

# WIRELESS RADIO MODEM WITH BLUETOOTH TECHNOLOGY

**C ←BUS**

## CBR 118 Eng.

- Permits converting Principal C-Bus to Bluetooth mode
- Extends the C-Bus network by radio waves
- Power supply: 230 V~ ; on wall mounting



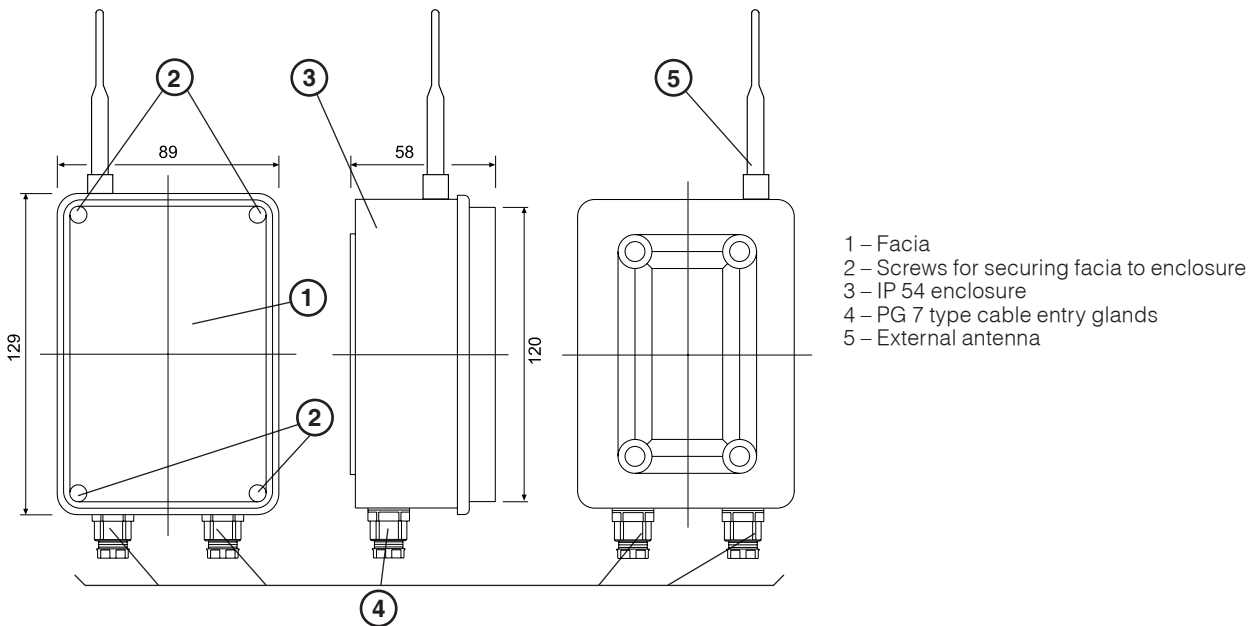
### 1. APPLICATION

Used in pairs to cover stretches of C-BUS (principal, not local e.g. RTB..) network where it is impossible to lay a twin copper wire cable e.g. in a public highway or a communal garden.

