

GP1 & DL6 Data Logger system accessories

1) **GSM Modem**

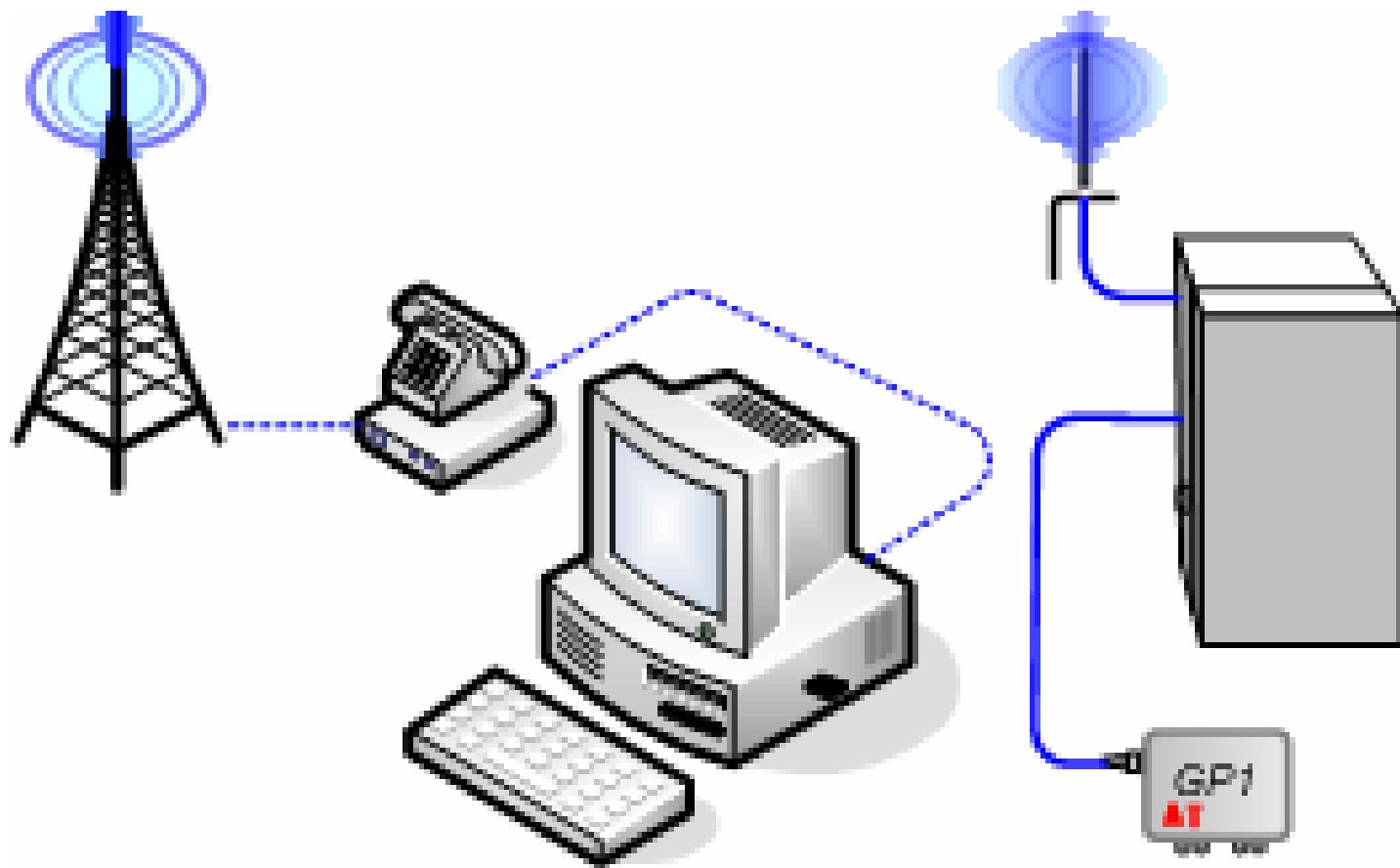
2) **Network cables**

*Flood and drain irrigation example
showing use of network cables*

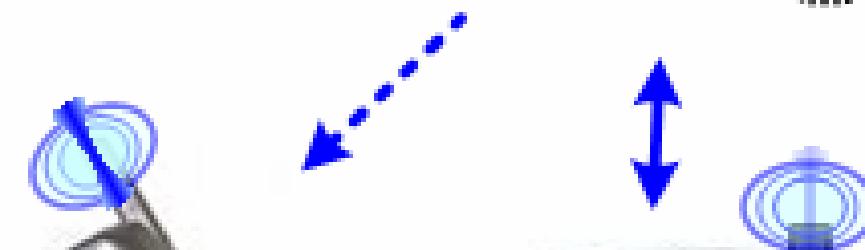
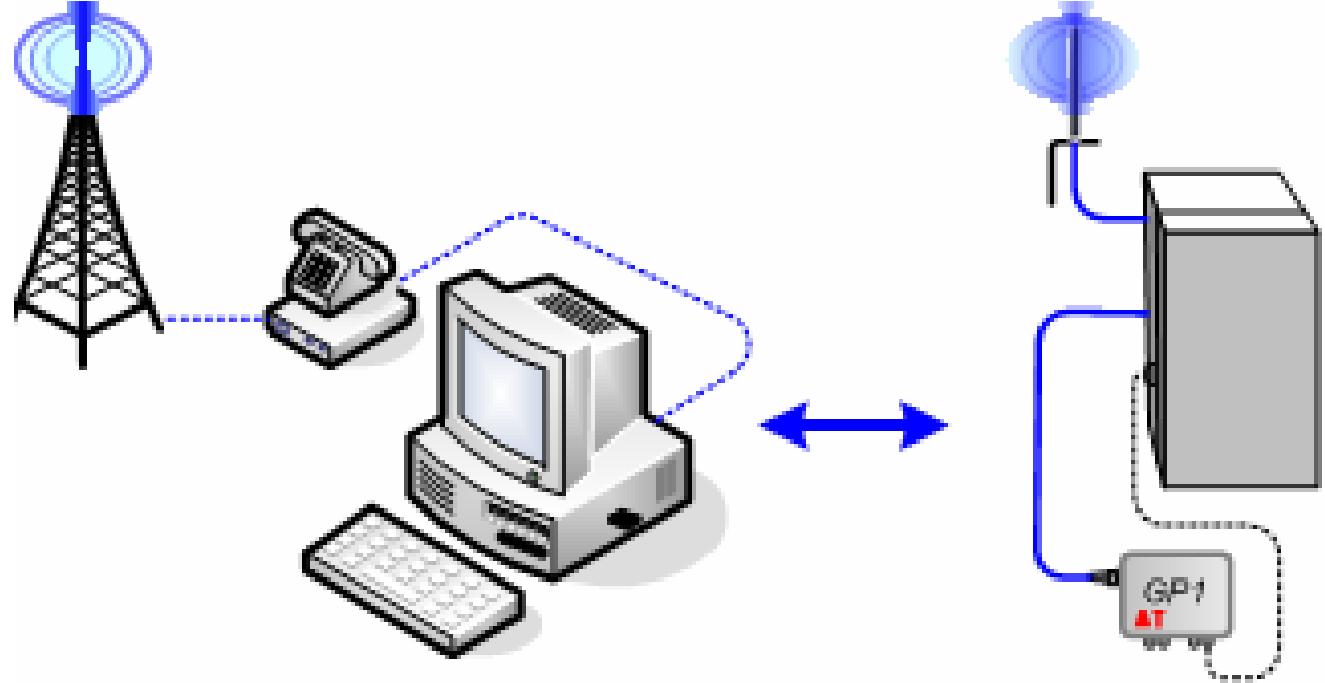
GSM Modem Box for GP1 & DL6 loggers



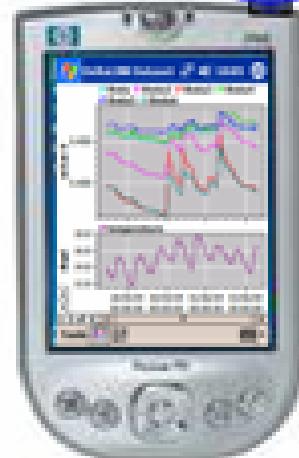
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Text
message



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- Box,
- GSM modem,
- cable glands,
- breather,
- DIN Rail with connectors
- internal cable harness

What you get

Power Options

- Solar power + internal battery
- Internal battery + timer
- Timer

GSM-BX1/SP	GSM Modem Box with solar power
GSM-BX1/IB	GSM Modem Box with internal battery
GSM-BX1/EB	GSM Modem Box (without battery)

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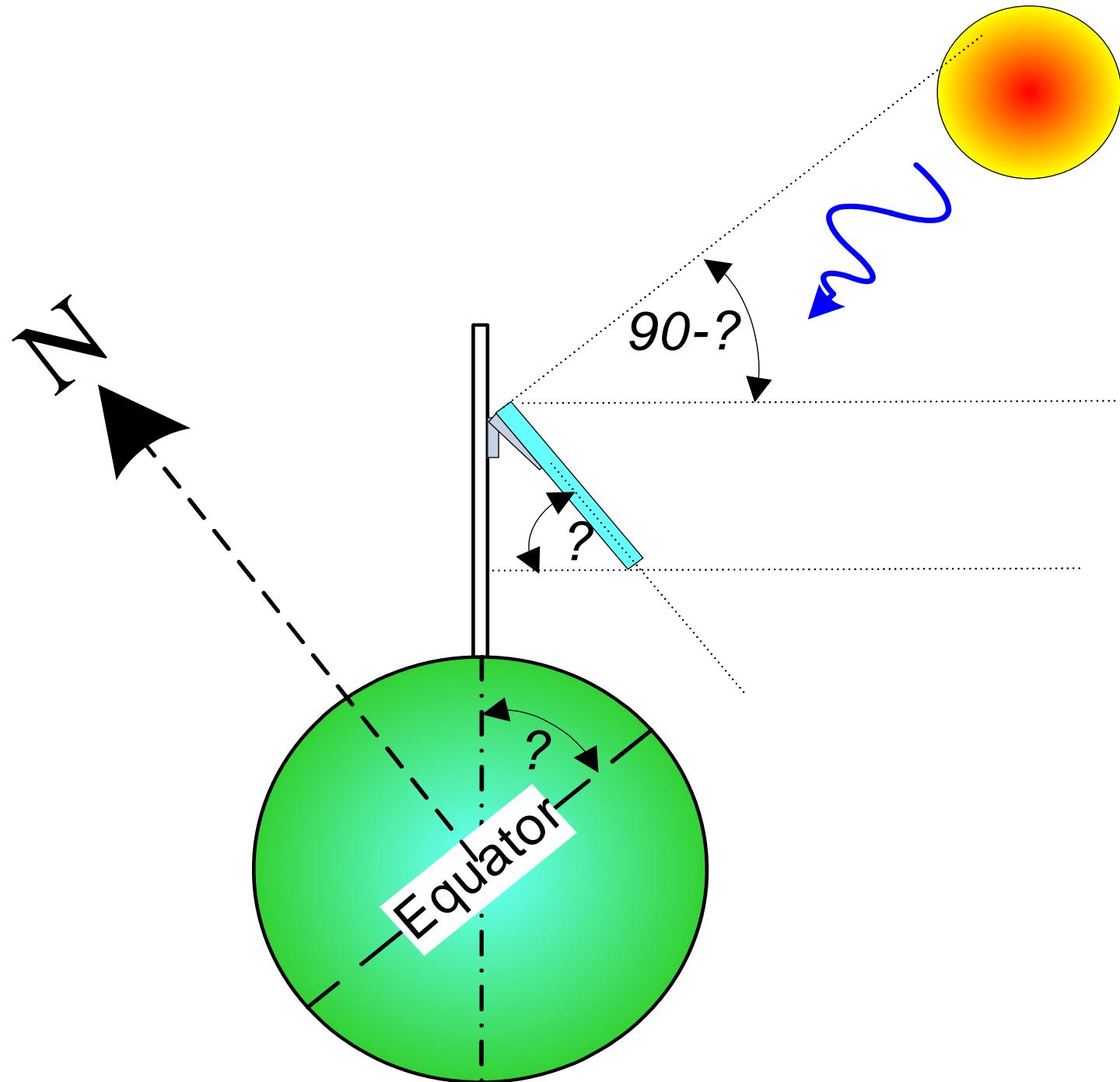
Solar Panel Power Kit



