PL2 Mk3 20mA telemetry pacer and filter
and 98005 Mk2 bi-directional 20mA to RS232 converter

CE

Installation Guide

PL2

98005

PRE-INSTALLATION CHECKS AND SAFETY PROCEDURES

Unpacking - Inspect the packaging for signs of damage. If damage has occurred, advise the carrier and/or the suppliers immediately. Unpack the unit carefully and check that all the items are present and correct (see checklist on box). If any item is missing contact the supplier.

Retain Packaging - The shipping carton is the safest container in which to transport the unit. Retain undamaged packaging for possible future use.

IMPORTANT SAFETY PRECAUTIONS

Read & Retain Instructions - All relevant safety, installation and operating instructions should be read & retained before attempting to install, connect or operate the unit.

Water and Moisture - Do not expose the internal electronics of this unit to water or dampness.

Power Sources - This unit should be operated only from the supplied power supply.

Servicing - Servicing of the unit should only be undertaken by qualified service personnel.

Damage Requiring Service - Servicing by qualified personnel should be carried out under the following conditions:
    (a) When the power-supply cord or plug is damaged;
    (b) If liquid has been spilled, or objects have fallen into, the unit;
    (c) If the internal electronics of the unit have been exposed to rain or water;
    (d) If the unit does not operate normally by following the operating instructions.
    (e) If the unit has been dropped or the enclosure is damaged;

Replacement Parts - If replacement parts are required, ensure that only replacement parts recommended by the product manufacturer are used.

Safety Check - Upon completion of any service or repairs to the unit, safety checks should be performed to ensure that the unit is in proper operating condition.

Pre-installation Checks - It is recommended that the unit be bench-tested prior to installation on the site.

Adhere to Safety Standards - All normal safety precautions as laid down by British Standards and the Health and Safety at Work Act should be observed.

WARNING
TO PREVENT DANGER OF FIRE OR SHOCK, DO NOT EXPOSE THE INTERNAL COMPONENTS OF THIS EQUIPMENT TO RAIN OR MOISTURE.

PL2 Mk3 v2 BBV 20mA telemetry pacer and filter

Software Version 02005V9.MOT and later 06 June 04

> The PL2 is designed to filter 20mA telemetry commands when used with RF and fibre links. The unit provides additional error checking and also has the option of filtering out unwanted commands.

Each PL2 Mk 3 is supplied with the following:
1 x PL2 in plastic enclosure
1 x SA-PL64-3 Moulded DB9F to DB9M cable
1 x 98005 Mk 2 (20mA-RS232 converter) and installation sheet.
1 x DB9F connector
1 x DB9 blue hood
1 x This installation sheet

LED guide

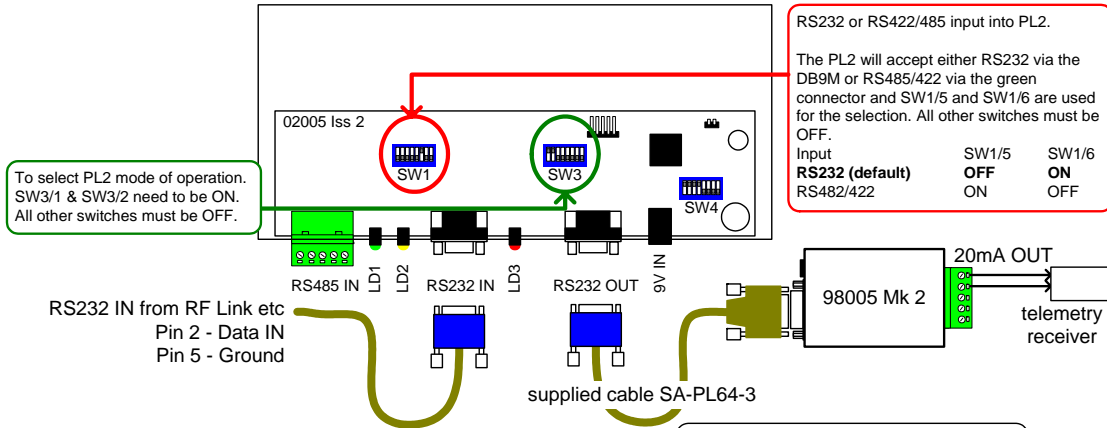■ RED LD3 — Heartbeat flashes indicating that the unit is powered and the processor is OK.