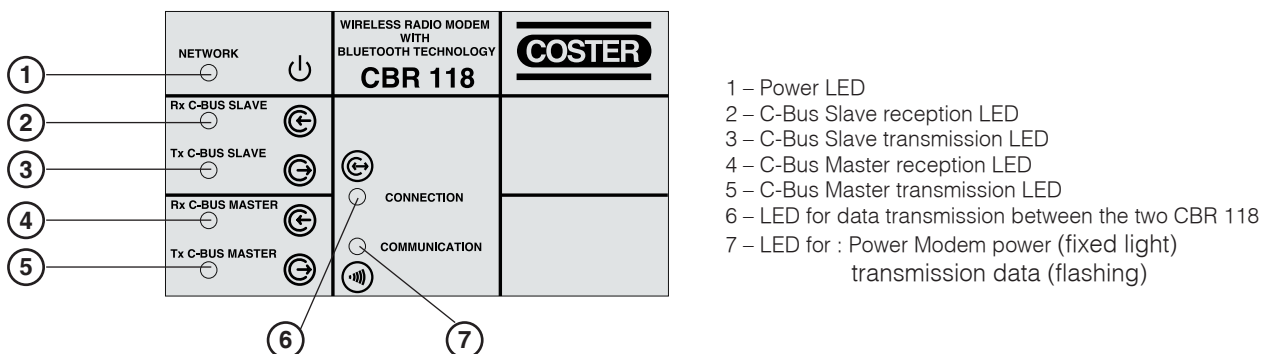
### 2. INSTALLATION

The devices can be sited on the outside of the buildings but must be protected from atmospheric pollution. It is preferable for the two CBR 118 to “see” each other so there should be no objects or walls which could obscure or interfere with the radio signal emitted.

### 3. OVERALL DIMENSIONS



### 4. FACIA



## 5. TECHNICAL DATA

Power supply	230 V ~ ± 10%	Frequency	2,400 - 2,4835 GHz
Frequency	50...60 Hz	CE Certification	G5M203060109-C
Consumption	3 VA	Hopping	1,600/s
Protection	IP54	GFSK Modulation	1MHz channel space
Baud Rate	<b>1200</b> ...9600 bps	TX power	max 20 / Typical 16dBm (class 1)
C-Bus Master port	1	Rx sensitivity	- 84 dBm
C-Bus Slave port	1	Operating temperature	- 10...45 °C
Range	up to 100 metres without obstacles		
Standard	Bluetooth Version 1.1		

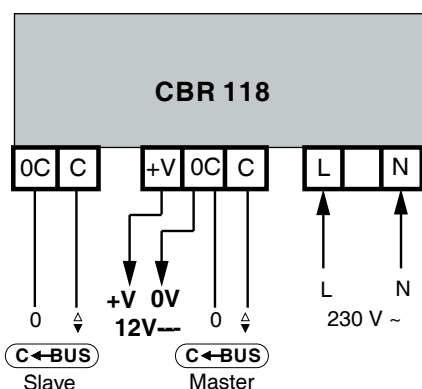
## 6. ELECTRICAL CONNECTIONS

Proceed as follows :

- Separate the facia and the enclosure after loosening the securing screws
- Carry out the electring wiring according to the diagram and in compliance the current electrical regulations and using :
  - 1.5 mm<sup>2</sup> cables for power supply
  - 1...1.5 mm<sup>2</sup> cables for C-Bus
- Apply power (230 V~) and check its presence across terminals L and N.
- Remove power, replace facia on enclosure and secure it with the four screws (3.2).

You are advised not to insert more than two cables in a single terminal of the device and, if necessary, to use an external junction box.

## 7. WIRING DIAGRAM



- L - 230 V ~
- N - neutral
- +V - output services (12 V - max 20mA)
- 0V - corresponds to 0C
- C-Bus Slave - input C-Bus line (from modem or other convertors)
- C-Bus Master - output C-Bus line (to electronic devices)

## 8. OPERATION

Provided CRB 118 is correctly powered the red NETWORK LED and the red COMMUNICATION LED should light and stay lit.

When the two CBR 118 are in communication with each other the green CONNECTION LED will light and the red COMMUNICATION LED will light intermittently according to the flow of data.

Even if the C-BUS network does not communicate the CBR 118 will exchange data and so the COMMUNICATION LED will continue to flash.

If the green CONNECTION LED does not light this means that the two CBR 118 are too far apart or the communication is blocked by walls and/or other obstacles.

In this event it is necessary to reduce the distance, remove the obstacles or use a triangulation with two other CBR 118.

The CBR 118 are initialised at the factory and so no configuration is necessary; furthermore, since they are transparent for the C-BUS network they do not require any addressing.

**IMPORTANT:** do not touch the RESET button on the Bluetooth modems since by doing so you will lose the factory setting making necessary the re-configuration of the Bluetooth devices as described in Section 9 of this data sheet.