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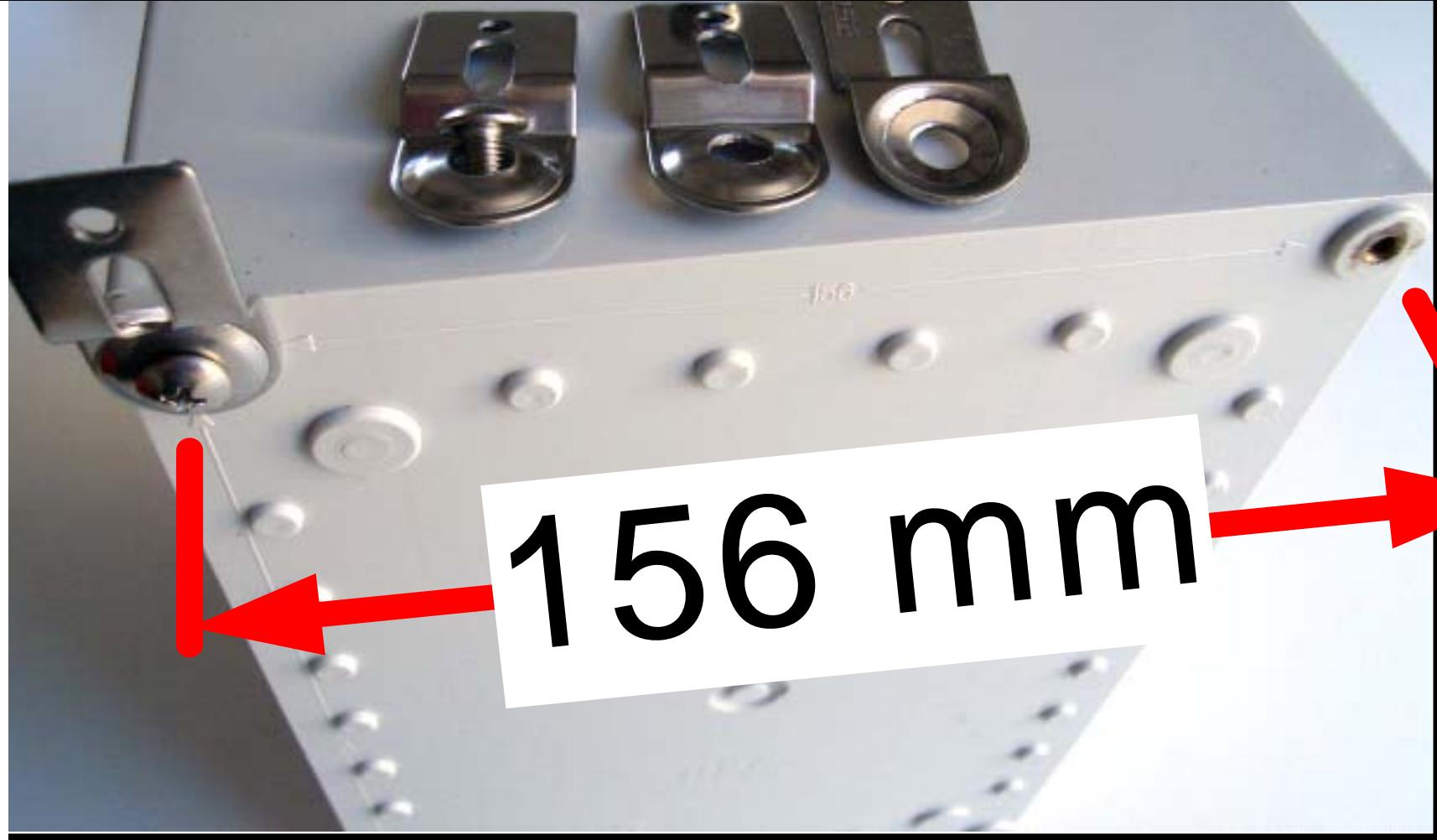


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*Wall-mount fittings are supplied as standard.
Mast mounting kit GSM-MK1 also available*