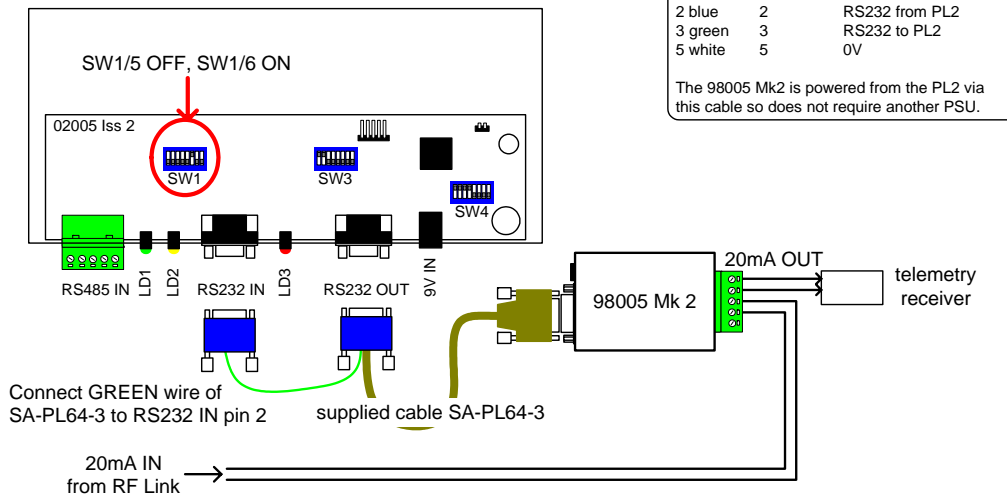■ YELLOW LD2 — Flashes as telemetry sent from PL2

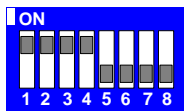■ GREEN LD1 — ON whilst telemetry is sent to the PL2

Scheme 1 - RS232 IN, 20mA OUT.

RS232 or RS422/485 input into PL2.

The PL2 will accept either RS232 via the DB9M or RS485/422 via the green connector and SW1/5 and SW1/6 are used for the selection. All other switches must be OFF.

Input	SW1/5	SW1/6
RS232 (default)	**OFF**	**ON**
RS482/422	ON	OFF

To select PL2 mode of operation.
SW3/1 & SW3/2 need to be ON.
All other switches must be OFF.

02005 Iss 2

SW1   SW3   SW4

RS485 IN   LD1 LD2   RS232 IN   LD3   RS232 OUT   9V IN

RS232 IN from RF Link etc
Pin 2 - Data IN
Pin 5 - Ground

supplied cable SA-PL64-3

98005 Mk 2

20mA OUT
telemetry receiver

Scheme 2 - 20mA IN, 20mA OUT.

SW1/5 OFF, SW1/6 ON

02005 Iss 2

SW1   SW3   SW4

RS485 IN   LD1 LD2   RS232 IN   LD3   RS232 OUT   9V IN

Connect GREEN wire of
SA-PL64-3 to RS232 IN pin 2

supplied cable SA-PL64-3

98005 Mk 2

20mA OUT
telemetry receiver

20mA IN
from RF Link

Supplied BBV Cable: SA-PL64-3

PL2	98005	
1 red	1	+9V from PL2 to 98005
2 blue	2	RS232 from PL2
3 green	3	RS232 to PL2
5 white	5	0V