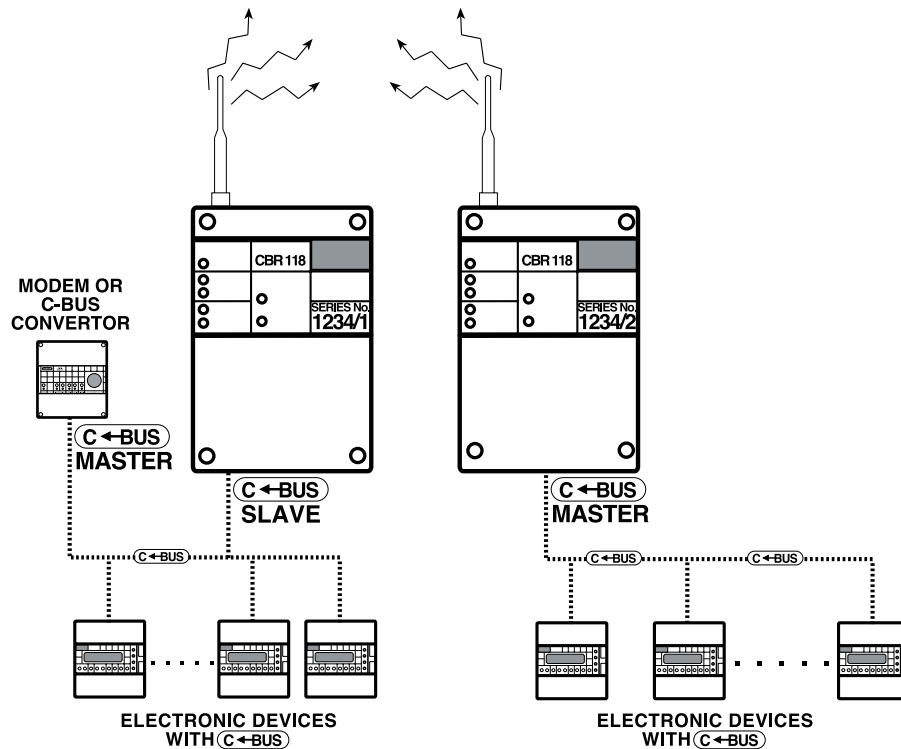
**9. TECHNICAL NOTES**

The CBR 118 are supplied in pairs and each marked to identify it.  
 They provide point-to-point communication and **are calibrated in the factory only for communication one with the other.**  
 Should more than one pair be purchased be careful not to mix the pairs because communication will not be possible.  
 Should you wish to cover two or more distances via radio follow the diagram in Section 10.1 on page 4.

