Flamonitec
BFI AUTOMATION

COMPACT FLAME CONTROL-LER- POWER SUPPLY AND CONVERTER BOX 5012 / 5012SD

for CFC 3000

TECHNICAL DESCRIPTION

VERSION: TB 5012-5012SD EN REV4

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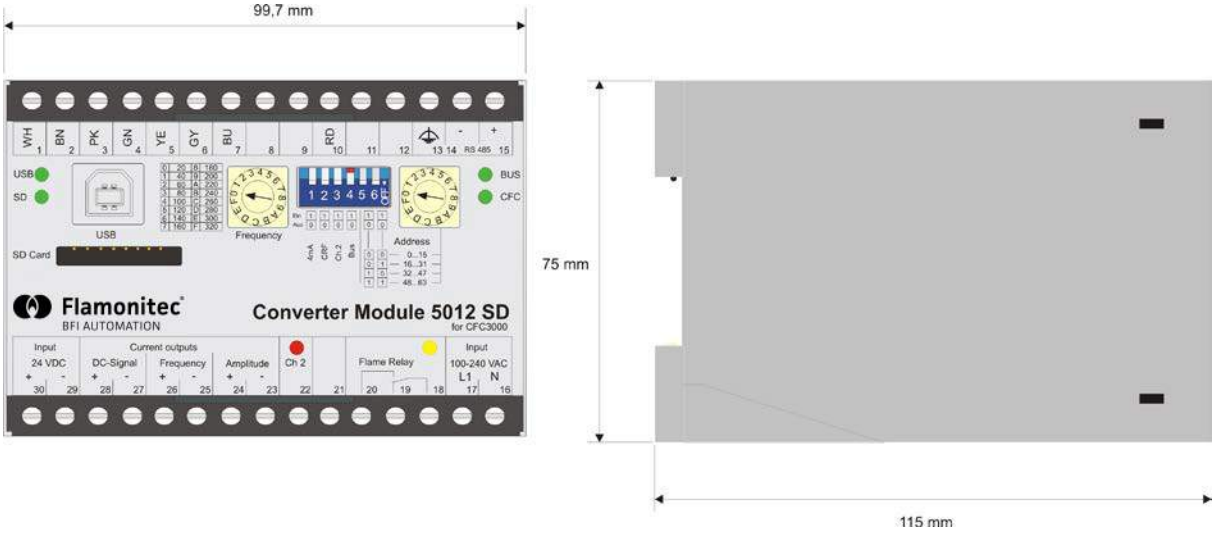
Converter Box incl. Power Supply

for connection to CFC 3000

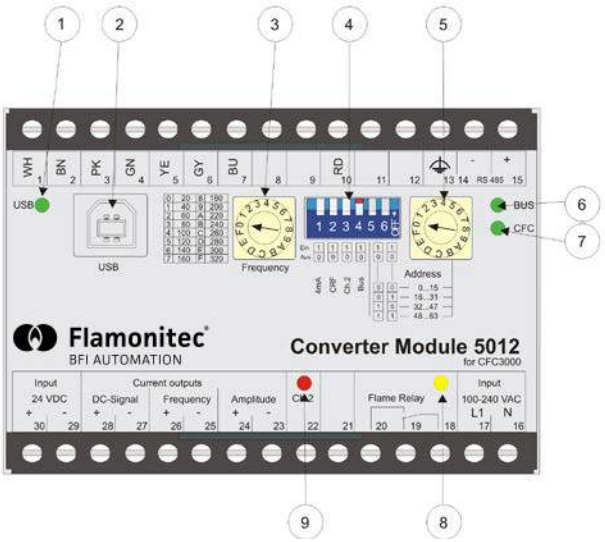
- **Wide range AC power supply 100 - 240 V AC**
- **DC voltage connection 24V**
- **Current output depending on the flame modulation frequency**
- **Current output depending on the DC-raw signal (active only when IR inputs)**
- **Creation of a BUS system for remote access of up to 64 CFC 3000 (5012/5012SD)**
- **Relay contacts with max. 250V AC / 1A resistive**
- **Optional SD card recorder for long-term written records**
- **Support rails or backplane assembly**
- **Space saving**