AT

steca
Solsum 6.6c

red empty
yellow
green full

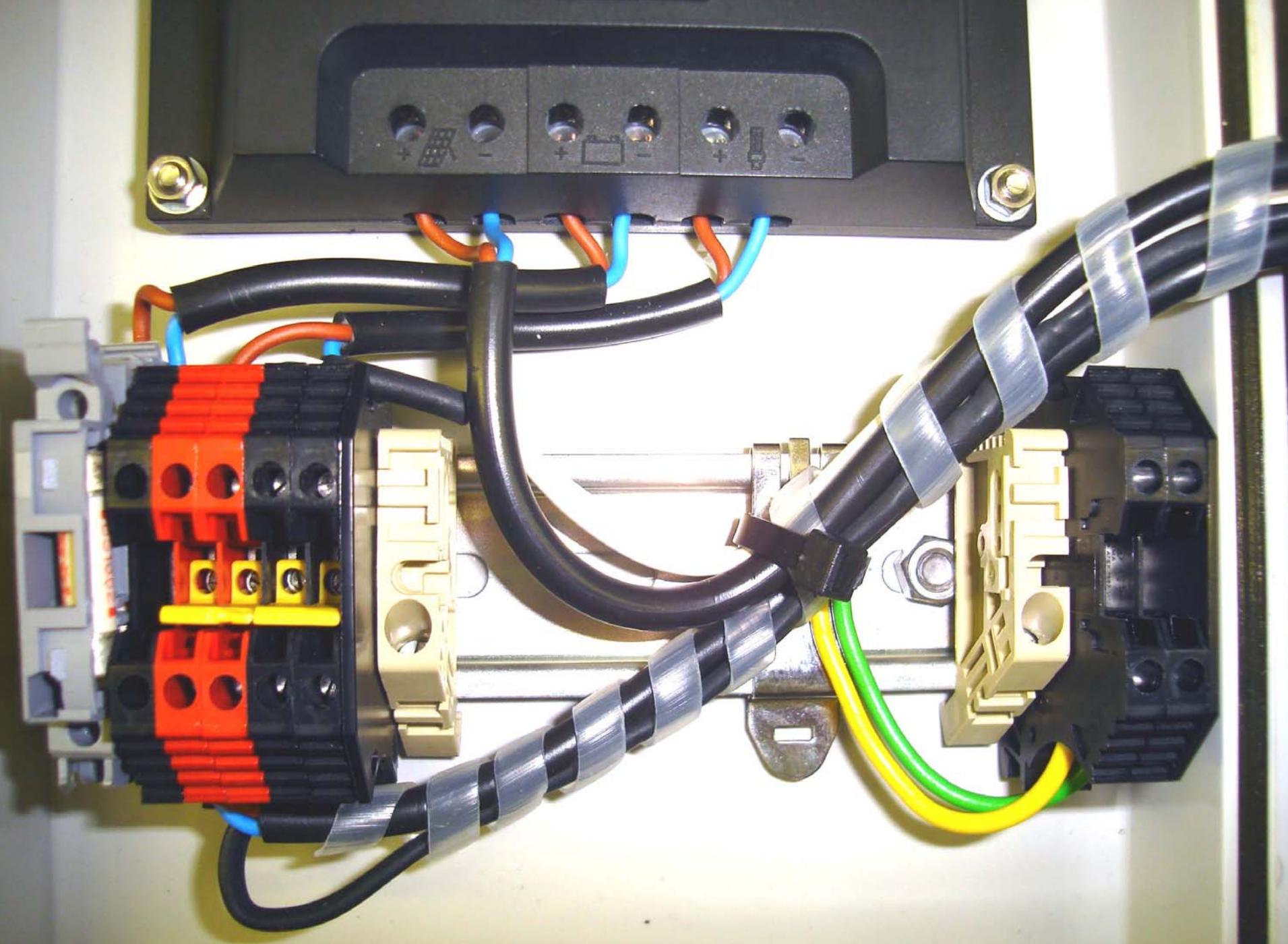
- 7.5 -

GSM - BX1/SP

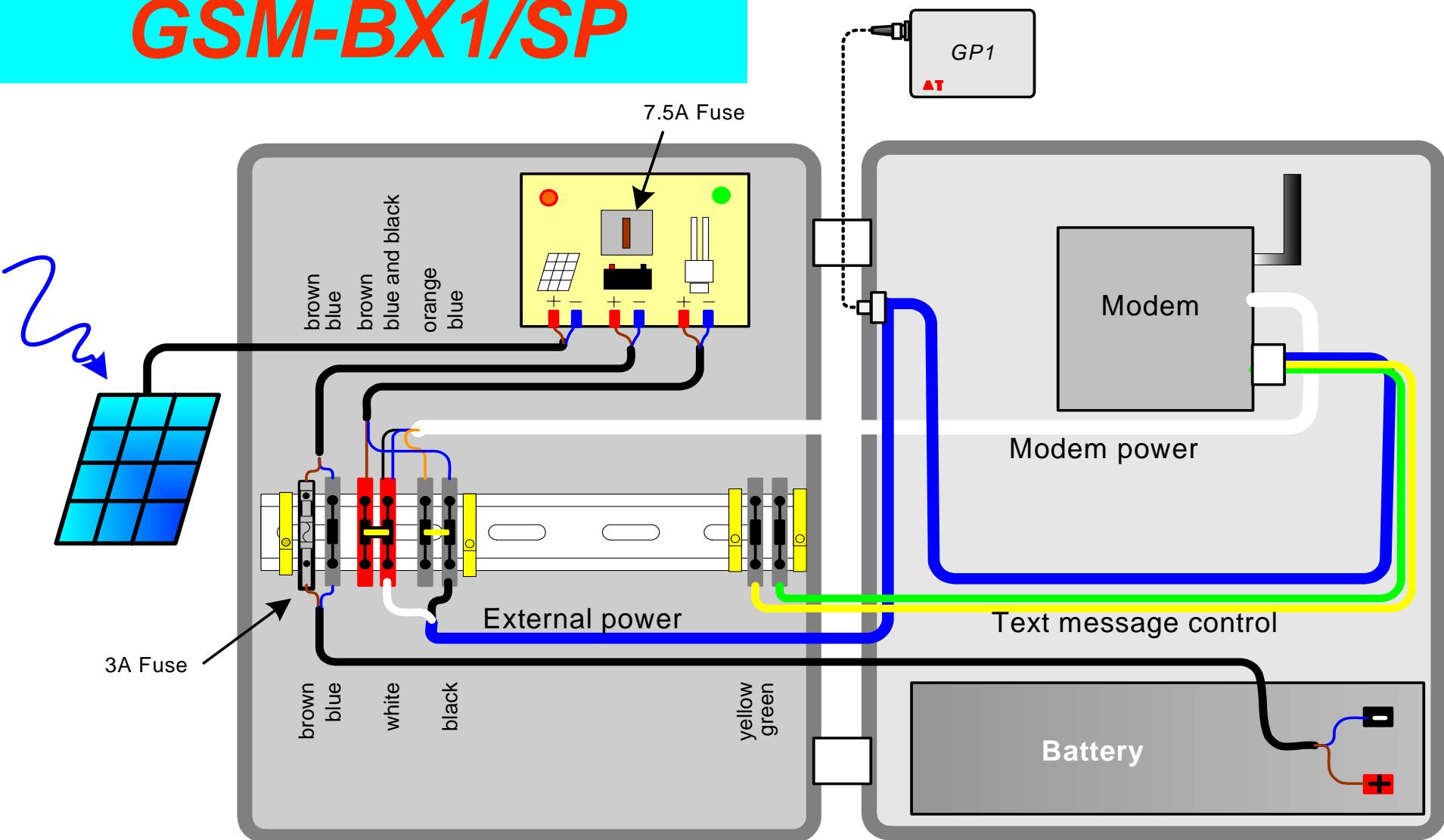
SIEMENS

NAME _____

DATE _____
CIRCUIT _____
WIRING _____
TESTS _____
PICKUP _____
REMARKS _____

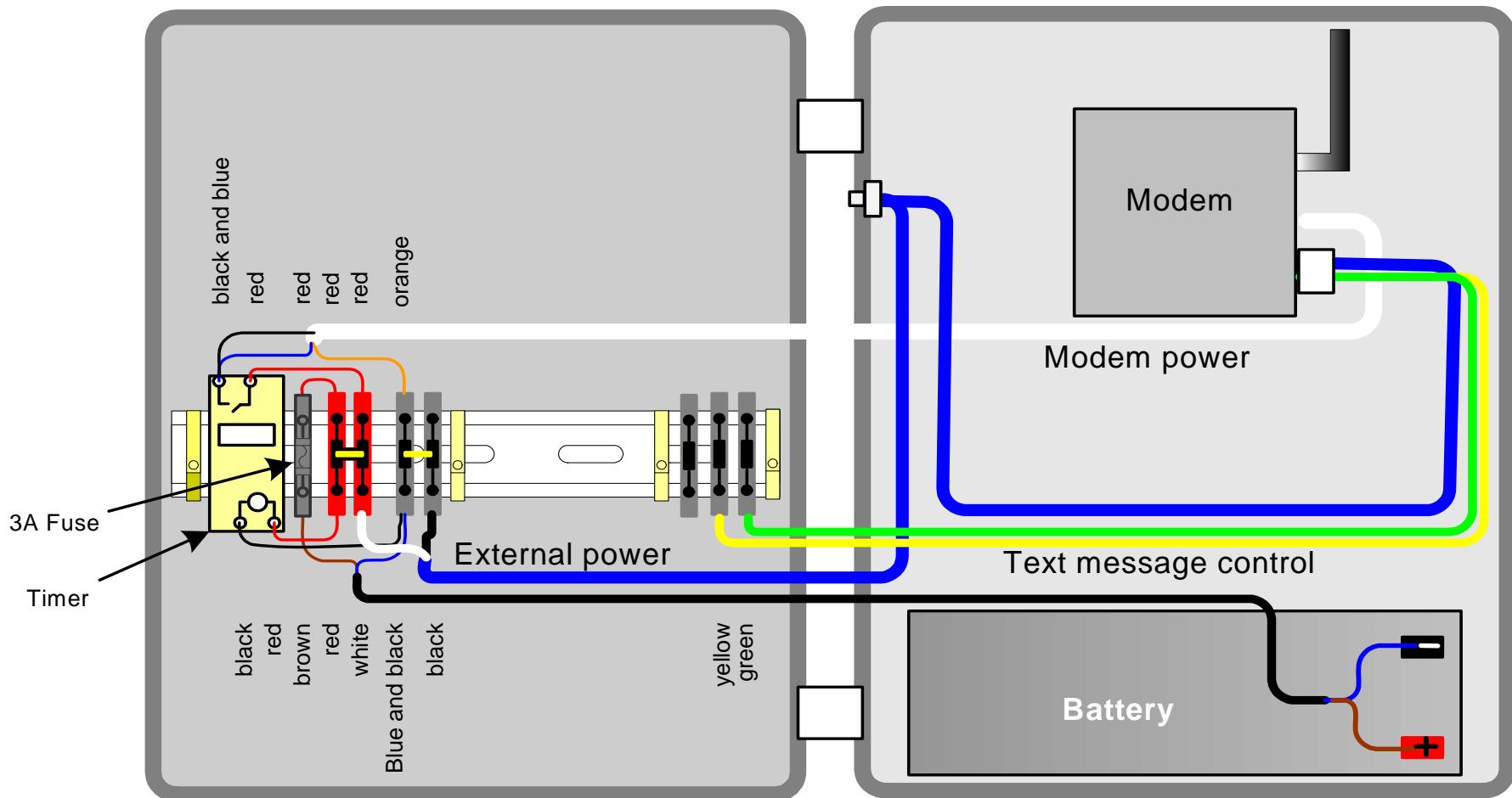


GSM-BX1/SP



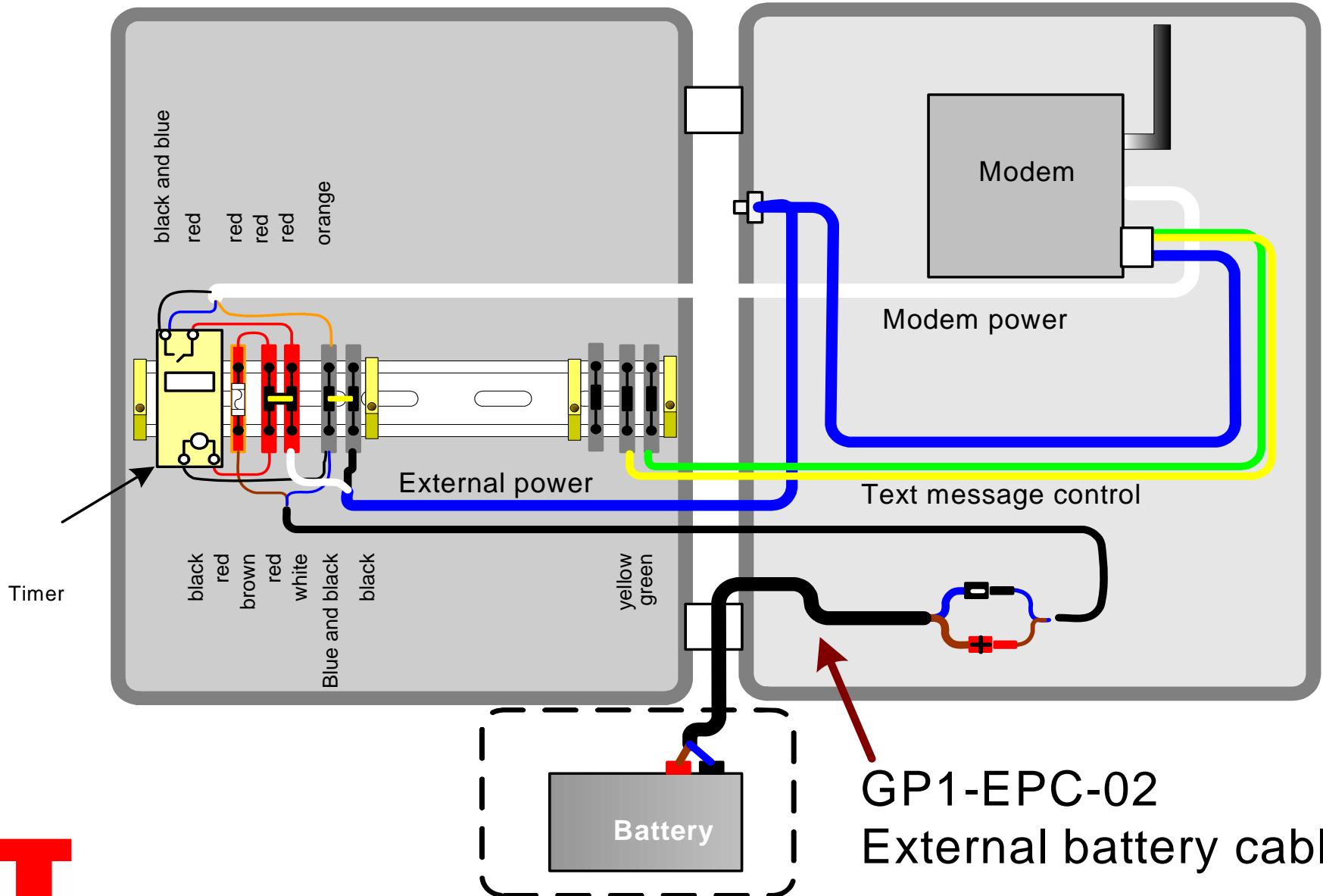
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GSM-BX1/IB



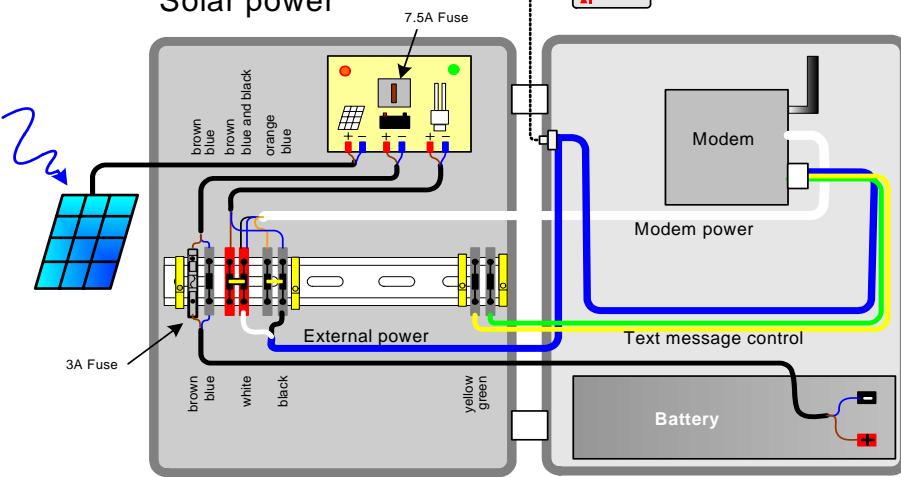
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GSM-BX1/EB

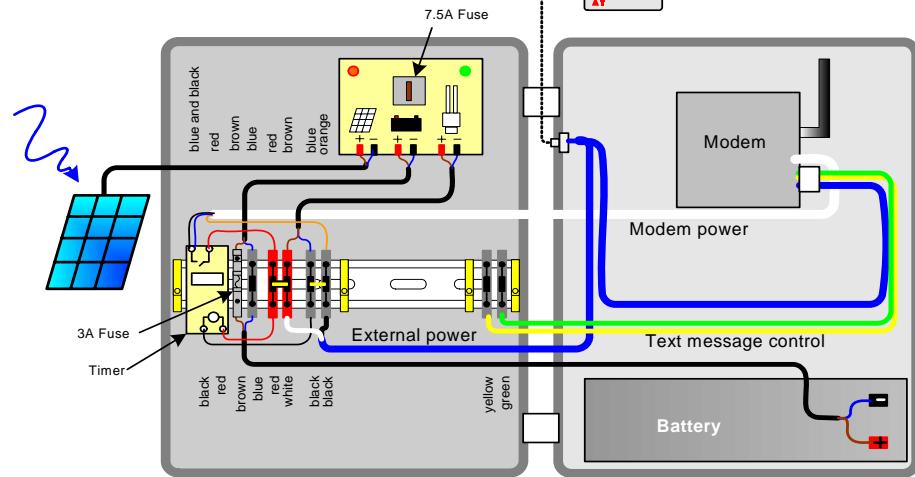


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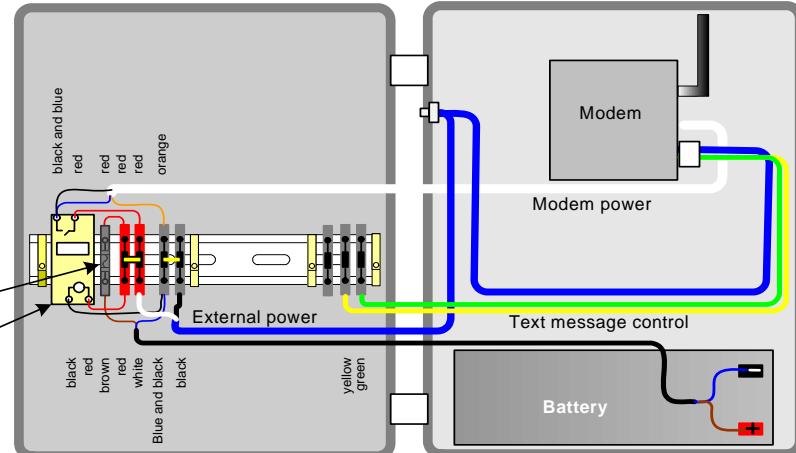
GSM-BX1/SP Solar power



