

# CALL '2' OPEN USING YOUR MOBILE PHONE

## Features

- Ready to operate Straight from the Box!
- O/P Changeover Contact 1.2KW
- 'White List' upto 10 Tel No's
- Signal Strength Indication
- Internal Antenna
- Waterproof Enclosure IP68 (Pressure Washer Proof)
- Accepts all major SIM Cards
- 9-24Vdc Operation
- Optional Battery Backup
- Optional Configuration by SMS Text Messages



## Easy Operation

1. User Calls C20
2. C20 Rejects call
3. If valid C20 operates Output

## Operation

Call '2' Open provides a relay changeover contact which can operate gates / barriers etc. When C20 receives a telephone call, the relay contacts are operated.

Because C20 rejects the call no call charges are incurred.

C20 can operate from any Tel number, or, from only those with Caller ID on the 'White list'

## 1. Insert SIM card

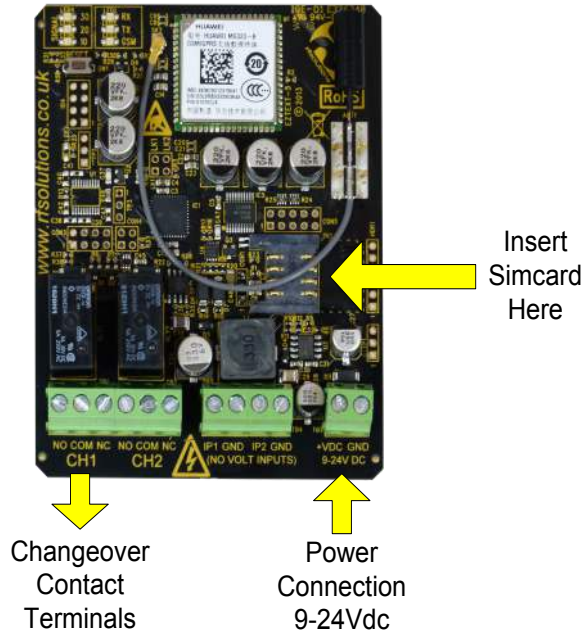
Insert SIM card before applying power (standard 3 Volt SIM cards only).

Ensure SIM card is blank

Ensure the SIM card has not been PIN Code Protected!

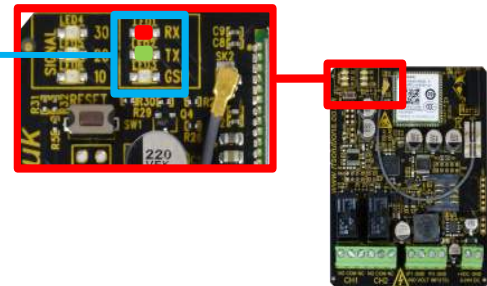
Beware of pay-as-you-go SIM cards which require regular call activity to remain active.

RF Solutions recommends O2 / Vodafone.  
Problems have been identified with Orange SIM cards which cannot be guaranteed



## 2. LED Indication at Startup

Logging onto Network (Tx/Rx alternate flash)					
RX	🔴	□	🔴	□	🔴
TX	□	🟢	□	🟢	□

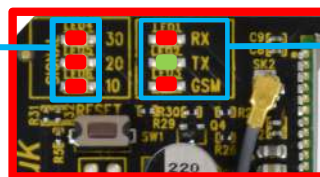


Error! (All Flash ON / OFF together)					
30	🔴	□	🔴	□	🔴
20	🔴	□	🔴	□	🔴
10	🔴	□	🔴	□	🔴
RX	🔴	□	🔴	□	🔴
TX	🟢	□	🟢	□	🟢

**Error - No GSM Service**  
1. Check SimCard  
2. Check Antenna Connection

## 3. LED Indication after Startup (Normal Operation)

Signal Strength		
Good	OK	Poor
🔴 🔴 🔴	🔴 🔴	🔴



Activity LED's	
RX	Receiving an SMS
TX	Transmitting an SMS
GSM	Intermittent Flash GSM Healthy

## Optional Waterproof Power Supply

Resin Potted Unit (IP67)

