

Easergy Range - G200

Remote Terminal Unit for Flite 116-SA



APPLICATION : FAST LOCATION OF FAULTY CIRCUITS

As the Flite 116 is a low power consumption unit, the G200 is used as a gateway to link the Flite 116 FPIs to any SCADA.

The G200 unit is mounted on an overhead line pole close to the Flite 116 radio Fault Passage Indicator and communicates:

- On one side with the Flite 116 units, via a spread spectrum licence-free radio 915 MHz (918 – 919,2 MHz) with low power consumption
- On the other side with the distant acquisition system through a long range communication medium:
 - mobile telephone network (GSM/GPRS)
 - others via the local RS232 port.

BASIC FUNCTIONS

The G200 basic functions are:

- Date and time stamping of all events from Flite 116
- Sending all the requested events to the SCADA
- Remote parameter setting of Flite 116 units
- Local parameter setting of Flite 116 and G200 units via the RS232 local port
- Storage capacity: 100 stamped events.



Customer Benefits

- Remote monitoring of up to 9 overhead lines (currents, faults, etc.)
- RTU with open protocol (DNP3, IEC 870-5-101, Modbus)
- Communication via GSM/GPRS
- Pole-mounted or inside RTU
- External power supply or solar panel

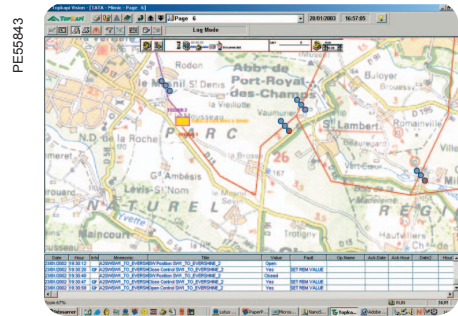
DESCRIPTION

The G200 is available in 3 housings:

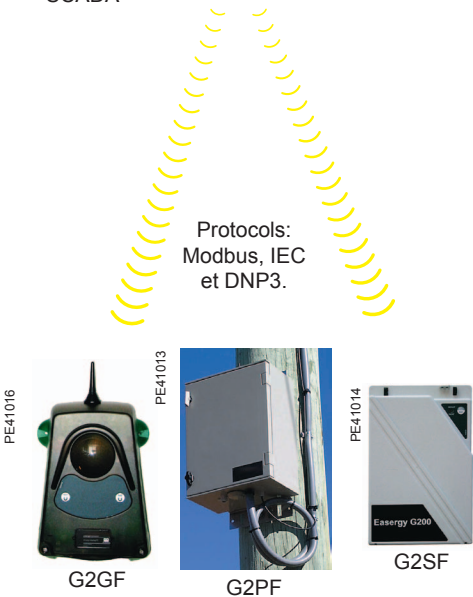
- Pole-mounted enclosure, able to house a battery (ex: 12V/7Ah), a battery charger, with external AC supply and a communication modem (ref. G2PF)
- Pole-mounted small size box, with external DC supply, either from solar panel or other (ref.G2GF)
- To be connected to another RTU or part of a switch local control cabinet (ref. G2SF).

The main board includes:

- A short range low power spread spectrum radio for communication with the Flite 116
- For long range communication:
 - one communication medium with its embedded modem (GSM/ GPRS) or
 - one RS232 port for external communication (for ref. G2PF & G2SF only).
- One RS232 local parameter setting port
- 6 digital inputs, for alarm information to SCADA
- 3 digital dry contact outputs set to repeat phase faults (phase A, B, or C) from Flite 116 or short range communication faults or battery faults for transmission by an external RTU.



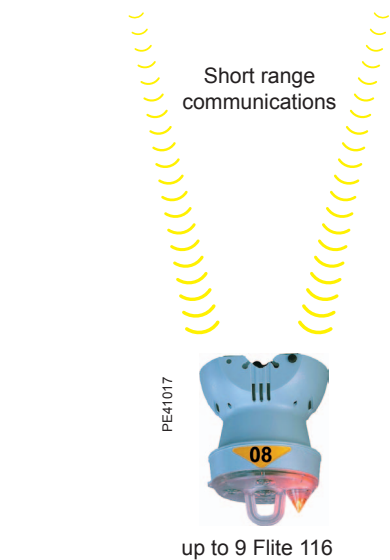
SCADA



Solar panel for G2GF



PE55848



G200 characteristics

Local radio network

Type	Spread spectrum low power licence-free
Frequency	915 MHz (918-919,2 MHz - for other frequency: please ask)
RF output	FCC part 15.249 and AS/NZS 4268:2003 approved radio

Long range communications

Communication media	Embedded GSM/GPRS modem (G2GF only)
Communication protocol	DNP3 serie/IP, IEC 870-5-101, Modbus serie/IP

Measurements

Type	<ul style="list-style-type: none"> ● I min, I max, I mean and I inst ● MV presence statistics
------	---

