

Tel: (+49) (0)89-6659089-0

#### Informational Sheet

# **TECHEON Universal Remote Controller BFF02**



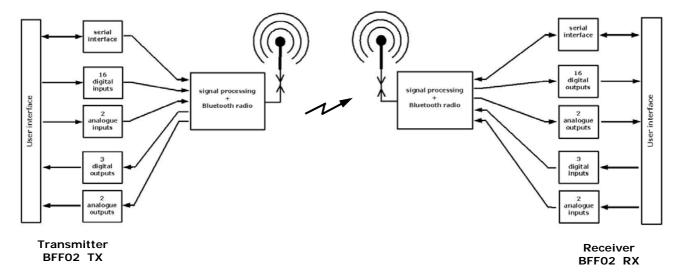


#### BFF02

HHEO

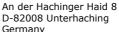
These universal remote control systems employ powerful Bluetooth radio components. A simultaneous application of digital- and analogue in- and outputs together with a full duplex serial interface is possible. The standard DIN rail housing can be easily mounted into your switch cabinet. It is very easy for the user to design a complete remote control for a various different applications by using these sophisticated devices. The BFF02 remote controller can not be adopted by third or other Bluetooth devices and offering a high grade of data security. Due to the application of 79 transmission channels in the frequency hopping mode with 1600 channel alternations per second, the systems securing a high grade of immunity against interferences. No influences by W-LAN devices according to IEEE 802.11b/g. The high radio frequency output power of +20dBm (100mWatts) is representing a good range performance, also. The units operate within the 2.4GHz ISM-Band, what means that those units can be used licence free and free of charge. All Bluetooth software tacks are already integrated and certified.

## Block diagram:



#### Available models:

	transmitter ->		receiver	receiver	← transmitter	
model	analogue channels	digital channels	interface	analogue reverse channels	digital reverse channels	interface
BFF02-0	2	16	RS232	2	3	RS232
BFF02-1	2	16	RS422	2	3	RS422
BFF02-2	2	16	RS485	2	3	RS485
BFF02-3	2	16	TTY	2	3	TTY
BFF02-4	2	16	-	2	3	-

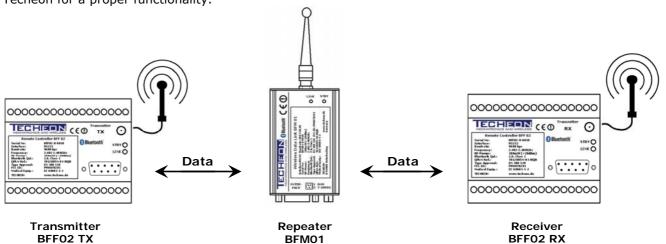


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### Raising the range by employing a repeater (BFM01):

The transmission range can be increased, by using a repeater (BFM01). The devices must be configured by Techeon for a proper functionality.



### 8. Technical Data:

Bluetooth Class 1, Qualification 2.0 Technology: Frequency: 2,402 - 2,480GHz, ISM-Band

RF-Channels: 79 1600 Alternations per second:

Max. Range: approx. 250 meters in line of sight; also depending on data rate

50 - 100 meters (approx. 150 - 300 ft) inside buildings. Depending

on the wall construction

Protocol: 8 data bits, no parity, 1 stop bit

transparent data mode

Data rate: 9600 bps

Handshake: no handshake Power consumption: max. 1.5 Watts

Voltage supply: 15 - 35V DC, 8 - 35 V DC for models with option -A5

Digital inputs: 0 - 30V DC; 47kΩ

Analogue inputs: 0 - 10V DC; 0 - 5V DC for models with option -A5

 $100k\Omega$ ; asymmetric; 10 bit A/D-converter resolution

Digital outputs: open collector (npn); max. 200mAmps per output; max. 1.4A at all

outputs together

0 - 10V DC; 0 - 5V DC for models with option -A5 Analogue outputs:

 $1k\Omega$ , asymmetric; 10 bit D/A-converter resolution

90 x 75.5 x 45.5mm / 3.54" x 2.97" x 1.79" (W x L x H), Dimensions:

without connectors and antenna

Weight: 550grams, without antenna

Protection class: IP50

-25°C - +55°C (-13°F - +131°F) Operating Temperature Range: Storage Temperature Range: -30°C - +85°C (-22°F - +185°F)

Humidity: 5 - 90%, not condensing

Conformities: EN 300 328-2 V1.1.1 EMC: EN 301 489 V1.3.1, EN 301 489 V17.1.1, EN 61000-6-2

Low Voltage Directive: EN 61131-2

Medical Electrical Equipment: IEC 60601-1-2

ETS 300 328, ETS 300 826 Type Approval:

FCC ID: PVH070201

Antenna with knee: L = 100 mm (3.94")

 $\emptyset = 70 \text{mm} (2.76'')$ ; cable length = 3,00m (118'') Puck antenna:

An der Hachinger Haid 8 D-82008 Unterhaching Germany\_\_\_\_ Tel: (+49) (0)89-6659089-0 Fax: (+49) (0)89-6659089-1 URL: www.techeon.de

Notice:

on basis of the type approval, it is strictly forbidden to use other antenna types as those types offered by Techeon Mechatronics And

Wireless.

RoHS: WEEE-Registration No:

Our products are conform to RoHS

DE 64490879

### Ordering informations:

Remote Controller BFF02-0 with RS232 interface: Remote Controller BFF02-1 with RS422 interface: Remote Controller BFF02-2 with RS485 interface: Remote Controller BFF02-3 with TTY interface: Remote Controller BFF02-3 without serial interface:	part No. 102.000.00 part No. 102.000.10 part No. 102.000.20 part No. 102.000.30 part No. 102.000.40
Remote Controller BFF02-0-A5* with RS232 interface: Remote Controller BFF02-1-A5* with RS422 interface: Remote Controller BFF02-2-A5* with RS485 interface: Remote Controller BFF02-3-A5* with TTY interface: Remote Controller BFF02-4-A5* without serial Interface:	part No. 102.000.50 part No. 102.000.60 part No. 102.000.70 part No. 102.000.80 part No. 102.000.90
$\lambda/2$ antenna (with knee, 100mm/3.94" length): Puck antenna (Ø 70mm/2.76"): Antenna extension cable; 1m/39.37" length; SMA connectors:	part No. 100.001.00 part No. 100.002.00 part No. 101.002.00

<sup>\*</sup> Option -A5: Power Supply = 8 - 35V DC, Analog Inputs and Outputs = 0...5V



 $\lambda$ /2-antenna with knee length = 100mm/3.94"



Puck antenna Ø 70mm/2.76" cable length = 3.00 meters/118"

Pictures are not true to scale

Technical changes reserved!