DIWICON-K
DW 5844 K

4 CHANNEL MINIMUM POINT CATHODIC PROTECTION COMMUNICATION UNIT

The DW 5844 K device measures minimum point cathodic potentials. The instrument has four channels through which it is able to receive data from up to four metering points at the same time. The metering results are transferred to the center by means of GPRS based cyclical communication. The instrument is designed to be buried underground and has a high capacity battery unit that allows autonomous operation for up to 5 years.

CHARACTERISTICS

- Data collection
- Parallel metering of 4 independent cathodic potentials
- GPRS communication

SPECIAL CHARACTERISTICS

- Autonomous operation with up to 5 year power supply
- 24 bit resolution
- Configurable polling time

DESIGN

- Operational temperature range from -30°C to +60°C
- Protection: IP68 (IEC 529 conform)
- Designed for underground installation

APPLICATION

The DW 5844 K is used in such places where only the monitoring of the cathodic potentials of the metering point is necessary, but regulating and controlling functions are not required. The device collects information from 4 metering points and forwards it to the central server once per day. Once connected to the metering points, it is burried. Its high capacity power supply makes operation possible for up to 5 years with daily polling.

TECHNICAL DATA

GENERAL CHARACTERISTICS

Supply voltage:	3.6 V DC
Supply capacity:	140/280 Ah
Operational temperature:	-30°C to +60°C
Storage temperature:	-40°C to +100°C
Humididty:	5% to 95% RH
Vibration:	2.1*g*–15–150 Hz ±2.5 mm amplitude
Dimensions (LxWxH):	220x120x90 mm
Protection:	IEC529 conform IP68

DIGITAL INPUTS

Number of digital inputs:	4
Shut-down relays:	4
Resolution:	24 bit
Input impedance:	1 GOhm
Voltage range:	0 to 2.5 V
Symm. over-voltage protection:	Yes

COMMUNICATION PARAMETERS

Integrated GSM modem:	ENFORA 0116
Frequency bands (MHz):	900, 1800, 1900
Download speed:	Max. 40 kbit/s
Upload speed:	Max. 27 kbit/s
Communication time delay:	Max. 1200 ms
Communication standard:	ETSI GSM Phase2
Channel distance:	200 kHz
Number of channels:	173 Carrier*8 (TDMA)
Modulation:	GMSK
Receiver sensitivity:	<-102 dBm
Output performance:	Class 4 / GSM900 2 W (33dBm) Class1 / GSM1800 1W (30 dBm)
Switch-over between GSM900 & GSM1800:	Automatic

OPERATION

The DW 5844 continuously meters the potential of the protected pipe section in comparison to references by means of a 24 bit A/D converter. This data is then sent to the central database via the GSM communication module at pre-set intervals, with open protocol, once a day. To ensure dependable operation, the instrument regularly sends alive signals. This also simplifies remote configuration and troubleshooting.

ADJUSTMENTS

Operational parameters can easily be configured through the Web interface by means of the database running in the dispatcher center along with the suitable permissions.

The device configurations which can be made include:

- Frequency of the transmission of measured data
- Frequency of alive signal transmission
- Integration time of analog readings
- Threshold limit values for abnormal changes
- Communication parameters (GPRS, IP address, port, user)

DIAGNOSTICS

The transmitted data also includes various diagnostic values related to the operation of the module:

- Temperature
- Status of battery (voltage, life expectancy)
- Communication error statistics

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