HV line monitoring

Number of HV lines monitored per G200	9 phases (9 Flite 116)
Max. distance with Flite 116	100 m
Earth fault	<ul style="list-style-type: none"> ● Earth fault indication (phase A, B, or C), (beginning time, ending time)
Phase fault or I max	<ul style="list-style-type: none"> ● Phase fault indication (phase A, B, or C), (beginning time, ending time)
Transient fault detection if enabled	Transient fault indication and time stamping
Voltage loss	<ul style="list-style-type: none"> ● Voltage loss indication (phase A, B, or C) and time stamping ● Voltage recovery time indication

Equipment monitoring

Local radio communication faulty	Communication with Flite 116 no.x faulty (after a number of attempts) and time stamping
Flite 116 battery alarm	Battery low in Flite 116 no.x and time stamping
G200 battery alarm	Battery low in G200 and time stamping (only for G2PF)
AC supply alarm	External AC supply off (only for G2PF)

RTU inputs/outputs

Inputs	6 digital inputs
Outputs	3 relay outputs 220 Vac/1 A

Local archive

Date and time stamped events and measures	100
Downloading of local archive	SCADA (L500)

Power supply

Supply	90 to 230 Vac or external 12 Vdc supply or solar panel
Battery	6 V when solar powered, 12 V when AC supply

Environment

Operating temperature	- 25 °C to + 70 °C
Storage temperature	- 40 °C to + 85 °C

Mechanical

	Large enclosure	Small box	Cabinet
Dimensions in cm	430 x 330 x 200	270 x 203 x 110	250 x 150 x 65
Net weight in kg	8	1,5	1
Protection level	IP 54 IK 7	IP 54 IK 7	IP 21 IK 7

Standards

Vibrations and shocks test	CEI 68-2-6 and 68-2-29
EMI / EFI immunity	CEI 801-3 and FCC Part 15
Salt spray and humidity tests	CEI 68-2-11 and 68-2-30

Other references

- Solar panel, with battery:
- Power 10W : GS-6-10
- Power 20W : GS-6-20

References G200 : G2 -



Enclosure size:

- PF large - IP 54
- GF medium - IP 41
- SF small - IP 21

Short range radio frequency:

- 915 (918-919,2 MHz)

1 - Power supply:

- A external 6/12 Vdc
- B 110/230 Vac

2 - Back-up battery:

- A 7 Ah sealed lead battery (G2 PF)
- Z no battery

1 - Embedded interface:

- G GSM 900 - 1800 MHz
- I GPRS 900 - 1800 MHz
- 2 RS232
- P GSM 1900 MHz
- Q GPRS 1900 MHz

2 - External modem device:

- Z none

Protocol used:

- D DNP 3.0
- I IEC 870-5-101
- M Modbus

Warning: all combinations are not possible, please refer to the table below. As standard, specifications and designs change from time to time, please ask for confirmation of the information given in this publication.

G200 references:

Reference	Large enclosure	Frequency	Power supply	Protocol	Modem
G2PF-915-AZ-D-ZZ	large	915 MHz	12 Vdc without battery	DNP3.0	RS232
G2PF-915-AZ-I-ZZ		915 MHz	12 Vdc without battery	IEC101	RS232
G2PF-915-BA-M-ZZ		915 MHz	110/230 Vac + Batt. 7Ah	Modbus	RS232
G2PF-915-BA-D-ZZ		915 MHz	110/230 Vac + Batt. 7Ah	DNP3.0	RS232
G2PF-915-BA-I-ZZ		915 MHz	110/230 Vac + Batt. 7Ah	IEC101	RS232
G2GF-915-AZ-M-GZ	medium	915 MHz	6/12 Vdc without battery	Modbus	GSM
G2GF-915-AZ-I-GZ		915 MHz	6/12 Vdc without battery	IEC101	GSM
G2GF-915-AZ-D-GZ		915 MHz	6/12 Vdc without battery	DNP3.0	GSM
G2GF-915-AZ-M-IZ		915 MHz	6/12 Vdc without battery	Modbus	GPRS
G2GF-915-AZ-D-IZ		915 MHz	6/12 Vdc without battery	DNP3.0	GPRS
G2SF-915-AZ-D-ZZ	small	915 MHz	6/12 Vdc without battery	DNP3.0	RS232
G2SF-915-AZ-I-ZZ		915 MHz	6/12 Vdc without battery	IEC101	RS232
G2SF-915-AZ-M-ZZ		915 MHz	6/12 Vdc without battery	Modbus	RS232

Schneider Electric Industries SAS

35, rue Joseph Monier
 CS 30323
 F - 92506 Rueil Malmaison Cedex (France)
 Tel.: +33 (0) 1 41 29 70 00
 RCS Nanterre 954 503 439
 Capital social 896 313 776 €
 www.schneider-electric.com

As standards, specifications and designs change from time to time, please ask for confirmation of the information given in this publication.

Design: Schneider Electric Industries SAS - Sonovision
 Photos: Schneider Electric Industries SAS
 Printed: Altavia Connexion - Made in France

