Proton Precession

Magnetometer / Gradiometer (GSM-8)

The GSM-8 is one of GEM's legacy products dating from the company's formation and initial commercial success in the 1980s. Although its internal electronics are dated, the GSM-8 remains "an effective magnetometer to use in the field" particularly by professionals with limited budgets or needs for basic and robust instrumentation.

Key technologies include:

Data available in digital or analog (optional)

World's smallest and lightest proton precession magnetometer

Liquid Crystal Display for excellent visibility even in brightest sunlight

Rugged, all metal package capable of excelling in all environments

Good gradient tolerance of 5000 nT / m for surveying near highly magnetic targets and cultural objects

Extremely low power consumption to facilitate long and productive work

And all of these technologies come complete with the most attractive savings and warranty in the business!



GSM-19T Proton Precession console with sensor and cable. Can also be configured with additional sensor for gradiometer(simultaneous) readings.

Developed in the early 1980's, the GSM-8 was the precursor of many of GEM's subsequent product offerings.

The magnetometer was commercially successful providing a high sensitivity alternative to other offerings on the market. Its commercial success led to the development of the first GSM-9 Overhauser magnetometer and the rest is history!

Despite its two-decade old technology, the GSM-8 remains a viable option for budget conscious consumers of magnetometry solutions based on the systems' data quality and robustness. It also remains the world's lightest and most compact 1 Gamma proton precession magnetometer.

The GSM-8 is a lightweight, low power consumption proton precession magnetometer for hand-held and base station use.

It is also adaptable for various types of applications, including academic, environmental and engineering (cable detection and tracking, etc.), and other near surface roles such as treasure hunting.

A rugged, wide-temperature-range Liquid Crystal Display (LCD) allows for easy reading in bright sunlight and an all-metal package ensures lasting use in rough field conditions.

The flexible design of the electronics enables a wide selection of cycling speed and other necessary features for almost universal Earth's field measurements.

A complete self-test feature ensures reliable operation and early warning of instrument malfunction due to interferences, such as excessive field gradient, power line or other electromagnetic radiation, or internal breakdown.

Some of the key features are:

* 1 gamma resolution and accuracy; 0.5 gamma optional
* Worldwide dynamic range
* High gradient tolerance
* Excellent display visibility
* Display active between readings
* World's lightest and most compact 1 gamma proton magnetometer
* External trigger and digital output standard, analog output optional
* Rugged, all metal package
* No-lock indication
* Polarize indication
* Non-magnetic battery pack optional

Specifications

SENSITIVITY:	1 gamma standard or 0.5 gamma optional
ACCURACY:	+ / - 1 gamma over operating range
DYNAMIC RANGE:	20,000 to 100,000 gamma in 23 overlapping steps
GRADIENT TOLERANCE:	Up to 5000 gamma / metre
OPERATING MODES:	MANUAL, push-button, new reading every 1.85 sec.,display active between readings CYCLING, push-button, 1.85 sec. period SELF-TEST cycle, push-button, 7 sec. period
OUTPUT:	VISUAL, 5-digit 1 cm (0.4”) high Liquid Crystal Display, visible in any ambient light DIGITAL, Multiplied precession frequency and gating pulse
EXTERNAL TRIGGER:	Enables externally triggered cycling with periods longer than 1.85 sec. (cycling faster than1 per sec. optional)
POWER REQUIREMENTS:	10 to 18 V DC, 8 Ws per reading
POWER SOURCE:	INTERNAL: 12 V 0.75 Ah NiCDd rechargeable battery, 3000 readings from fully charged battery EXTERNAL: 12 to 18 V
BATTERY CHARGER:	Input: 120 / 220 V, 50 / 60 Hz, Output 75 mA DC constant current
OPERATING TEMPERATURE:	-40 to 50 degrees C
DIMENSIONS:	CONSOLE: 15 x 8 x 15 cm (6 x 3-1/4 x 6”) SENSOR: 14 x 7 cm dia (5-3/4 x 2-3/4” dia)
WEIGHT:	2.7 kg (6 lb) complete, 2.3 kg (5 lb) in backpack mode
STANDARD PACKAGE:	CONSOLE, with batteries, carrying harness SENSOR with cable STAFF, collapsible or sectional
STANDARD ACCESSORIES:	BATTERY CHARGER, MANUAL, CARRYING CASE
GUARANTEE:	2 years from the date of shipping

GEM Systems, Inc.
135 Spy Court
Markham, ON
Canada L3R 5H6
Tel: 905 752 2202
Fax: 905 752 2205
Email: info@gemsys.ca
Web: www.gemsys.ca

Rev. 03/12/2007