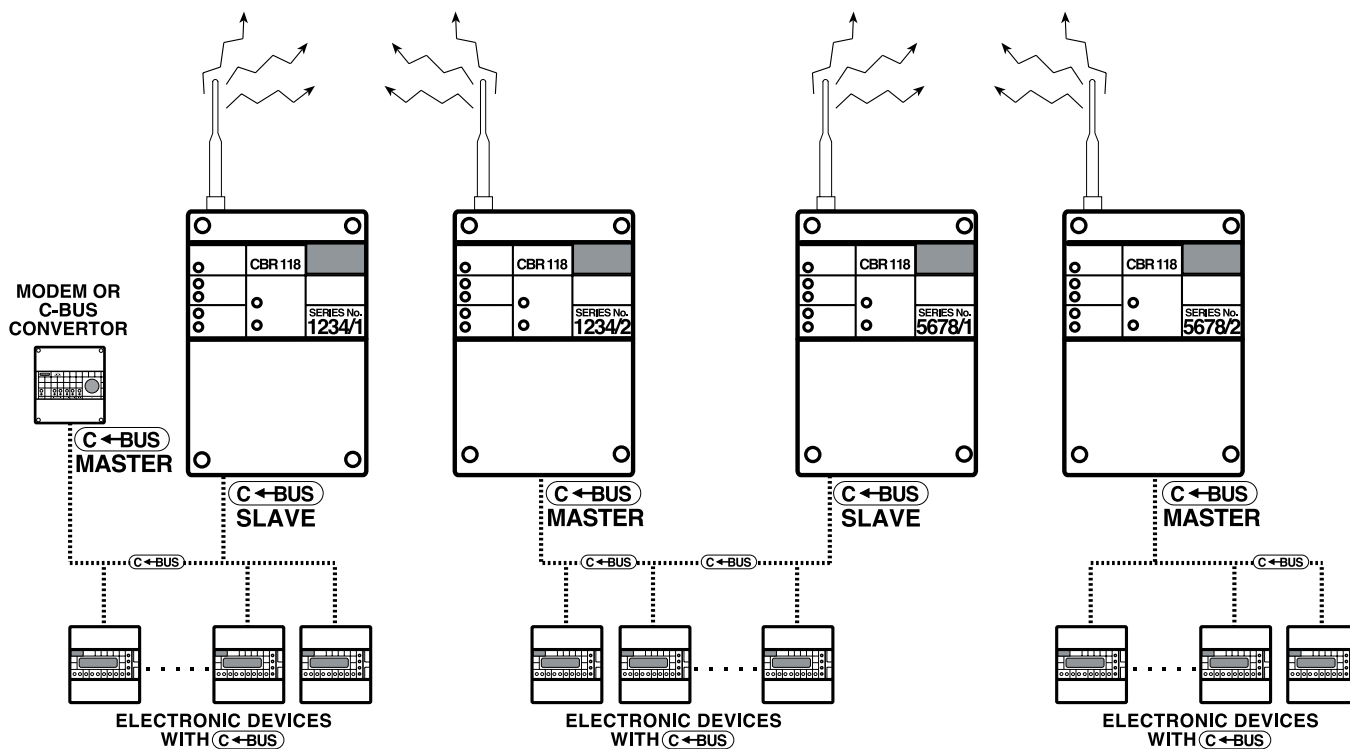
**9.1 Reconfiguration**

Should re-configuration of the BT modem become necessary (e.g. because of an accidental depression of the reset key) the ACB 232 accessory will be required.  
 ACB 232 is connected to a COM port of a PC and to the C-BUS slave port of the CBR 118.  
 On the PC a communication program is carried out with the serial (e.g. HyperTerminal of Windows), configuring it to communicate with the serial port connected to the ACB 232 with the following parameters: 9600, N,8,1, no flow control.  
 At this point you can power the CBR 118 and wait until the "COMMUNICATION" LED (OPR) lights.  
 Now press the RST key until the red LED goes out; soon after the green LED will light intermittently.  
 Procedure:  
 – Press "Enter" key of PC and wait to see the message:  
   "To see usage type ? <CR>"  
 – Press capital "B" key (baud rate): there will appear the message:  
   bps 0: 1.2/1: 2.4/2: 4.8/3: 9.6/4: 19.2/5: 38.4/6: 57.6/7: 115.2K  
   followed by <CR>  
 – Press "0" (zero), "1200 bps"  
 – Press "Send"; there will appear the message:  
   "Type X to complete setting"  
 – Press "X" (upper case); there will appear the message:  
   "Saving change and rebooting!"  
  
 The reconfiguration is terminated.  
 It is important that the keys "B" and "X" are capitals so press Shift before the letters or use the Caps Lock key.  
 Now repeat the procedure with the second CBR 118 (keeping the first switched off), following the same procedure.

**10. TYPICAL FUNCTIONAL DIAGRAM**



10.1 Functional diagram with two pairs



Amendments to data sheet

Date	Revision No.	Page	Section	Details of amendments
02.12.05 MM		1 2 2	4. FACIA 7. WIRING DIAGRAM 8. OPERATION	Corrections to legend. Added terminal + V. Last sentence re-worded
14.02.07 MC		2	7. WIRING DIAGRAM 9. TECHNICAL NOTES	Added 12 V- output Added technical point 9,1 (reconfiguration) with detailed description of the procedure
08.10.07 AM	<b>01</b>	1	1. APPLICATIONS	Adjust first sentence

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