Dimensions 5012



Controls and Displays 5012

1: USB-operation
2: USB-Port
3: Frequency slector
4: DIP-switches
   - 1 = change over 0-20/4-20 mA
   - 2 = Current-Relay-Function
   - 3 = Sensitivity change over
   - 4 = BUS terminator
   - 5 = Selection adress bank
   - 6 = Selection adress bank
5: Lower adress part
6: BUS-operation
7: CFC-Communication
8: Flame relay activ
9: Sensitivity change activ



Controls and Displays 5012SD

1: USB-operation
2: USB-Port
3: Frequency slector
4: DIP-switches
   - 1 = change over 0-20/4-20 mA
   - 2 = Current-Relay-Function
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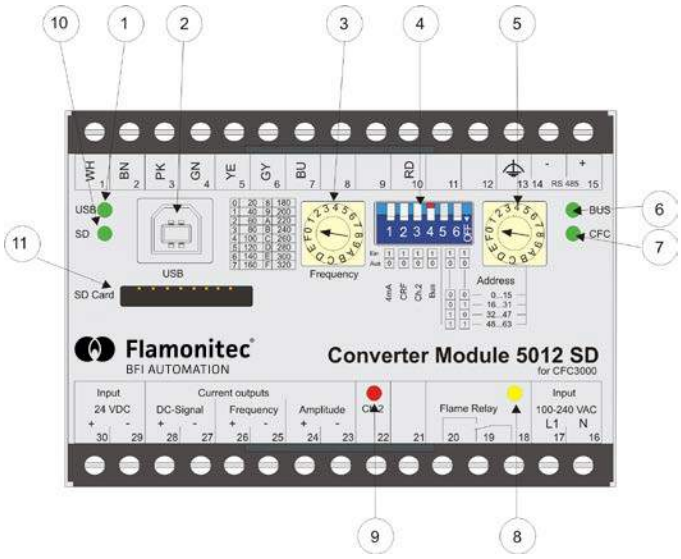
7: CFC-Communication
8: Flame relay activ
9: Sensitivity change activ
10: SD-LED
11: SD-card slot



Application

The Converter Box 5012 is developed for the compact flame controller type CFC 3000 and provides custom connection solutions that allow the diverse possibilities of CFC 3000 to use to the maximum extent. Firstly, the Converter Box serves as a power supply unit, which is designed to supply power to BFI compact flame controller. Through its wide range input of 100 - 240V AC, it is universally applicable. For higher switching capacities of the relays, the converters provide higher duty relay contacts, which are driven by the internal relay of the CFC. In addition to the standard power output of the CFC 3000 the Converter Box 5012 provides two other current outputs. Current output 2 provides a signal proportional to the main frequency of flame modulation current signal 0 (4) -20 mA. The determination of the flame radiation modulation is carried out by a special algorithm in CFC 3000 and is transmitted 232 signal for 5012, together with other data on the RS. The 100% end value of the current output signal can be adjusted by means of switches on the front panel in 16 steps. The current output 3 provides a raw signal proportional to the DC 0 (4) - 20 mA signal. This third current output is only active when the CFC devices with IR input. The initial value of 0 or 4mA can be selected via a DIP switch on the front panel for both outputs. About the USB port on the front panel, all data such as when connecting the interface cable to the CFC, on a computer can be displayed. For safety reasons, this is limited to the read-only mode. By 5012 it is possible to build a bus system in which all data via an interface conversion from RS 232 to RS 485 over greater distances can be transferred without interference. It is possible up to 64 converters 5012 and thus to combine CFC 3000 with each other and display the data using a special visualization software simultaneously. It can be displayed as a bar graph or in parallel but constitute as from the CFC-Com software known as single display or with 4 freely selectable windows data from all 4 x16 CFC.

The Box and thus per CFC (burner) can be set via the rotary switch an individual address whereby each CFC and therefore the burner can be selected by itself. It is therefore no special setting on the CFC that make this when replacing a CFC does not need to be paid to a specific address. Optionally, the unit can be supplied fitted with an SD card writer. Here currently a maximum size of 4 GB cards allowed. Approximately 100 MB of memory are needed per day, so that 40 complete days can be recorded.

For security reasons, only the read-only mode is also possible in the remote display.

Due to the small dimensions of the device, it is particularly easy to install by mounting on a 35mm DIN rail (rail). In addition, it is possible to mount the device through the existing holes on a mounting plate.