The 98005 Mk2 is powered from the PL2 via this cable so does not require another PSU.
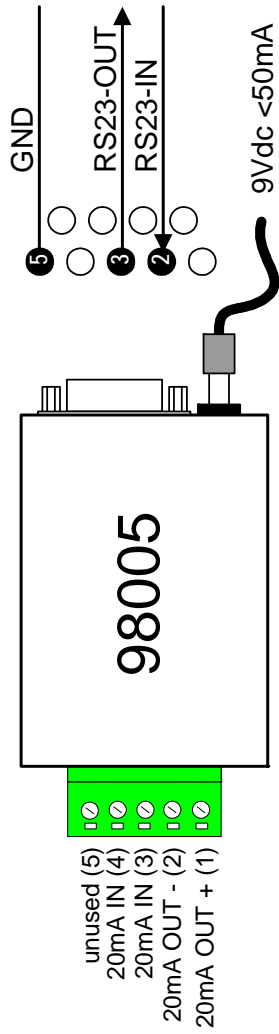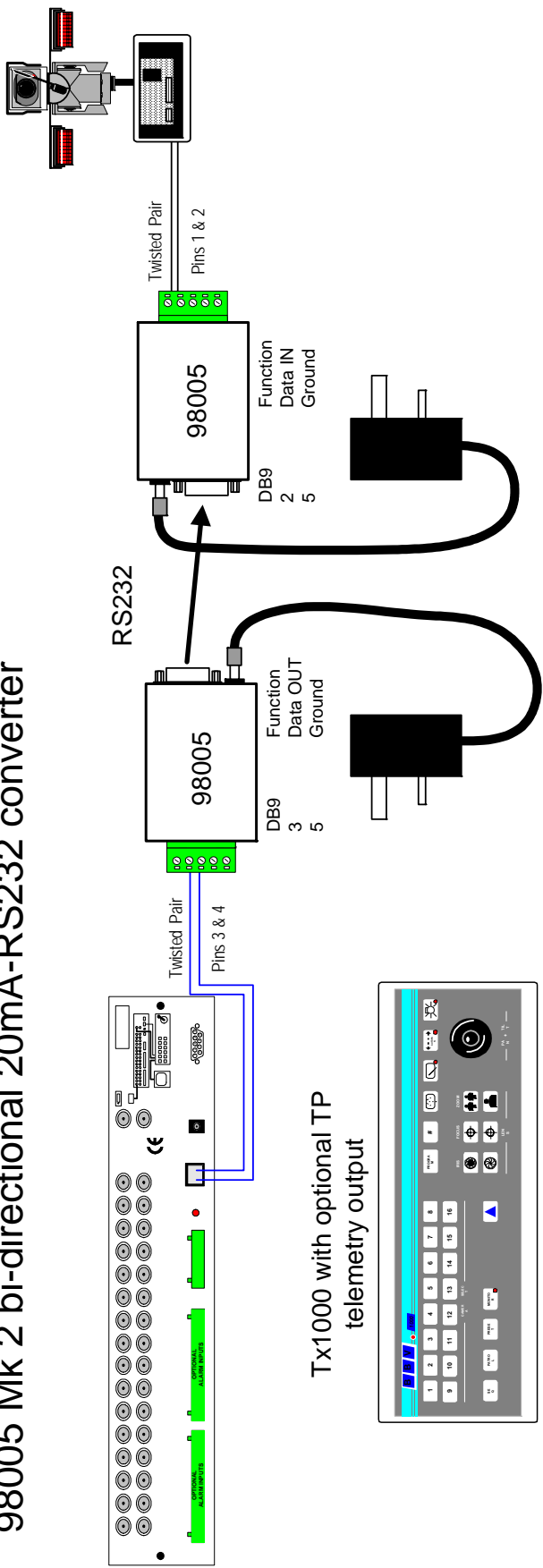
SW4 Settings

Switch	ON
1	Commands must be repeated to filter out spurious commands. (Telemetry response is slowed slightly)
2	Disable AUTOPAN and RANDOM PAN
3	Disable # commands, prevents dome menus from being displayed.
4	Disable preset PATROLs.

For further assistance please call the BBV tech support line +44(0)1323 444600 or email support@bbvcctv.com www.bbvcctv.com