Size 83 x 37 x 30mm

Input 100-240Vac Output 12Vdc 1A

Wall Fixing Lugs

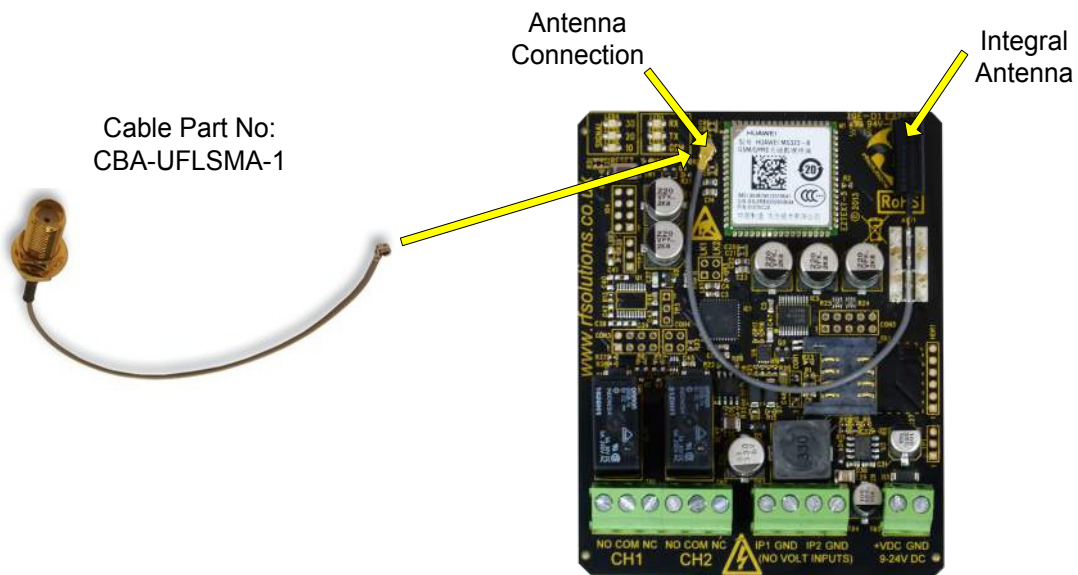
Supplied with 3.3m lead

Part NO PSU-12V1A-IP



## Optional External Antenna

Using an external antenna can provide a better signal reception than the internal antenna if required. Using Cable adaptor CBA-UFLSMA-1 provides an SMA Bulkhead connector into which many alternative GSM antennas may connect



## Ordering Information

PART No	Description
C20	Call2Open Controller IP68
PSU-12V1A-IP	Power Supply IP67
CBA-UFLSMA	Cable assy for external Antenna

## Sending Text Commands (These are optional)

Command	Description
<p>Unit Password</p> <p>(UPW)</p>	<p>The default password is 1234 .it can be changed to any combination of letters/ numbers from 4 to 10 characters.</p> <p>This command that must be sent within 5minutes from initial power up. If for any reason the unit password is lost or miss-entered, remove all power to the unit for 1 minute, then start again.</p> <p>Command Example: UPW#1234 (Sets the password to 1234)</p> <p>Response: Unit Password Set</p> <p>***NOTE ONLY THIS COMMAND IS CASE SENSITIVE!***</p>
<p>Change Output delay time</p> <p>(OPDLY1)</p>	<p>By default this is pre-set to 1 Second operation</p> <p>Command Example: 1234#OPDLY1#2 (Sets the changeover contacts to operate for 2 seconds)</p> <p>The time of the output can be set from 1 to 65500 seconds, or If is set to '0', then the output will latch on.</p>
<p>Unit Identity</p> <p>(UID)</p>	<p>This sets the 'identity' of the C20 unit, and is included in any response text from the C20</p> <p>Command Example : Password#UID#Gate2 Sets the identity of this C20 to Gate2</p>
<p>Report GSM Signal Strength</p> <p>(SIGQ)</p>	<p>Reports C20 GSM signal strength as: 'POOR' (consider alternative antenna) 'OK', or 'Good'</p> <p>Command Example : Password#SIGQ Response : Signal is Good</p>

## Additional Commands for using the White List

Command	Description
<p data-bbox="217 533 516 604"><b>Add Tel No to White List</b></p> <p data-bbox="305 684 431 720">(C2ONUM)</p>	<p data-bbox="558 447 1398 478">Adds a telephone number (caller ID) to the white list that C20 will accept.</p> <p data-bbox="558 512 1276 577">Note the C20 can store up to 10 cell phone numbers per input. Setting * as a number will allow any number access</p> <p data-bbox="558 617 1024 678">Command Example: 1234#C2ONUM#1#* (Allows any telephone to activate C20)</p> <p data-bbox="558 716 1317 777">Command Example: 1234#C2ONUM#1#0123457891 (Adds the telephone no 01234 57891 to position 1 of the white list)</p>
<p data-bbox="207 961 526 997"><b>Report the White List</b></p> <p data-bbox="298 1077 435 1113">(C2ONUM?)</p>	<p data-bbox="558 989 1308 1020">Report C20 White List of Telephone numbers which are accepted</p> <p data-bbox="558 1052 984 1083">Command Example: 1234#C2ONUM?</p>
<p data-bbox="227 1289 506 1360"><b>Delete a number in the White List</b></p> <p data-bbox="272 1402 461 1438">(C2ONUMDELn)</p>	<p data-bbox="558 1318 1308 1350">This command Deletes a telephone numbers within the White list</p> <p data-bbox="558 1350 1045 1381">Command Example: 1234#C2ONUMDEL#1</p> <p data-bbox="558 1381 1127 1413">Deleted telephone number in position 1 of the list</p>

## Technical Specifications

Storage Temperature: -10 to +70° Celsius. Operating Temperature: 0 to +55° Celsius.  
 C20 Enclosure Rating IP68  
 C20 Dimensions 130 x 112 x 42mm

Electrical Characteristics	Min	Typical	Max	Dimension	Notes
Supply Voltage	11		24	Vdc	
Supply Current for C20:					
Idle	35	44	100	mA	1
Operating	200	370	1000	mA	2
Mains rated Relay Rating (230Vac)		5	12	A	3

**Notes**

1. Refers to maximum supply current required with all components idle.
2. Refers to peak supply current required with all components operating. In practice internal reservoir capacitance limits the instantaneous peak current to less than 500 mA.
3. The relay contacts in this unit are for functional switching only and must not be used for isolation purposes.

**RF Solutions Ltd. Recycling Notice**

Meets the following EC Directives:

**DO NOT**

Discard with normal waste, please recycle.



**ROHS Directive 2002/95/EC**

Specifies certain limits for hazardous substances.



**WEEE Directive 2002/96/EC**

Waste electrical & electronic equipment. This product must be disposed of through a licensed WEEE collection point. RF Solutions Ltd., fulfills its WEEE obligations by membership of an approved compliance scheme.

**Waste Batteries and Accumulators Directive 2006/66/EC**

Where batteries are fitted, before recycling the product, the batteries must be removed and disposed of at a licensed collection point.

**Environment Agency producer registration number:**  
 WEE/JB0104WV.

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