Technical specifications

Input voltage	100 - 240V AC +/- 10%, 50/60 Hz or 24 V DC
Fuse:	internal, primary 125 mA T
Output voltage:	24 V DC - only terminal CFC 3000
Max. Output Current:	150mA
Relay:	fuse circuit, 250V / 1A
Sensitivity adjustment:	external signal 24V DC, looped for CFC
Data output:	conversion from RS 232 to RS 485 - address adjustable 0-63
Temperature range:	-20 ° C - + 60 ° C
Mounting:	Terminal housing for DIN rail, 35mm and wall-mounting
Protection:	IP 20

Current outputs

- current output 0(4)- 20mA of the CFC 3000 looped
- Frequency-dependent current output 0 (4) - 20mA, full scale adjustable in 16 steps
- DC- raw-signal dependent current output 0 (4) - 20 mA

Single unit

Weight:	about 450g - DIN rail
Dimensions (W x H x D):	99.7 x 75 x 115 mm

Converter in IP65 ABS housing construction

Weight: 2400g - with wall mounting housing
Dimensions (W x H x D): 228 x 227 x 150 mm

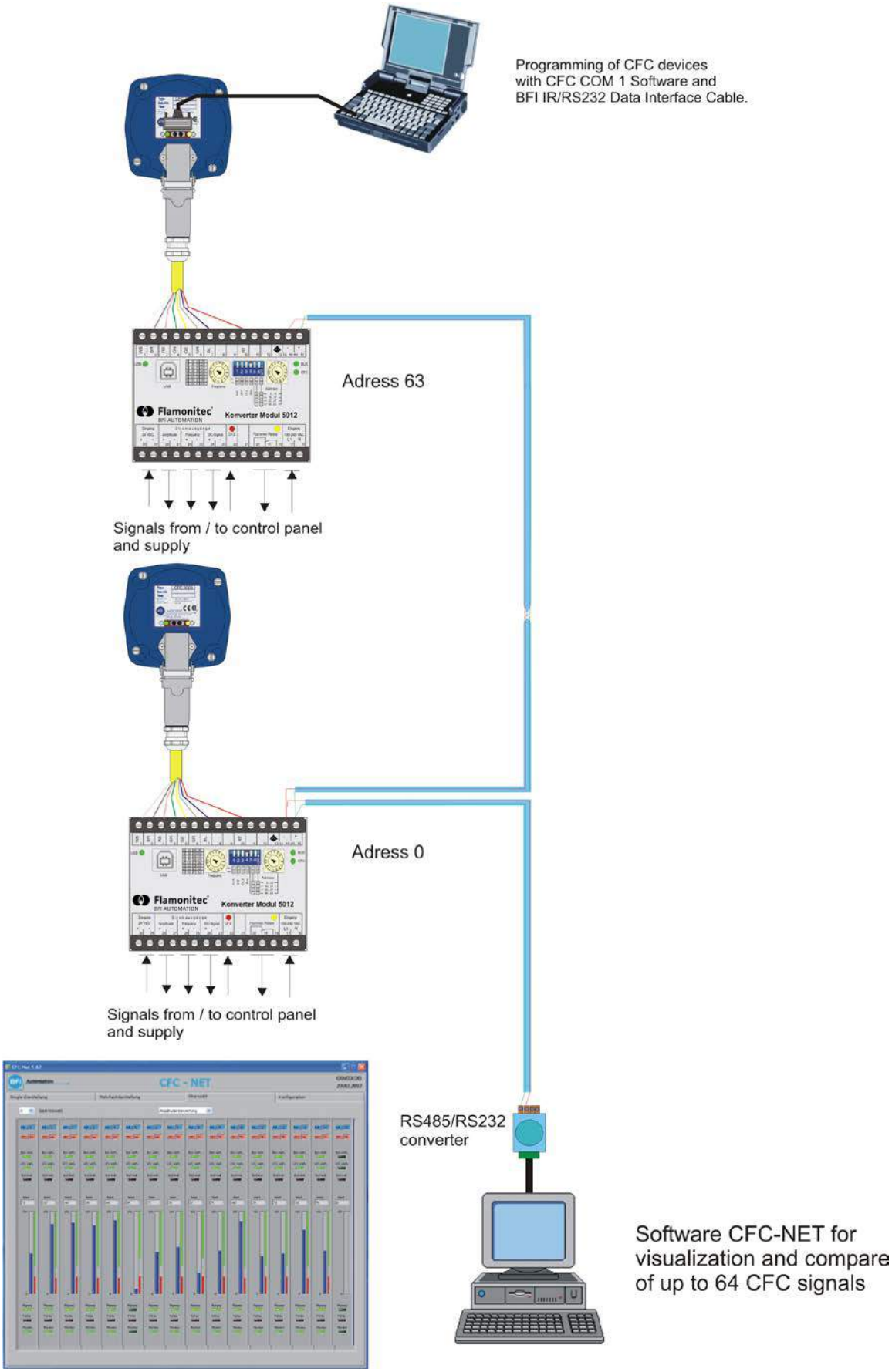
Optional:

