (IS certification limits)  
*Resolution:* 10 ppm of element thickness (1/100000)  
 Temperature resolution ±1°C  
*Probe cable:* 3m (10ft) integral with IP67 connector  
*System intrinsic safety:* Eex ia IIc T3  
*ATEX Certificate:* ITS03ATEX21262  
*Size:* Data logger case dimensions 220 x 118 x 90mm (8.7" x 4.7" x 3.5")  
*Housing material:* glass filled polyester  
*Protection rating:* IP66 (NEMA 4x)  
*Capacity:* typical data logger capacity 6 months of hourly readings

## MAINTENANCE

No routine maintenance of the instrument is required other than periodic replacement/recharge of the battery pack. Sensors may become fouled and require cleaning or require periodic replacement after the element life is consumed.

## PRODUCT CODES

| CEI        |      |                |             |                 |                        |                |
|------------|------|----------------|-------------|-----------------|------------------------|----------------|
| Instrument | Type |                | Function    |                 | Option                 |                |
|            |      | TL             | Data Logger | HR              | Ceion® high resolution | PA<br>PL<br>PR |
|            | TH   | Hand held unit | DU          | Data upload kit |                        |                |

| CEA                     |      |                             |                  |  |
|-------------------------|------|-----------------------------|------------------|--|
| Instrument<br>Accessory | Type |                             | Option           |  |
|                         |      | TL                          | Logger Accessory | PA<br>PL<br>PR                                     |
|                         | EB   | Protection box              | WL               | Stainless steel mounting box                       |
|                         | PC   | Test & Calibration          | TK               | 6 pin test probe with matched configuration module |
|                         | CU   | Charger unit for 'PR' packs |                  |  |

Technical support and sales assistance are available for this product from Sales@cormon.com or from our representative network (see website for list). Our FAO group can offer you system design, optimisation and operational services to realise the full value of your monitoring system. Contact FAOgroup@cormon.com or visit the website for further information.

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