

Kairos

Kairos by Pietro Fiorentini is the datalogger for the continuous remote monitoring of electrical parameters in cathodic protection systems. It records all key operating values, including E_{ON} / E_{OFF} measurement cycles on buried coupon. Kairos is natively integrated with S2B platform.



Kairos complies with the main international standards ISO 15589-1 and EN 13509, that set out the monitoring principles and measurement techniques of the effectiveness of cathodic protection on buried metallic structures.



Gas compression /
booster station



City gates



District stations

Features	Values
Ambient temperature	from -25°C to +60°C
Input impedance	>10MΩ (CH1, CH3, CH4) >1MΩ (CH2)
Data Logging	- Continuous recording: 86400 points/day - Statistical aggregation per minute: MIN, MAX, AVG, ST.D., TFL +/- (Time Fraction Low/High), NAL +/- (Number Above/Below Alarm Limit) - Storage duration: 2 years (daily), 4 days (1-second) data retention.
Configurable parameters	Transmission interval, channel full scale, thresholds, acquisition sampling times and elaboration
Integrated cyclic switch	Remotely fully configurable mechanical or SSR switch
Channel connection type	Bolt terminals or Phoenix connector
Ingress protection	IP54
Optional accessories	External Power Supply Adapter, Back-up Battery, Power Cables, Labelled Interface Cables with colour mapped headings, External Antenna, External Shunts (1,5A, 15A or 30A)
Local communication	BLE
Remote communication	Internal modem 4G+2G/GPRS (internal antenna or optional external antenna)
Battery life ¹	- Main battery: up to 3 years - Back-up battery (when powered by external power sources²): up to 60 days
External Power Supply ²	230V AC
Main dimensions	215x85x80 mm
⁽¹⁾ Battery life depends on several factors, including ambient temperature, logging frequency, and transmission interval. ⁽²⁾ Connection to an external power source requires an optional external power supply adapter.	

Table 1 Technical features

Measurement Channels DC/AC

Channel	Measuring type	Accuracy (Selectable Full Scale)
CH1	E_{ON} / E_{COUPON} Potential + E_{OFF} cyclic switch	0,2% ($\pm 0,2V$) 0,02% ($\pm 2V, \pm 10V, \pm 20V$)
CH2	I_{COUPON} (through the internal shunt)	0,5% ($\pm 25mV, \pm 50mV$) $\pm 100mV, \pm 150mV$)
CH3	V_{OUT} High voltage	0,02% ($\pm 2V, \pm 20V$) 0,2% ($\pm 50V, \pm 100V$)
CH4	Low Voltage or I_{OUT} (through the external shunt)	0,2% ($\pm 0,2V$) 0,02% ($\pm 2V, \pm 10V, \pm 20V$)

Table 2 Channel list

Approvals

Kairos is designed in accordance with EN 13509 (Cathodic protection measurement techniques) and follows the requirements of ISO EN 15589-1 (Petroleum, petrochemical and natural gas industries — Cathodic protection of pipeline systems). The device meets the requirements of EN 60529:1991+A1:2000+A2:2013 (Degrees of protection provided by enclosures. IP Code) and IEC 62262:2002 (Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts. IK Code)

Kairos is CE marked and complies with 2014/53/UE (RED), 2012/19/EU (WEEE 2), 2014/35/EU (Low Voltage) and 2011/65/UE (RoHS 2).



ISO EN
15589-1



EN
13509



UNI
10950



Low
Voltage



WEEE 2



RoHS 2



RED



IP54



IK07

Kairos: competitive advantages



Easy installation and maintenance



Local communication with BLE



Optional external power supply



Electrical safety design



Selectable Full Scale



Integrated cyclic switch for configurable and optimized OFF measurements



4G and 2G network technologies



Protection against lightning-induced overvoltage