- SD card slot (max. 4GB)

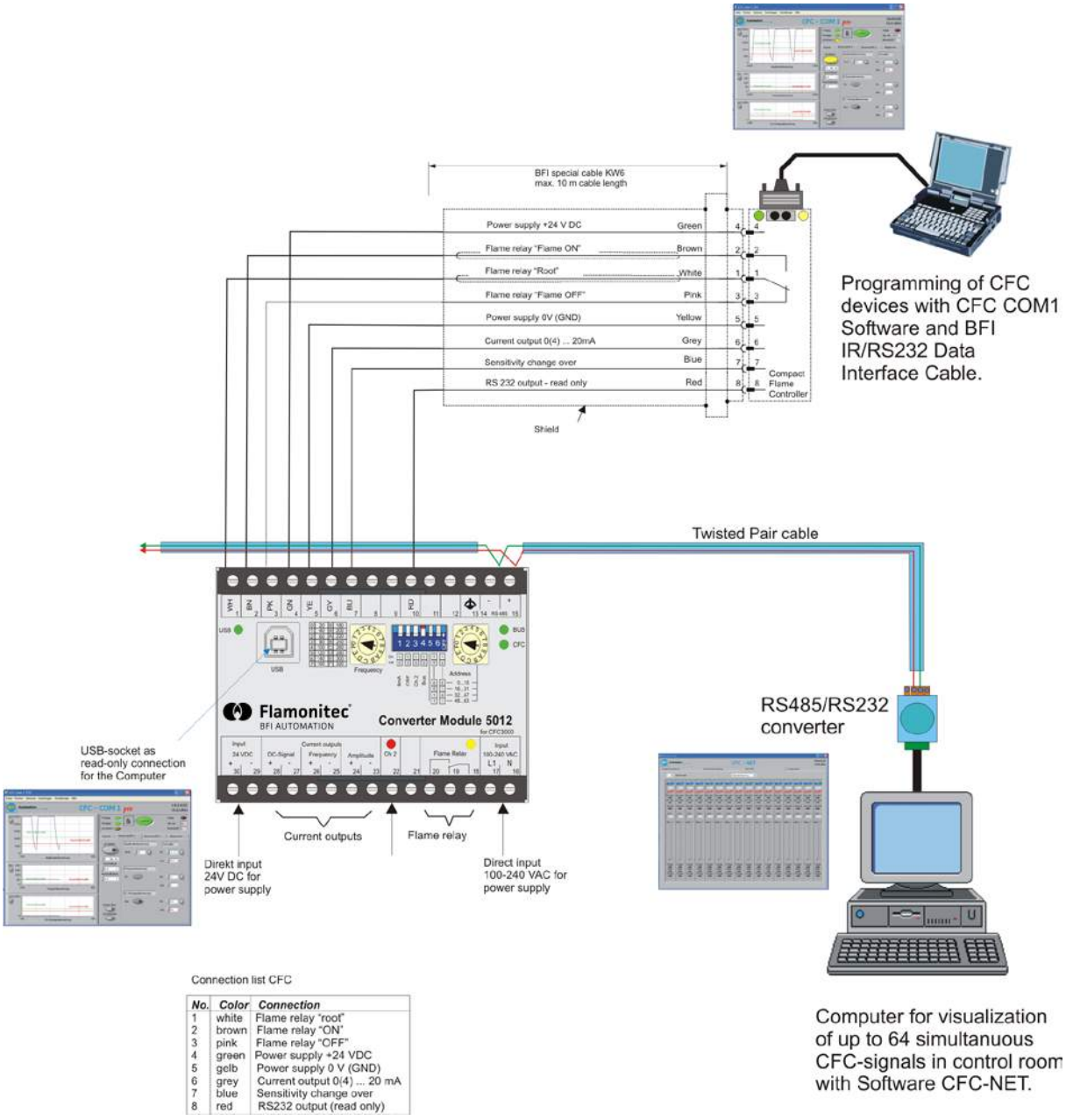
Part numbers:

