GERCHAMP

G-TH-Ex

IECEx

Explosion-proof Battery Monitoring System

- Explosion-proof
- High-accuracy SOC/SOH
- AI data analysis
- Advanced low power consumption design

Overview

G-TH-Ex distributed explosion-proof single battery monitoring module are mainly applied in the petroleum and petrochemical industries. Each module for a cell supports the monitoring of the cell voltage, internal resistance and temperature. Easy for installation and maintenance, the module meets the requirements of the relevant explosion-proof standards of IECEx/ATEx, and is used in the environment of category IIC.

Features

1、With 2-channel communication ports, support ring communication connection;
2、Adopt distributed single-module design;
3、Flexible configuration and strong expansion;
4、Adopt low-consumption design, with the minimum consumption of 15mW;
5、Ensure the flame-retardant materials for the module's shell and cables;
6、Support high stability and long-term running;
7、Provide reverse protection function;
8、Support MODBUS protocols.

Composition

GCM-HN

Max manages 6 battery strings, max manages 600 batteries 1 GCM-HN module/1 system

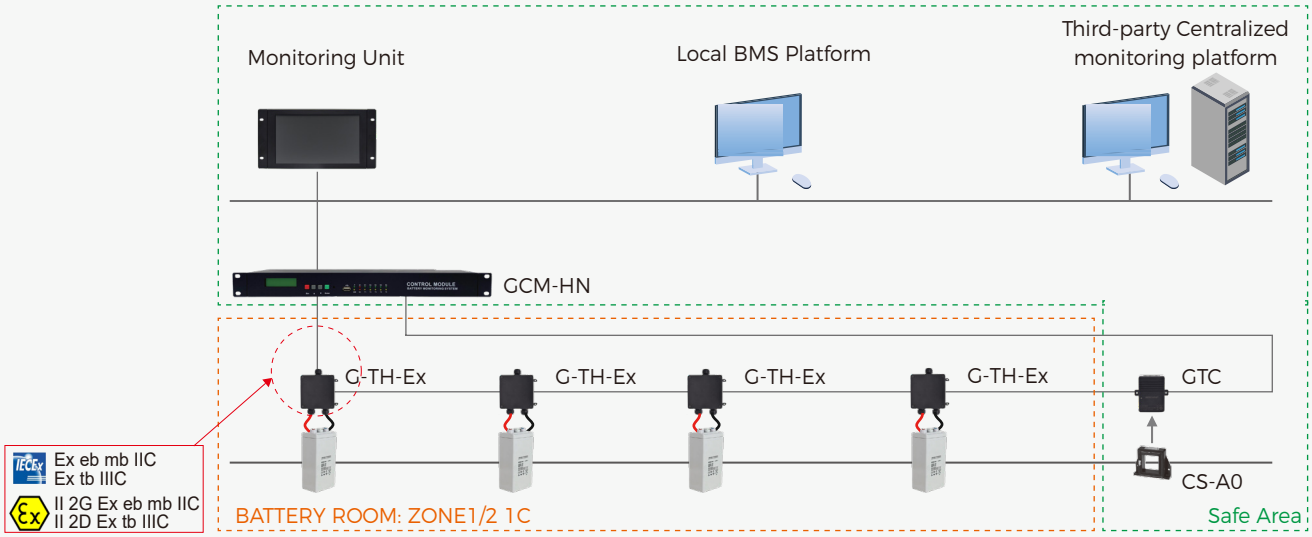
G-TH-Ex

Monitoring cell voltage, cell internal resistance,cell negative pole temperature
1 G-TH-Ex module/1 battery

GTC

Monitoring 3 charge/discharge current and 2 ambient temperature
1 GTC module/1 battery string

Topology



Parameter

Working Environment

Working environment: -20～+40℃ (0~2000m altitude)
Relative humidity: 5～95%
Atmospheric pressure: 80～110kPa

Monitoring Aability

Support monitoring cell voltage, negative terminal temperature and internal resistance for a single battery

Power Requirement

Powered by the monitoring module
1.2V consumption current≤20mA
2V/2.4V consumption current ≤13mA
4.8V/6V/12V consumption current ≤7mA

Protection

Support two-level protection, reverse connection protection, optoelectronic isolation, and power-on self-test

Flame Retardant

Meet UL94-V0 requirement

Port & Protocol

UART
MODBUS/RTU

Application Scenarios

Widely used in petrochemical, chemical and offshore wind power and other industries

Measurement

Content	Range	Accuracy	Resolution
Cell voltage	1.2V/2V/2.4V 4.8V/6V/12V Capacity<3000AH	±0.1%	0.001V
Cell internal resistance	50～65535μΩ	±2%	1μΩ
Negative terminal temperature	-5～+99.9℃	±1℃	0.1℃

Certification

ATEx IECEx in progress
Ex eb mb IIC T5 Gb & Ex tb IIIC T100℃ Db
II 2G Ex eb mb IIC T5 Gb & II 2D Ex tb IIIC T100℃ Db

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