98005 Mk 2 bi-directional 20mA-RS232 converter

Twisted Pair
Pins 1 & 2

98005

Function
Data IN
Ground

DB9
2
5

RS232

Function
Data OUT
Ground

98005

DB9
3
5

Twisted Pair
Pins 3 & 4

Tx1000 with optional TP telemetry output

GND

RS23-OUT

RS23-IN

5   3   2

9Vdc <50mA

98005

unused (5)
20mA IN (4)
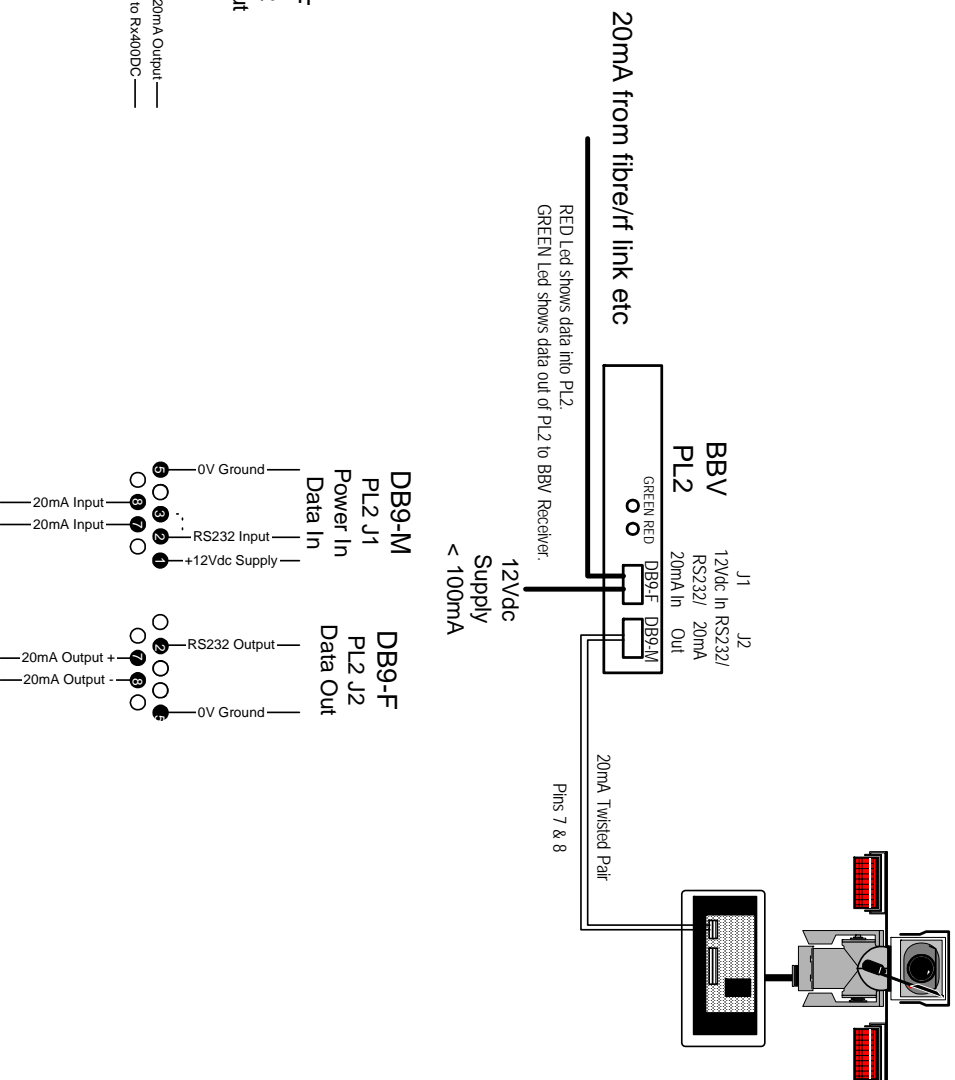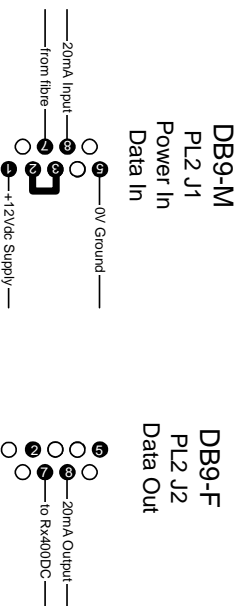20mA IN (3)
20mA OUT - (2)
20mA OUT + (1)

PL2 MK2 WIRING

The PL2 is used to filter TP telemetry commands when used with RF links and fibre systems.

The unit provides additional error checking and also filters unwanted commands.

PL2_V5 software provides the following functionality.

1. Remote Self Test removed.
2. Random/Autopan removed.
3. Status leds showing data presence.

The unit can accept either 20mA or RS232 inputs and will output both 20mA and RS232 simultaneously.