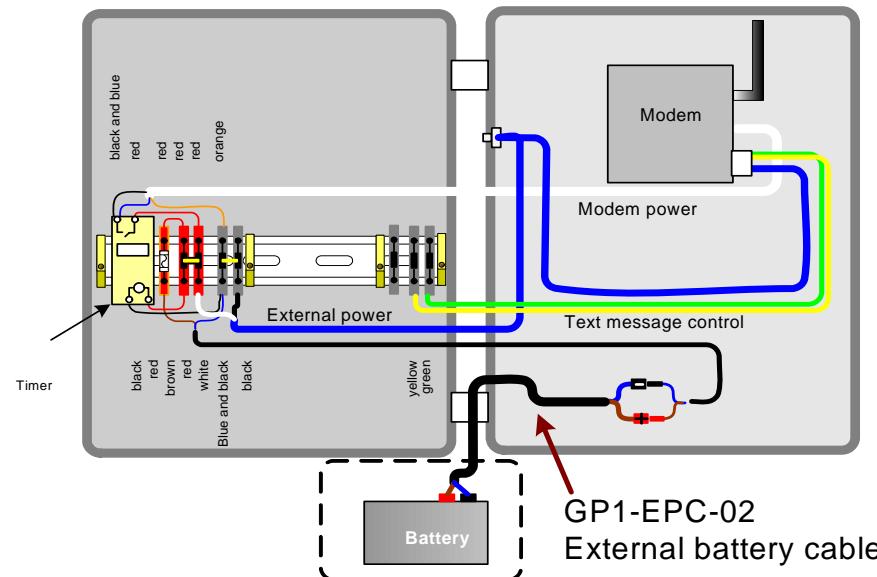
Solar power and timer



GSM-BX1/IB Internal battery & timer



GSM-BX1/EB External battery & timer



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Install SIM card



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Internal quad band aerial

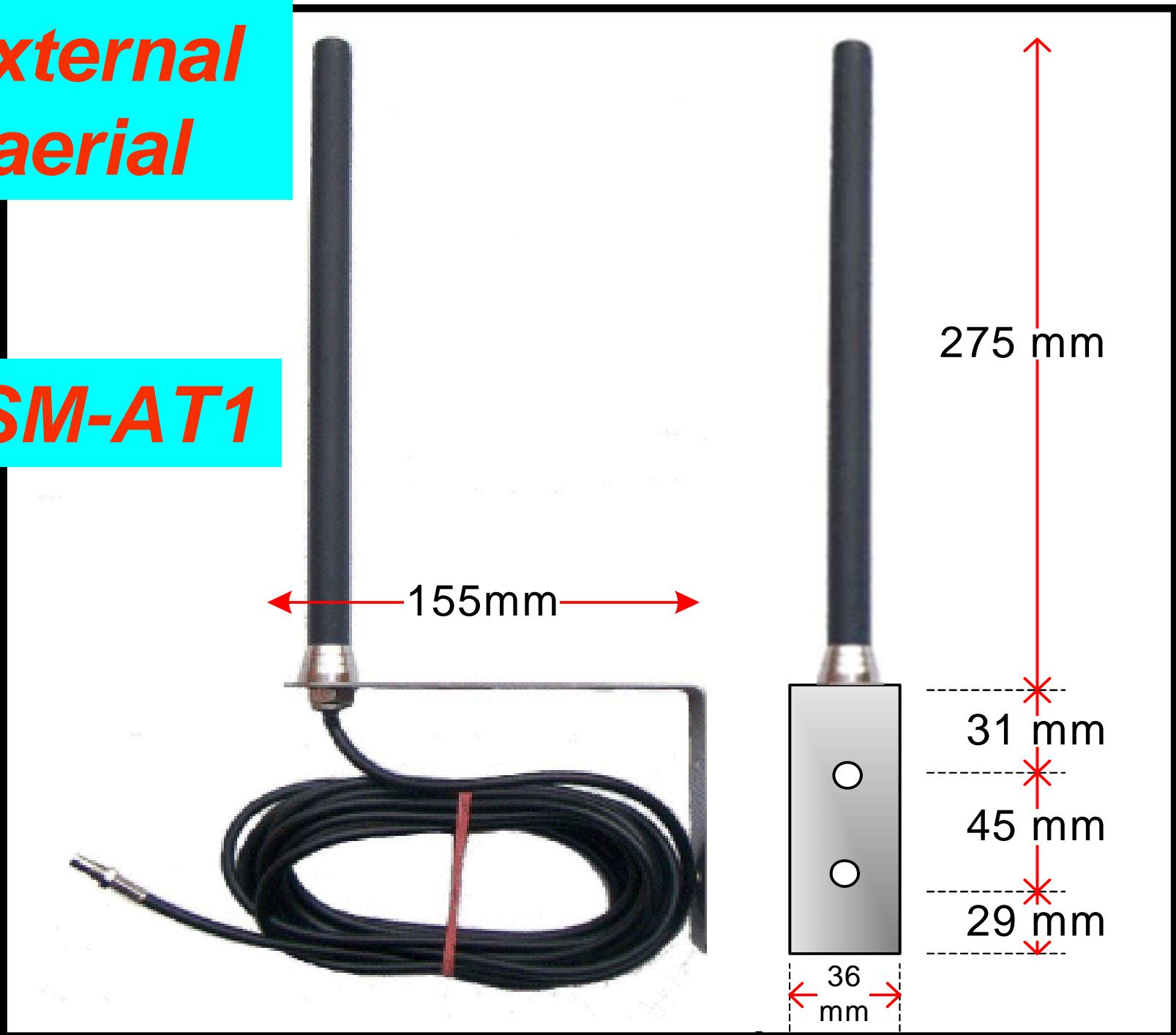
GSM-AT2



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*External
aerial*

GSM-AT1



A1

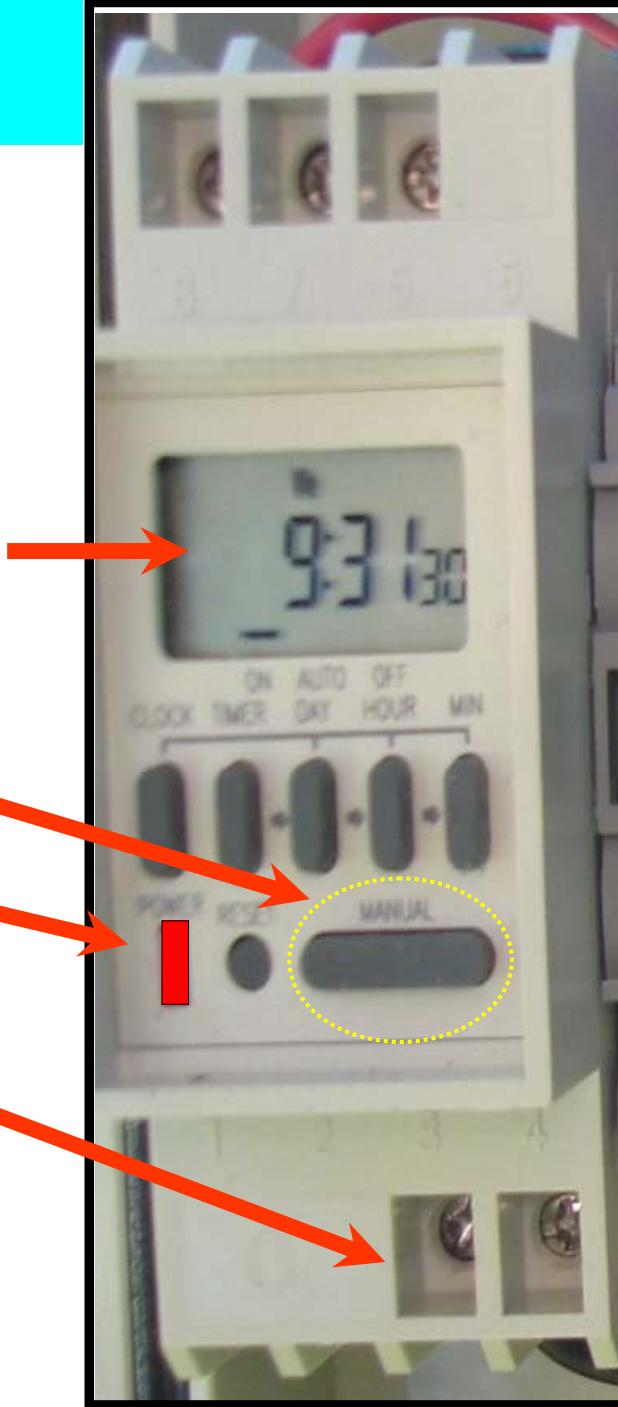
Fitting external aerial lead



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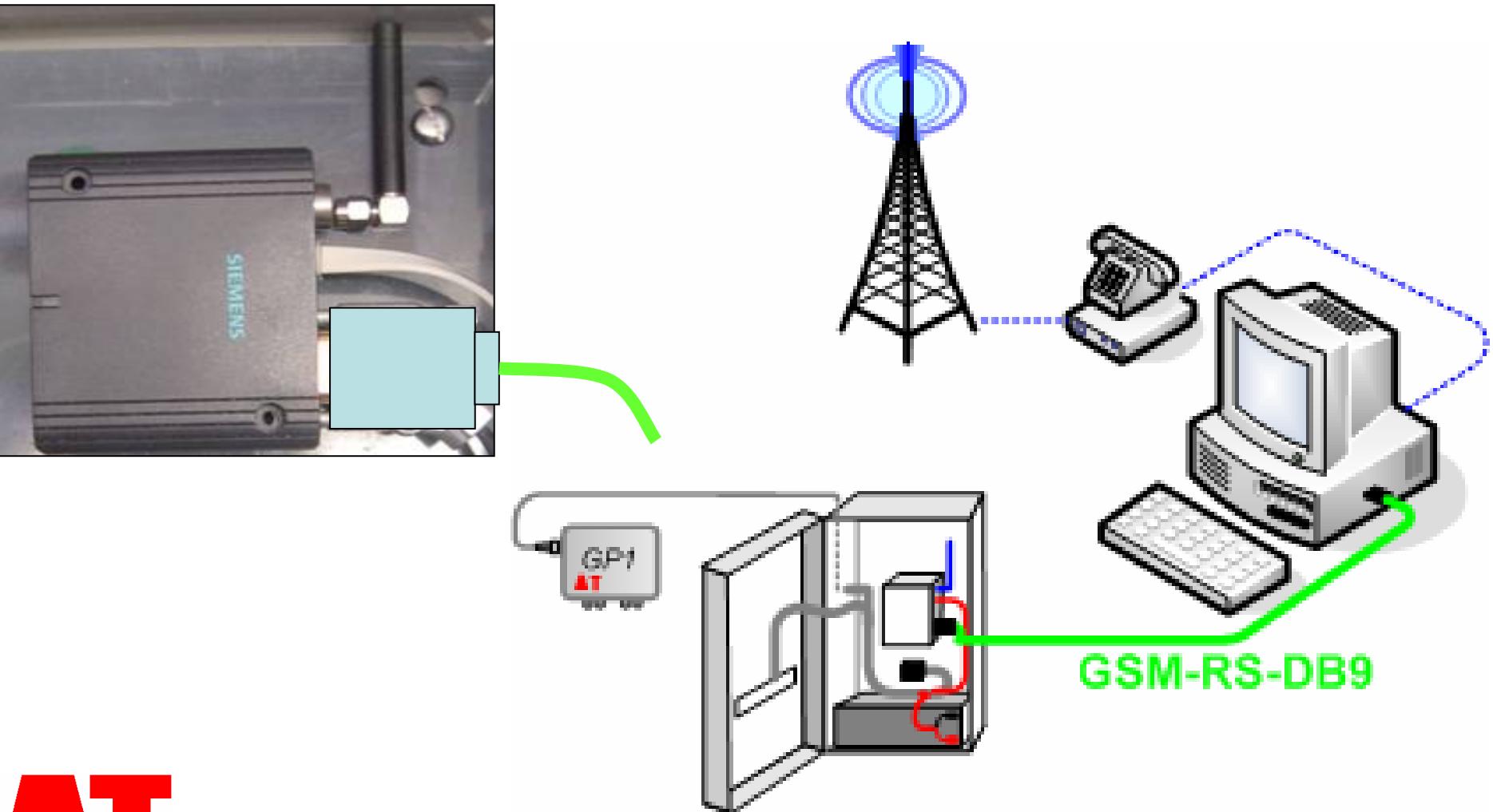
Digital timer switch