- Converter 5012 -> G 657
- Converter 5012 SD -> G 657.2
- Converter 5012 in IP66 ABS housing construction -> G 657.1
- Converter 5012 SD in IP66 ABS housing construction -> G 657.3

BUS-System with CFC3000 and Converter 5012



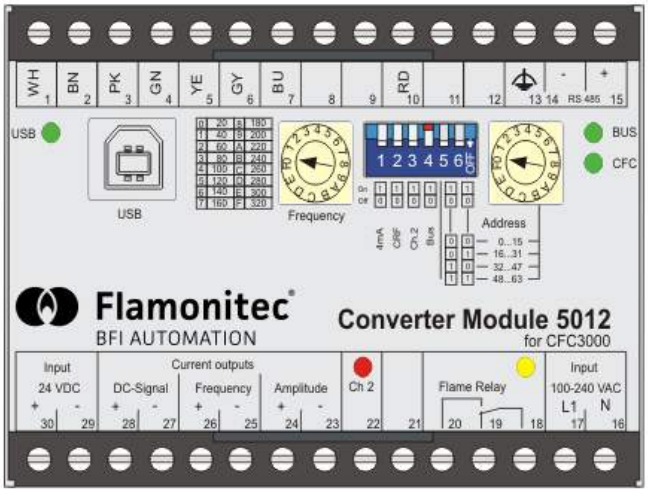
Connection diagram and Software assignment

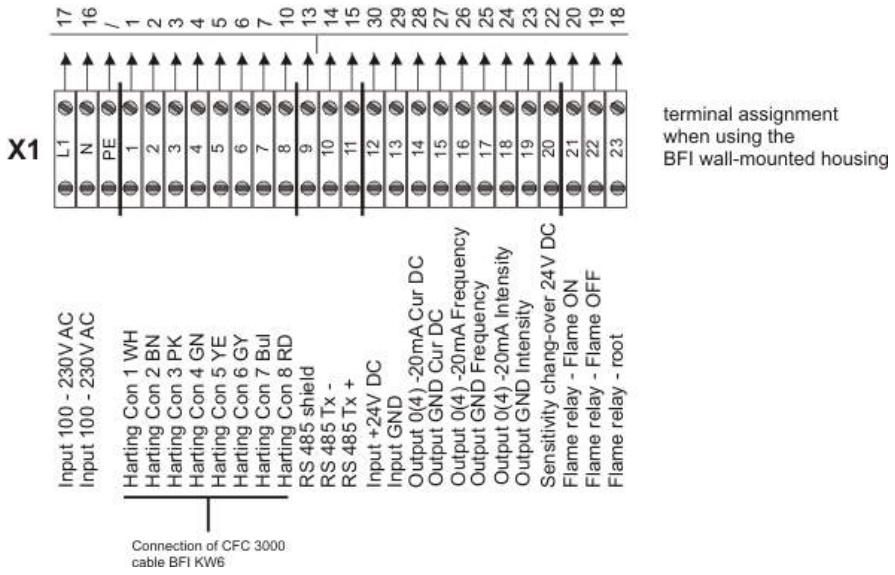


Connection list CFC

No.	Color	Connection
1	white	Flame relay "root"
2	brown	Flame relay "ON"
3	pink	Flame relay "OFF"
4	green	Power supply +24 VDC
5	gelb	Power supply 0 V (GND)
6	grey	Current output 0(4) ... 20 mA
7	blue	Sensitivity change over
8	red	RS232 output (read only)

Connection diagram Converter 5012 with mit wall-mounted housing for BFI Automation





terminal assignment
when using the
BFI wall-mounted housing

