



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 is 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.




GCM-07NM

Manages max 6 battery strings, manages max 600 batteries 1 GCM-07NM module/1 system



G-TH-Ex

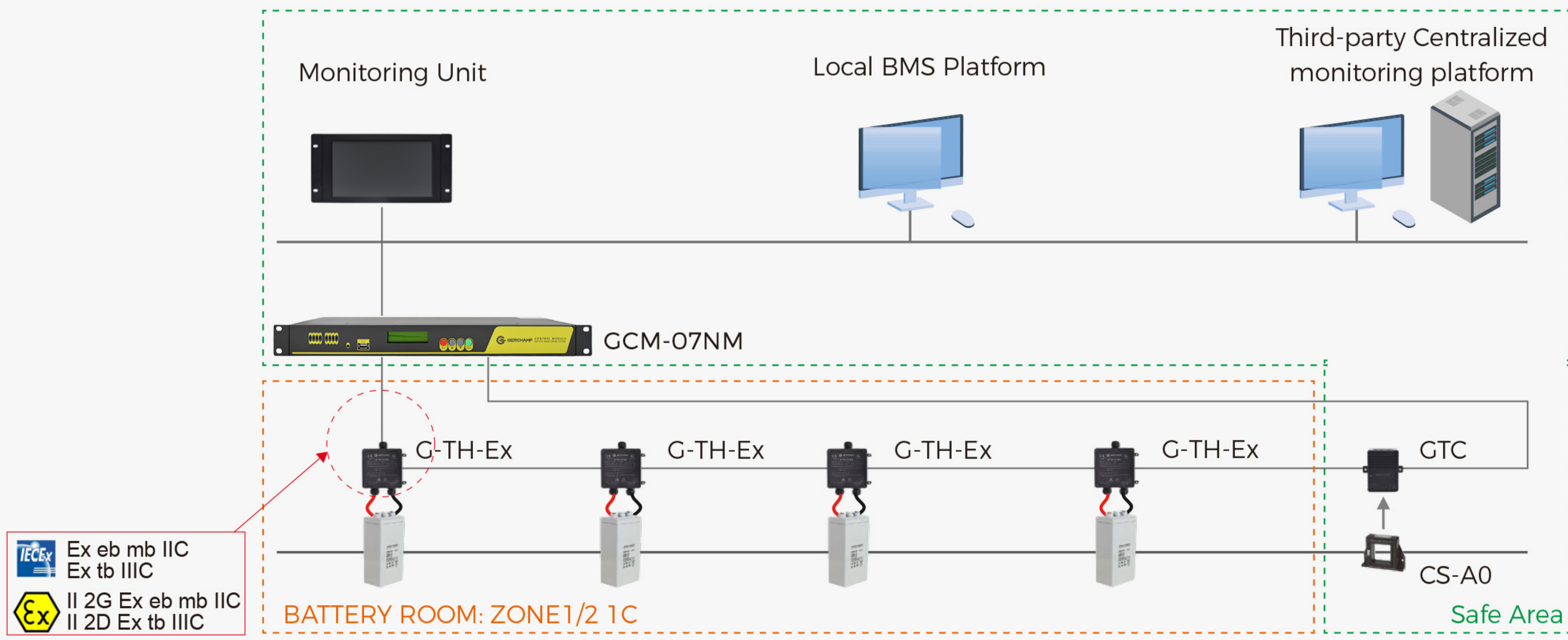
Monitoring cell voltage, cell internal resistance, cell negative pole temperature
1 G-TH-Ex module/1 battery



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 Ability
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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