- Lithium **battery backup**
- -10 +55°C
- **LCD** indicates ON & OFF settings
- **Manual** override
- **LED** power indicator
- **12V** supply voltage
- **Easy** to program
e.g. Once/day for 20 mins, at 2 pm



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Configure, test or set up text messaging in GSM modem



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GSMConfig

optional

Enable text messaging

Set up

Test

Configure GSM modem

Enable SMS text message transmission

SMS message text:

Write your message here

Destination SMS enabled number: 12345678

Configure GSM modem now

GSMConfig

GSMConfig Settings

GSM modem will be used with: DL6/GP1 logger

GSM modem is connected to: COM1 RS232 port

Test GSM modem connection

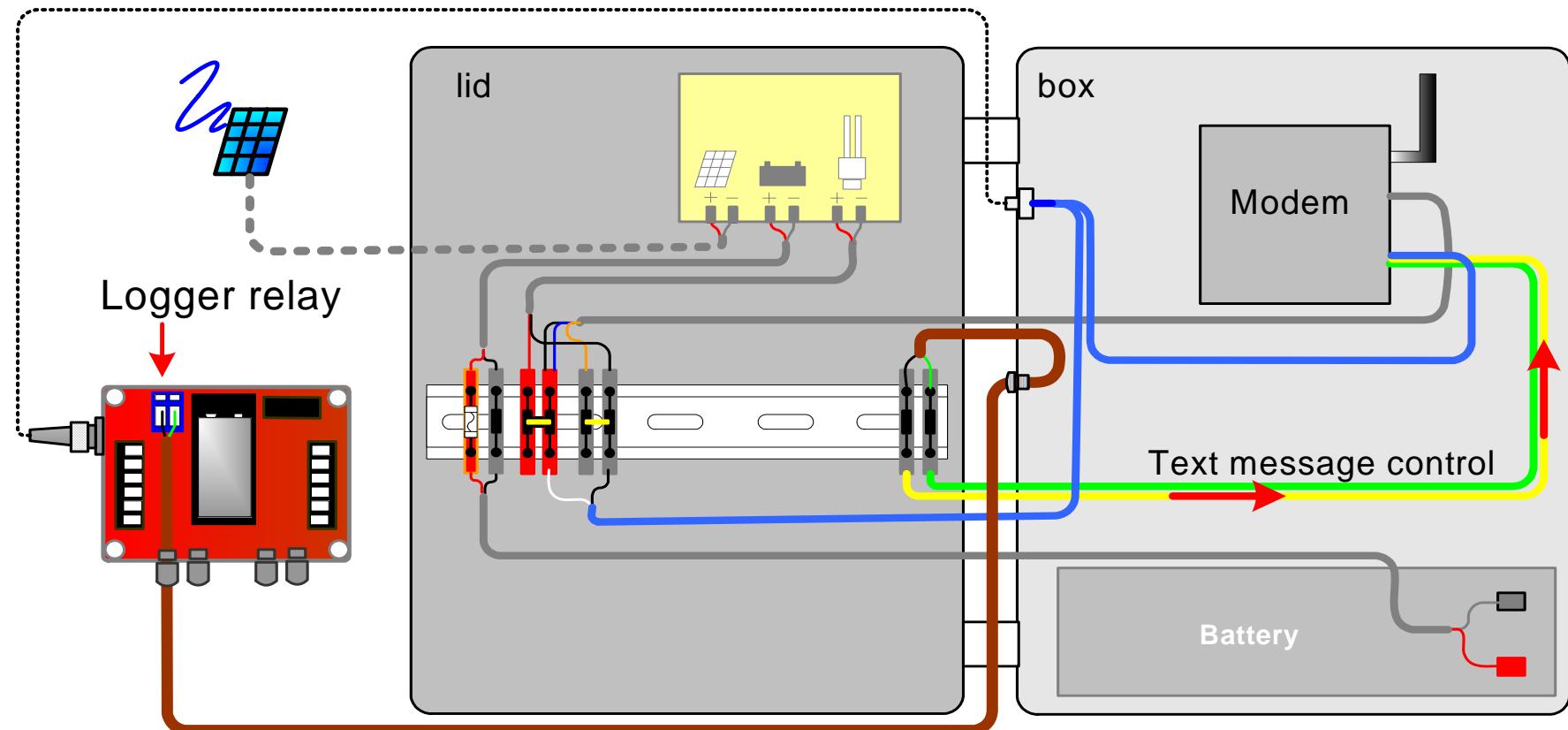
Dial out using PC modem:

GSM modem number:

Test GSM modem connection now

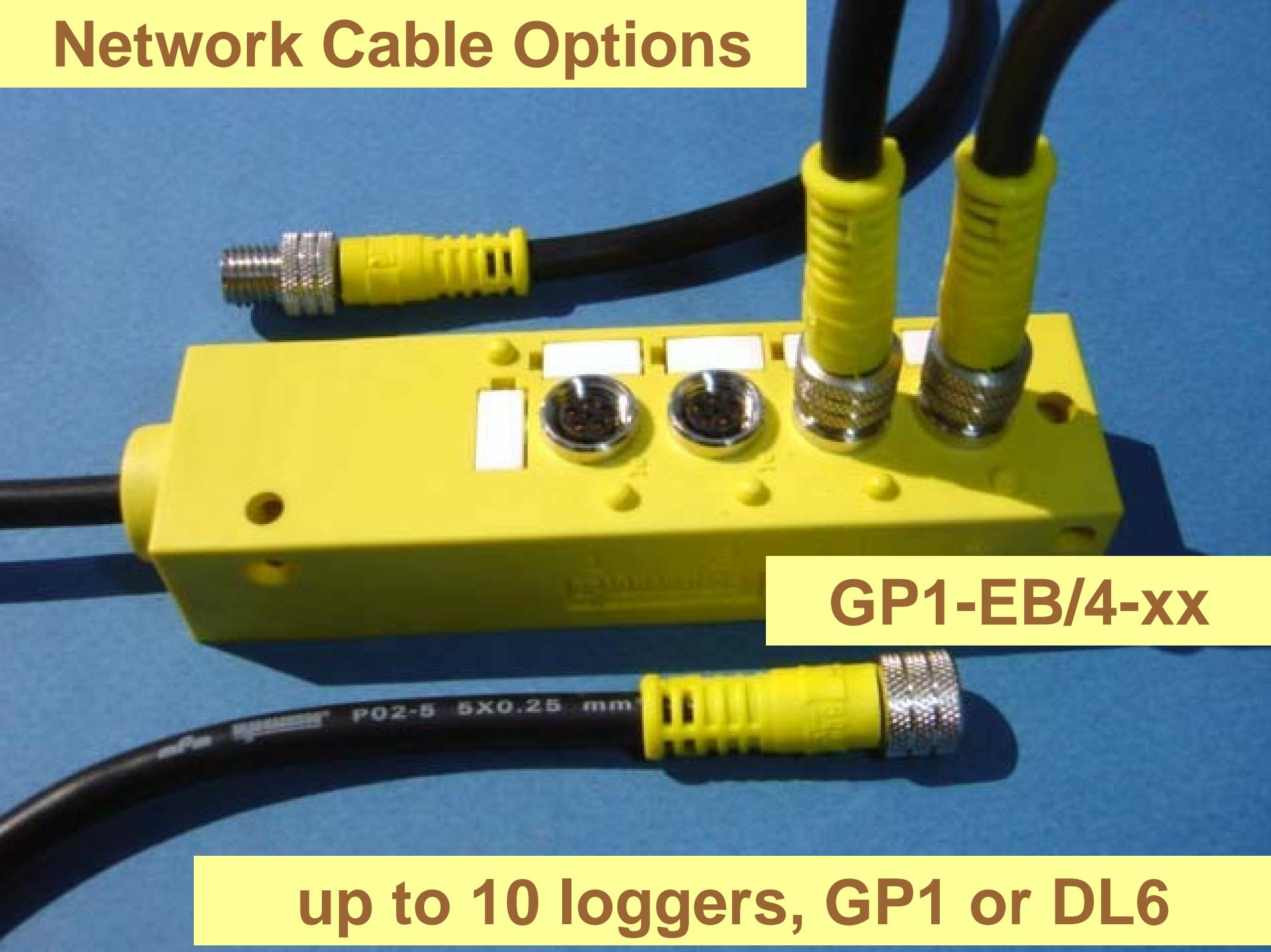
Text messaging needs a separate signal wire from logger relay to modem

Extension cable (RS232 + power)



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2-wire control line from logger signals modem to send text message