DB9-M
PL2 J1
Power In
Data In

- 20mA Input — from fibre
- +12Vdc Supply
- 0V Ground

DB9-F
PL2 J2
Data Out

- 20mA Output — to Rx400DC

20mA from fibre/rf link etc

RED Led shows data into PL2.
GREEN Led shows data out of PL2 to BBV Receiver.

BBV PL2
GREEN RED
J1 — 12Vdc In RS232/ 20mA In
J2 — RS232/ 20mA Out
DB9-F DB9-M

12Vdc Supply < 100mA

20mA Twisted Pair
Pins 7 & 8

DB9-M
PL2 J1
Power In
Data In

- 0V Ground
- 20mA Input
- 20mA Input
- RS232 Input
- +12Vdc Supply

DB9-F
PL2 J2
Data Out

- RS232 Output
- 20mA Output +
- 20mA Output -
- 0V Ground

NOTES

<u>NOTES</u>

Other BBV products.

Product	Description
TX300	Single camera desktop telemetry transmitter with BBV up-the-coax & 20mA telemetry, Pan/Tilt/Lens & Lights
TX400	As TX300 inc Wash, Wipe, Autopan, 8 presets, preset patrol.
TX400DC/RS485	As TX400 including joystick for proportional Pan/Tilt control with RS485 Output.
TX1000 MK2	8 or 16 camera, 2 monitor telemetry transmitter. Up to 2 keyboards. BBV up-the-coax and RS422 standard with options for alarm inputs and 20mA telemetry.
TX1500	Mid size matrix 16 – 96 camera, 8 monitor. Up to 4 control positions (keyboard & remote control) options for alarms, remote control, BBV up-the-coax and RS485 telemetry.
FBM range	Large size matrix. Configurable up to 4096 cameras and 64 monitor outputs. Up to 16 control positions (keyboard & remote control) options for alarms, remote control RS485/RS422 telemetry with various options. Please call to discuss requirements.
RX100	Dome Interface with options to drive a large library of dome cameras. BBV up-the-coax and 20mA telemetry.
RX100/BAX	Dome Interface with options to drive a large library of dome cameras. BAXALL up-the-coax telemetry.
RX200	AC receiver for Pan only heads or static cameras, Wash/Wipe/Lights. BBV up-the-coax and 20mA telemetry.
RX300	AC receiver for Pan/Tilt/Zoom/Focus/Iris Override and 1 Auxiliary output. BBV up-the-coax and 20mA telemetry.
RX400P	AC full function receiver. PTZFI 4 Auxiliary outputs, 16 presets. BBV up-the-coax and 20mA telemetry.
RX45X (AC) RX55X (DC) Multi RS485 protocol and BBV up-the-coax telemetry receivers	Multiple RS485/422 and BBV up-the-coax controllable AC and DC receivers. These receivers are controlled from an expanding range of serial protocols as listed below. 110/230Vac supply. PTZFI, 64 presets, preset patrol, 8 local alarm inputs, 12V 500mA supply output. OSD for remote diagnostics. 3 Aux. outputs RX55X or 4 Aux. outputs RX45X. Optional Privacy board. BBV RS485, COAX & 20mA, BAXALL COAX, DENNARD RS485, MOLYNX, PELCO P/D RS485, VCL/HONEYWELL RS485, PHILIPS/BOSCH RS485 (OPTIONAL BI-PHASE INPUT), SENSORMATIC/AD RS422 VICON RS422 & CIRRUS AUDIO MONITORING
RX450/550	PANASONIC RS485 Protocol only version of RX45X/55X.
CTI16 CTI8	Multi-protocol serial converter that gives either 8 or 16 channels of up-the-coax control (BBV Coax protocol). BBV RS422, Dennard RS485, Pelco P, Pelco D, Philips/Bosch RS485/232, VCL RS485, Sensormatic RS422, Molynx, Vicon
STARCARD STARCARD/CONVERTER	8 * RS485 output, 2 wire simplex RS422, 4 wire full-duplex RS422, 2 wire half-duplex RS485. Optional STARCARD/CONVERTER offering protocol conversion to drive an increasing range of 3rd party protocols.
ACCESSORIES	TxLD (bidirectional RS422-RS232 converter) 98005 (bidirectional 20mA-RS232 converter) AD RS422 (American Dynamics) protocol converters