Network Cable Options



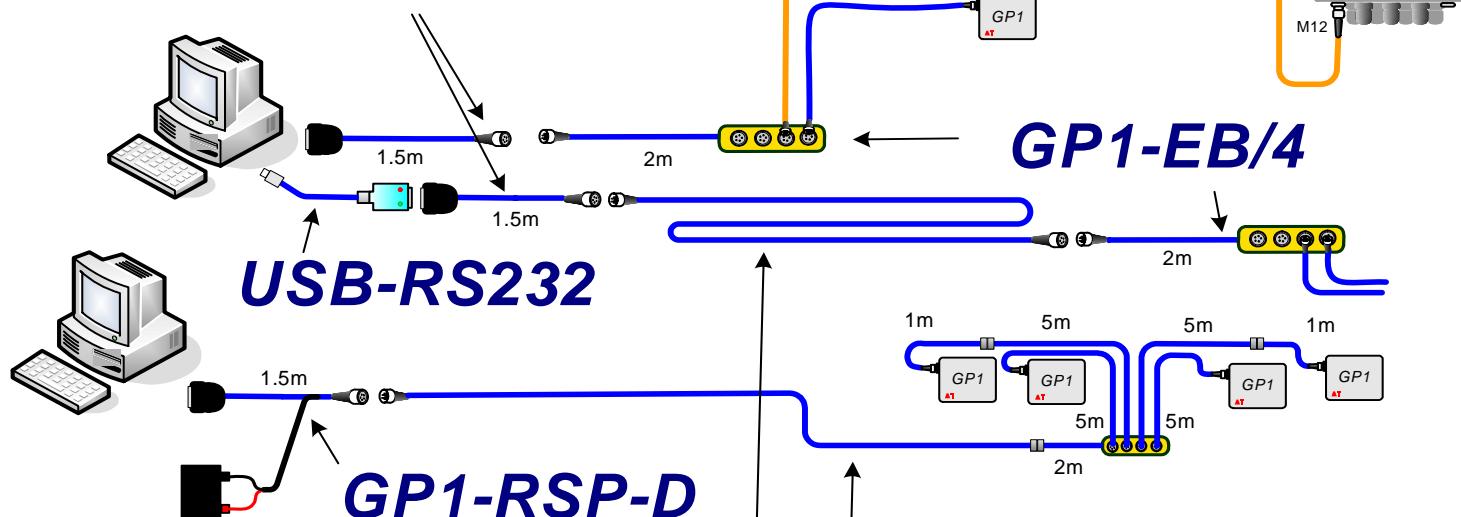
GP1-EB/4-xx

up to 10 loggers, GP1 or DL6

Network Cable Options

GP1/DL6-M8

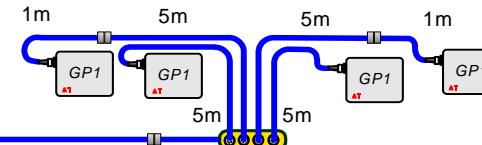
GP1-RS232



USB-RS232

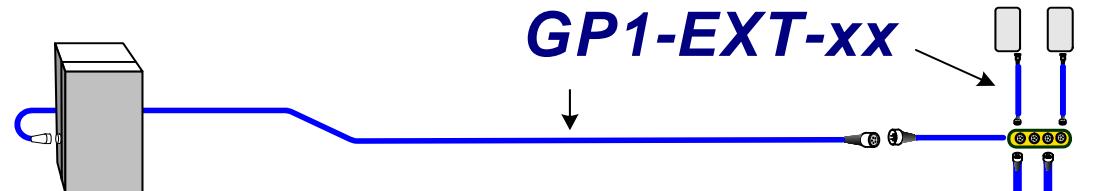
GP1-RSP-D

GP1-EB/4



GP1-EXT-xx

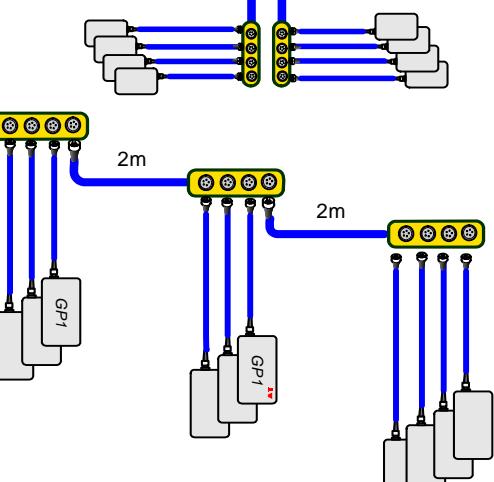
GSM-BX1/xx



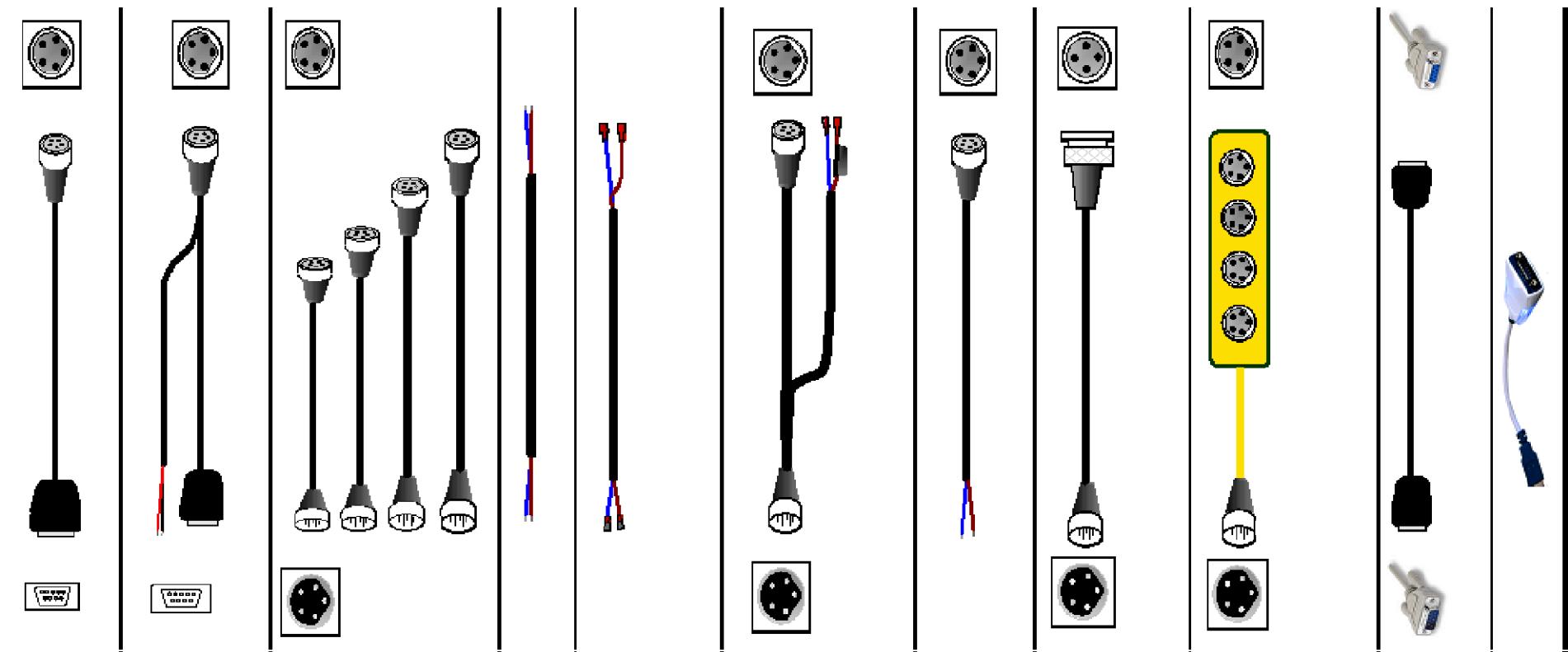
GP1-RSP-M8

PDLK-M8

Lead acid
battery



Network Cable Options



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Maximum Length

Maximum Length

The maximum cumulative cable length
- of all the loggers added together -
depends on the signal source as
follows:

Signal source	typical max cumulative cable length see note 1
RS232 note 2	20m
USB to RS232 note 3	220m
GSM modem	60m
PDA	30m

Network Cables

Protect from high currents >3A

Never connect more than one battery.

Lead acid batteries must have a 3A fuse in series with the +'ve wire.

Do not charge any battery, nor power the GSM modem, via the network serial cables.

Battery Life Considerations

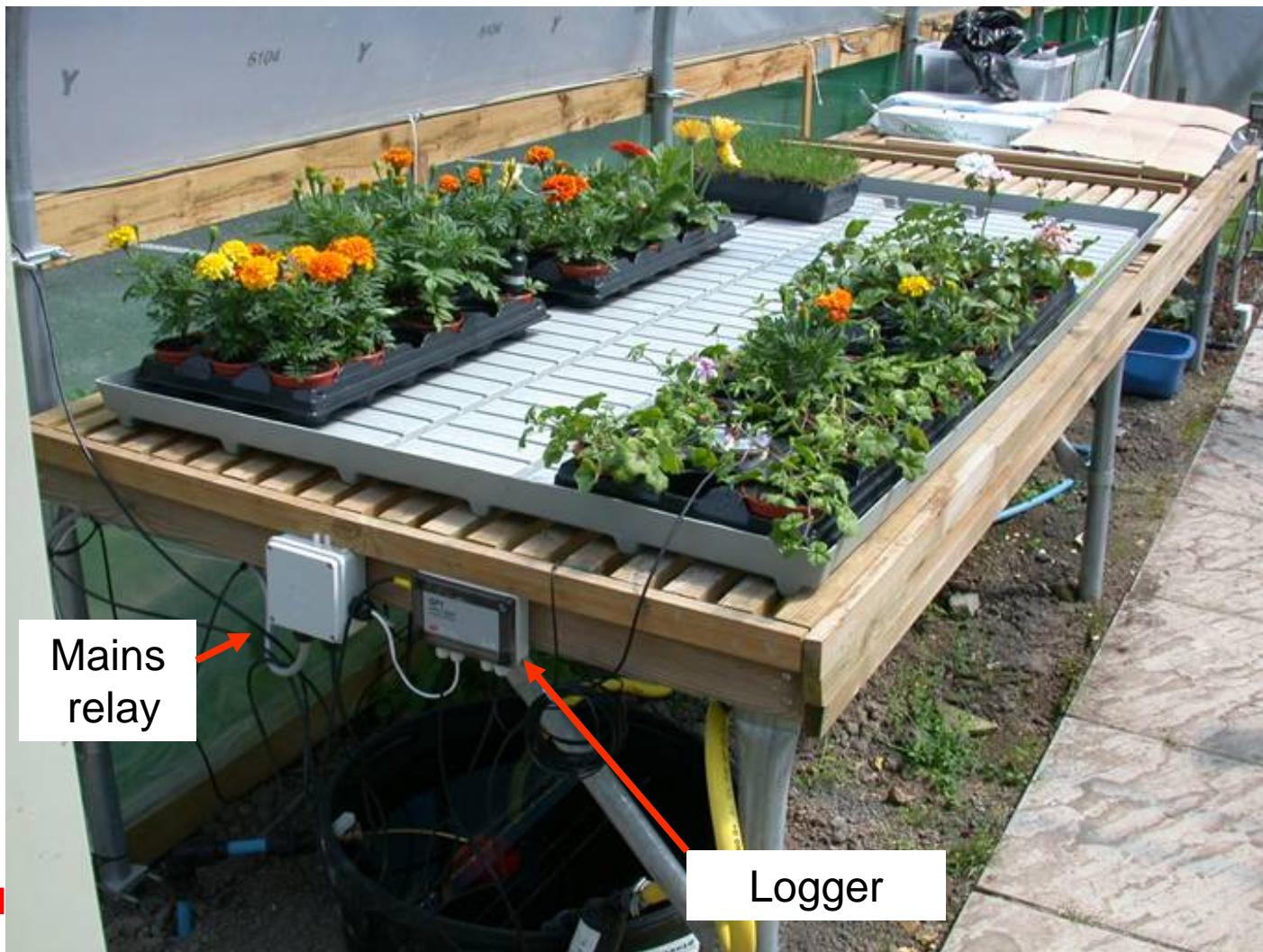


Days Without Sun¹

		Data on demand ²		2/24hr access slot ³	
modem acitivity/day ⁴		10 min	20 min	10 min	20 min
Loggers ⁵	logging frequency				
0	n/a	21	19	97	57
1	1/hr	21	18	89	55
1	1/min	20	17	71	47
10	1/hr	18	16	53	39
10	1/min	12	11	21	19

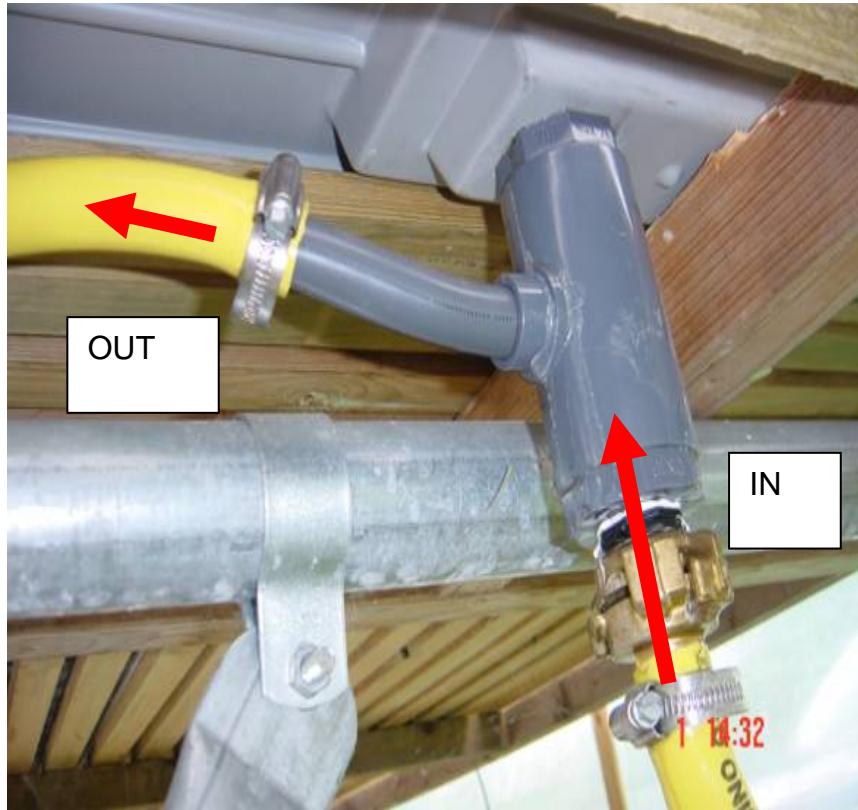
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Flood and Drain Irrigation Control with GP1 loggers



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Flood & Drain



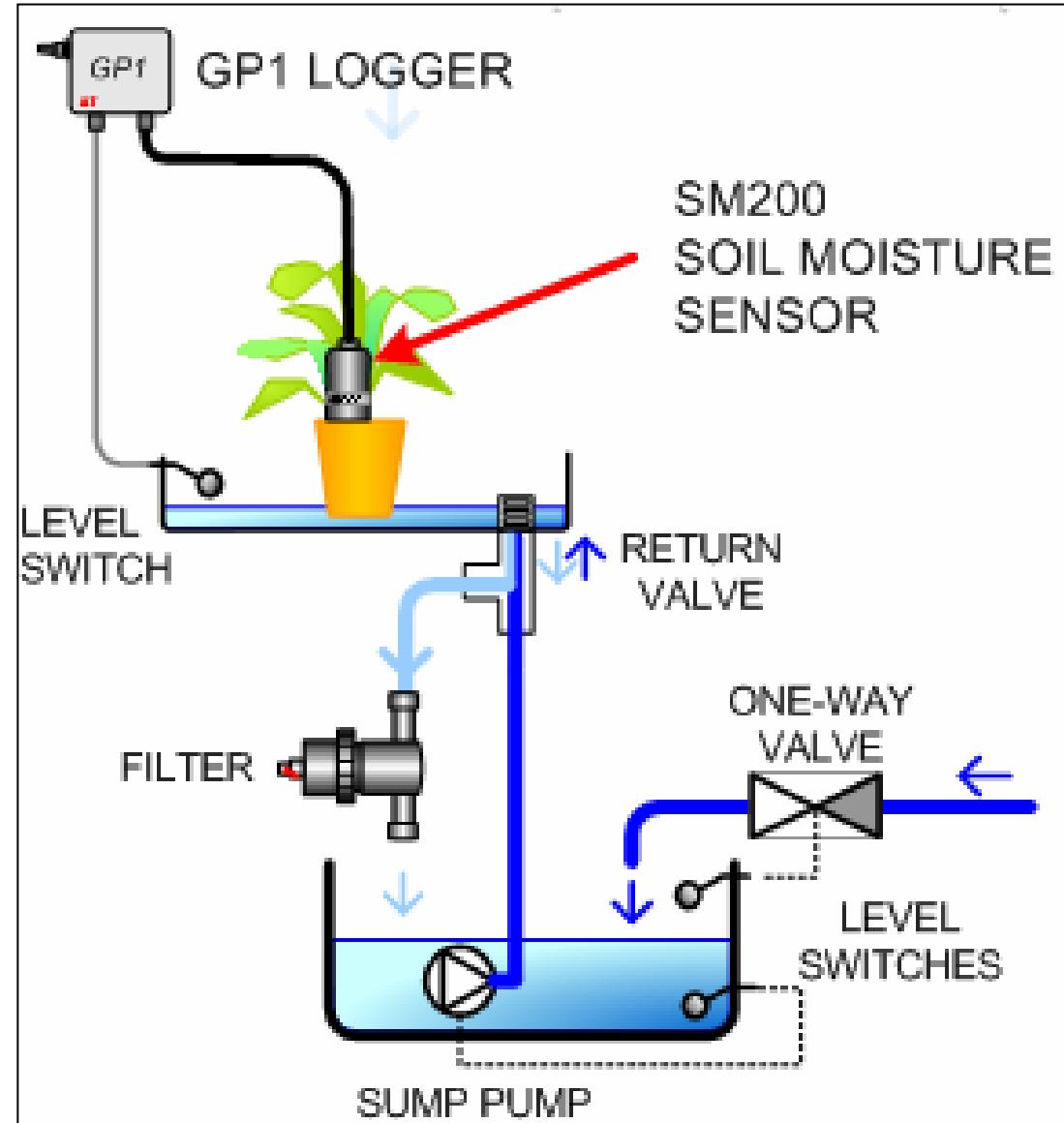
**Two way valve under
tray inlet**



**Optional level switch:
for fail-safe back-up**

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Flood & Drain Irrigation



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Flood & Drain Irrigation: Zone control

- Multiple zones may be created
- Each zone controlled by a GP1
- sharing a common pump
- by use of different Offset Times
in the DeltaLINK software
(requires version 2.3)

Example:

16 Growth chambers



12 12:56



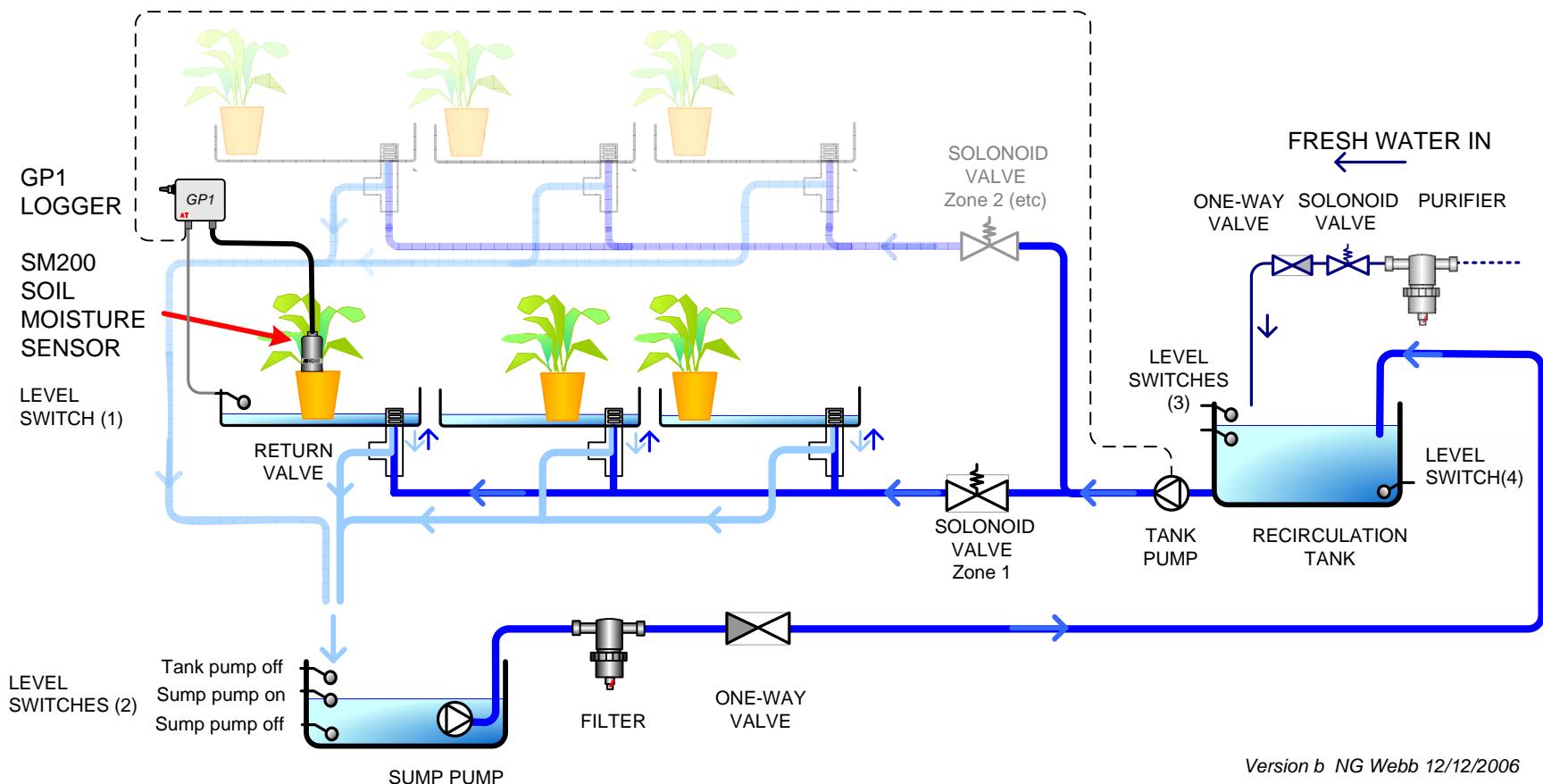
*2 GP1 loggers per chamber
each controlling 6 flood trays*



Multiple zones share one pump

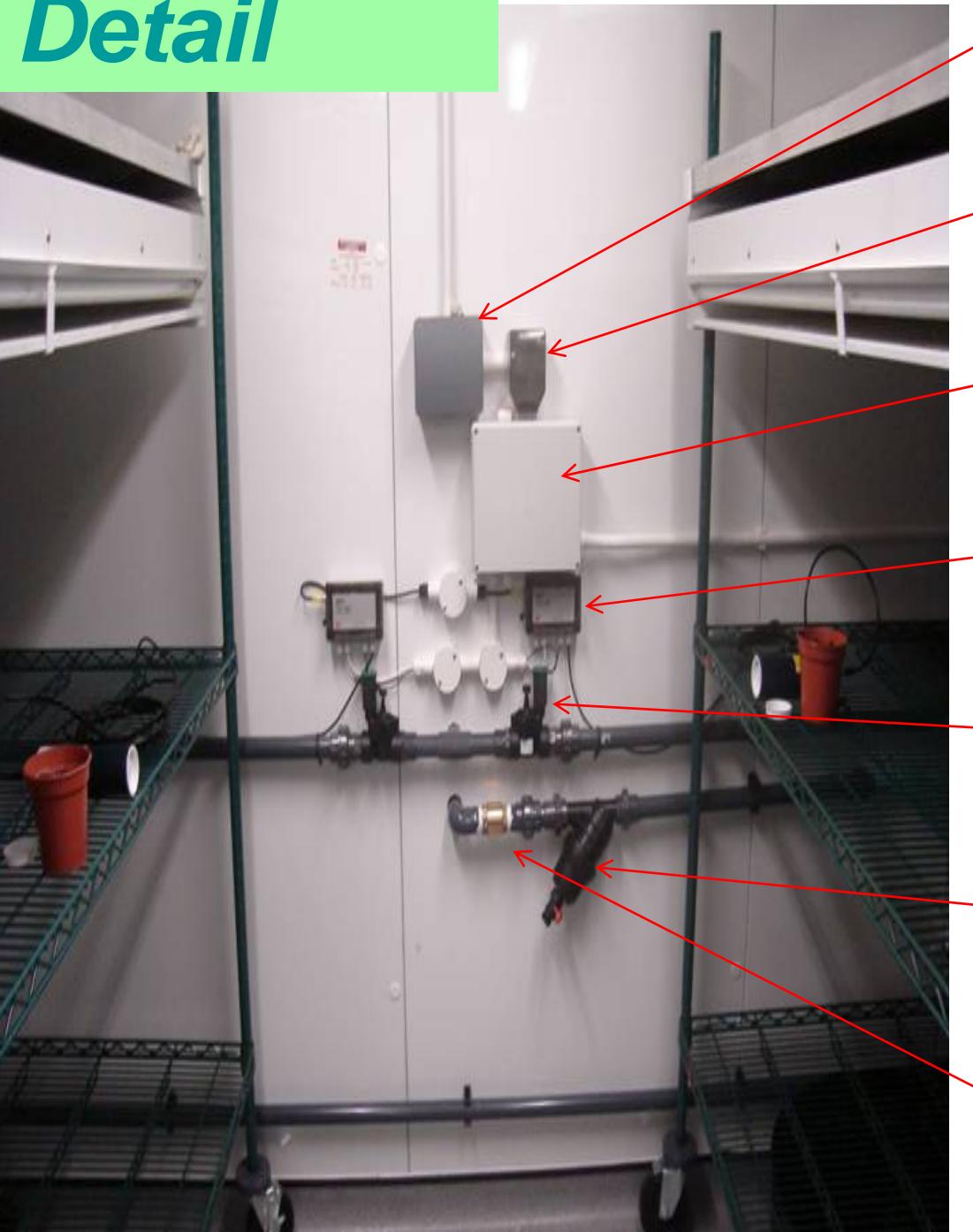
Figure 7:

Ebb-Flood Irrigation Control using
Delta-T SM200 Soil Moisture Sensor and GP1 Logger
Water Circuit Diagram



Version b NG Webb 12/12/2006

Detail



Mains power

Fuses

24V transformer and relays

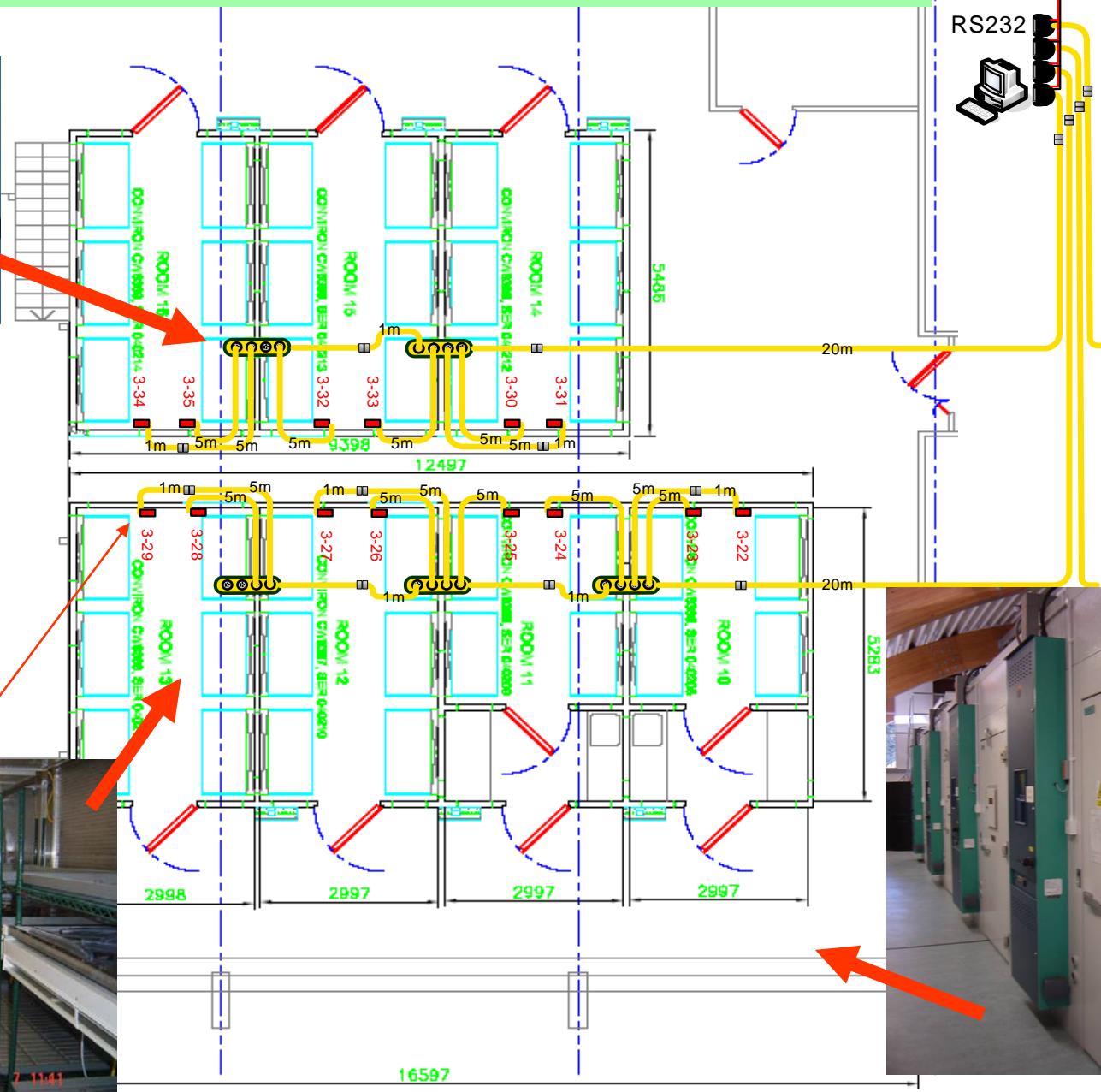
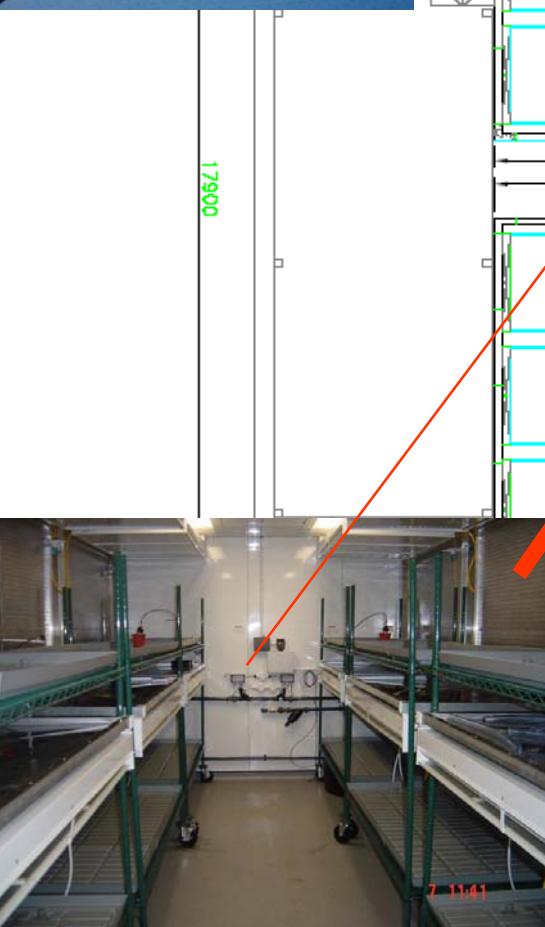
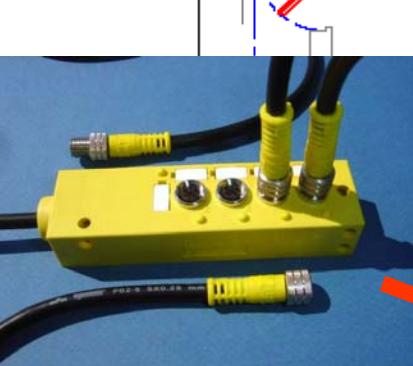
**GP1
Logger**

**Solenoid valve on
inlet**

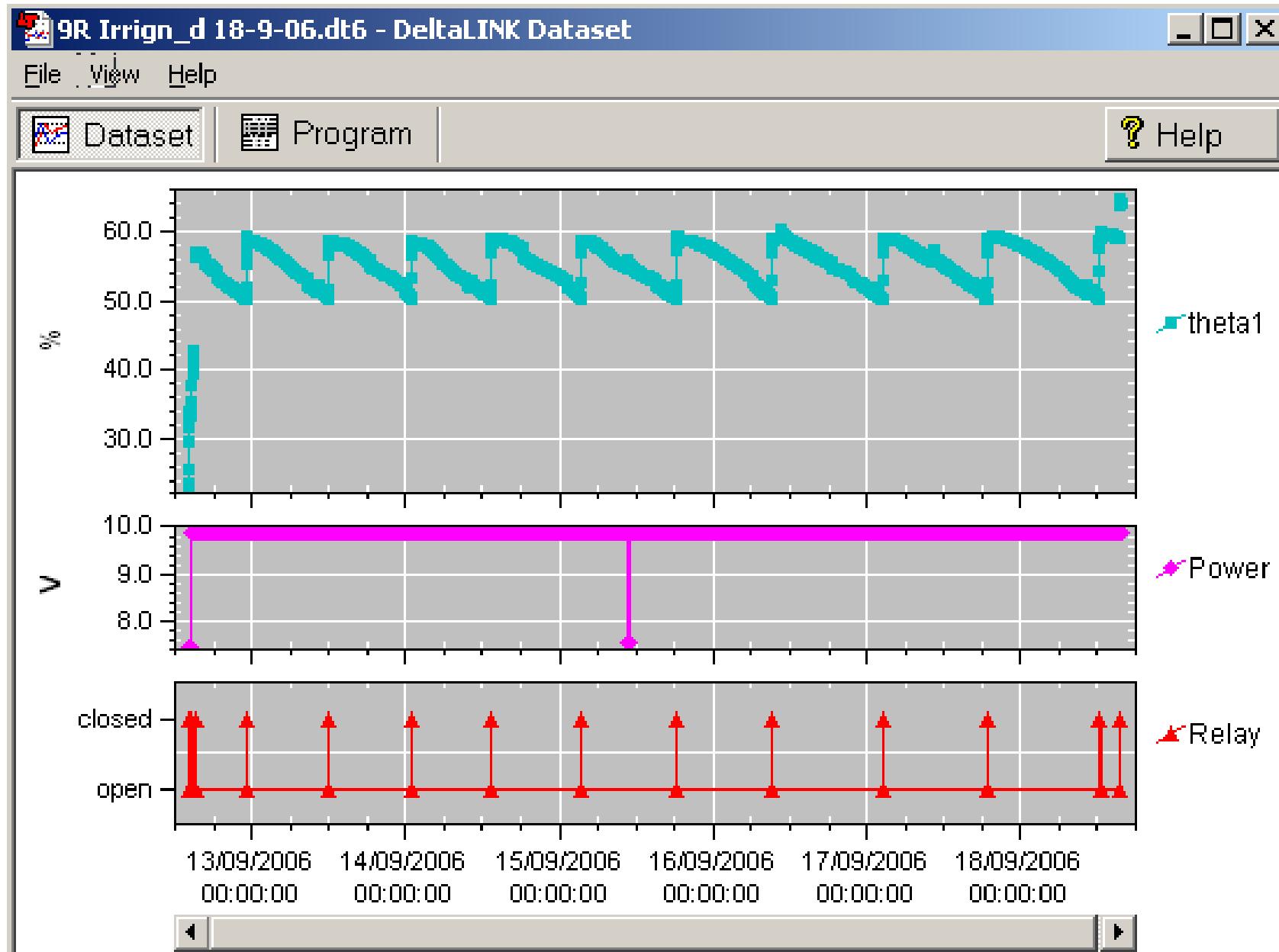
**Filter in return water
line**

One-way valve

GP1 serial cabling network



Typical data showing good control



Flood and Drain Notes

- Irrigation only occurs when plant needs it i.e. when soil is dry.
- Irrigation can be stopped at specific times e.g. at night.
- By varying the Offset Time, several zones can share one pump.
- Best to pre-wet the soil before starting irrigation for the first time.

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User Manual for the

GP1/DL6 GSM Modem System



Delta-T Devices

GP1 Network

Using multiple loggers on a GP1 Cabling Network

Quick Start Guide Version 0.e



AT Delta-T Devices Ltd

For further information visit:

www.delta-t.co.uk

Thank you for looking at our slides

Manuals and applications notes are also available

DeltaLINK Application Note

Flood Fill and Drain with GP1 Logger

Flood and Drain Irrigation Control with a GP1 Logger



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