

General

The LegioBox C3 is a universal gateway with an extensive IO configuration. The LegioBox C3 can be equipped with an optional GPRS modem and/or an Ethernet connection. The number of inputs, both digital and analogue, offer the possibility to monitor and log a range of signals. The digital outputs also enable influencing processes.

Installing a new LegioBox C3

Parameters and (communication) software have been installed and/or set-up upon delivery. Using the ID present on the LegioBox (called GUID, for example: 12345678.1234.1234.1234.123456781234) and the Avision-website made available with it, it is possible to retrieve the settings, including installed bus protocols, modems, etc. that were present when delivered.

PAY ATTENTION: The hardware of the C3 is shipped in some different versions. In the case of dissimilar jumper numbers on the C3 with respect to the image below, the image below is leading. In that case, please ignore the jumper numbering on the C3.

Installation steps (see also the connection scheme on the back)

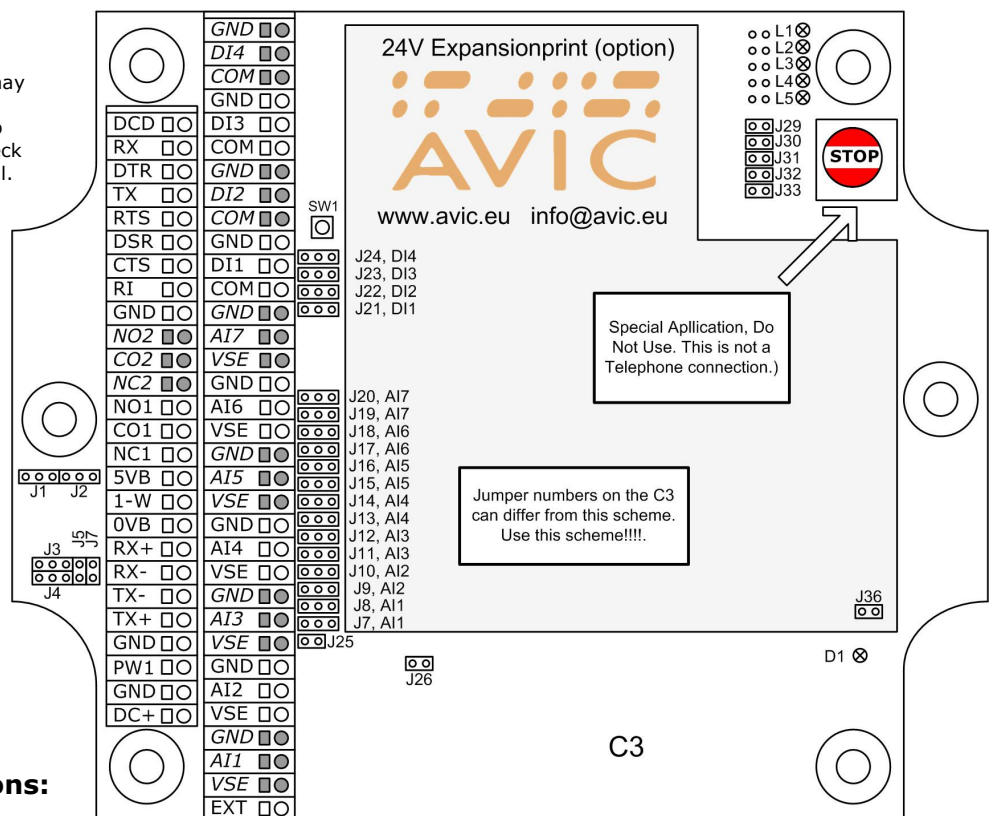
- (1) Check the correct functioning and connection of the cabling between the device and the signals to be connected;
- (2) Connect all inputs and outputs according to the connection scheme;
- (3) Check the jumper settings below and on the next page;
- (4) Connect the main power supply and wait 1 – 3 seconds. Is none of the LEDs burning?: check the incoming power voltage or push SW1 in the case of a Low Power configured LegioBox C3.
- (5) Optionally connect Ethernet.

Led signals LegioBox C3

When the C3 is used in Low Power the leds may be Off.

The functioning of this leds may be subject to Change (even during its Lifetime), please check our website for the last version of this manual.

Led	Application
D1	Carrier Detect
L1	Blinks quietly during communication. Blinks rapidly after a Wakeup (Forced Communication)
L2	Number x blink: Average number of communication tries during the last 10 sessions.
L3	During startup it blinks a number of times. After Startup: GPRS/GSM Field strength. Number of blinks indicates field strength.
L4	Communication Led: 1xblink.: Connecting 2xblink.: Connected 3xblink.: Data exchange 4xblink.: Terminating connection
L5	Power supply available



Instal. and jumper instructions:

Digital inputs (Connector DI1 to 4 and its COM (Common) en GND (Ground))

- Open collector signal: connect to GND and DIx (x = 1, 2, 3 or 4). Jumper (J21 .. J24) to the left.
- Dry contact (f.e. read relay) or potential free signal connect to COM and DIx (no jumper)
- Powered inputs connect to Gnd and DIx and no jumper

Digital Output 1 (Bi-Stable, maintains position on power failure)

- Normally open contact connect to NO1 and CO1
- Normally closed contact connect to NC1 and CO1

Digital Output 2 (Falls back to standard position on power failure)

- Normally open contact connect to NO2 and CO2
- Normally closed contact connect to NC2 and CO2

Analogue input (Connector AI1 t/m 7 and accompanying VSE (under AIx) and GND (above AIx).)

- PT-1000 connect to Gnd and AIx. Jumper settings: Upper jumper (f.e. input 3, jumper position 12) no jumper and lower jumper: to the left. (f.e. input 3, position J11)
- mA 2-wire signals are connected to VSE (Jumper J36 is relevant) and AIx. Jumper settings: Upper jumper to the left and lower jumper position, no jumper.
- mA 3-wire (power supplied from C3) signal is connected to Gnd and AIx and VSE supplies power to the connected sensor. **PAY ATTENTION:** For using VSE, jumper J36 is relevant. Jumper settings: see mA 2-wire.
- Volt signals connect to Gnd and AIx. Jumper settings: Upper jumper to the right and lower jumper position, no jumper.

RS-485, 2-wires

- 2-wire RS-485 (see jumper settings) connect to RX+ and RX-.

Jumpers C3

J7..J22	See installation instructions on the first page and wiring scheme's below		
J36	DO NOT USE WITH AN 24V EXPANSIONPRINT (on top of the processor and GPRS modem) in the C3. Closed (no EXPANSION PRINT): power supply of the C3 is available on the VSE connections.		
J1+J2	Both to the Left. RS 485 is available (Also see J3 and J4)	Open: RS 485 is inactive	To the right : One wire
J3+J4	Both to the Left, RS 485 is available (Also see J1 and J2)	Open: RS 485 is inactive	
J26	Closed: Continuous 5 Volt on the modem. Open: The modem may be switched off by the processor. Relevant in Low Power situations		
J29	Wakeup Jumper		
J5, J6, J25, J30, J31, J33	Not in use/Special Application		
J32	Communication interface. Closed = Ethernet/LAN, Open = GPRS modem. When closed and a modem is installed, the LegioBox C3 will fall back on the modem when the LAN is non/bad functioning.		

Low Power

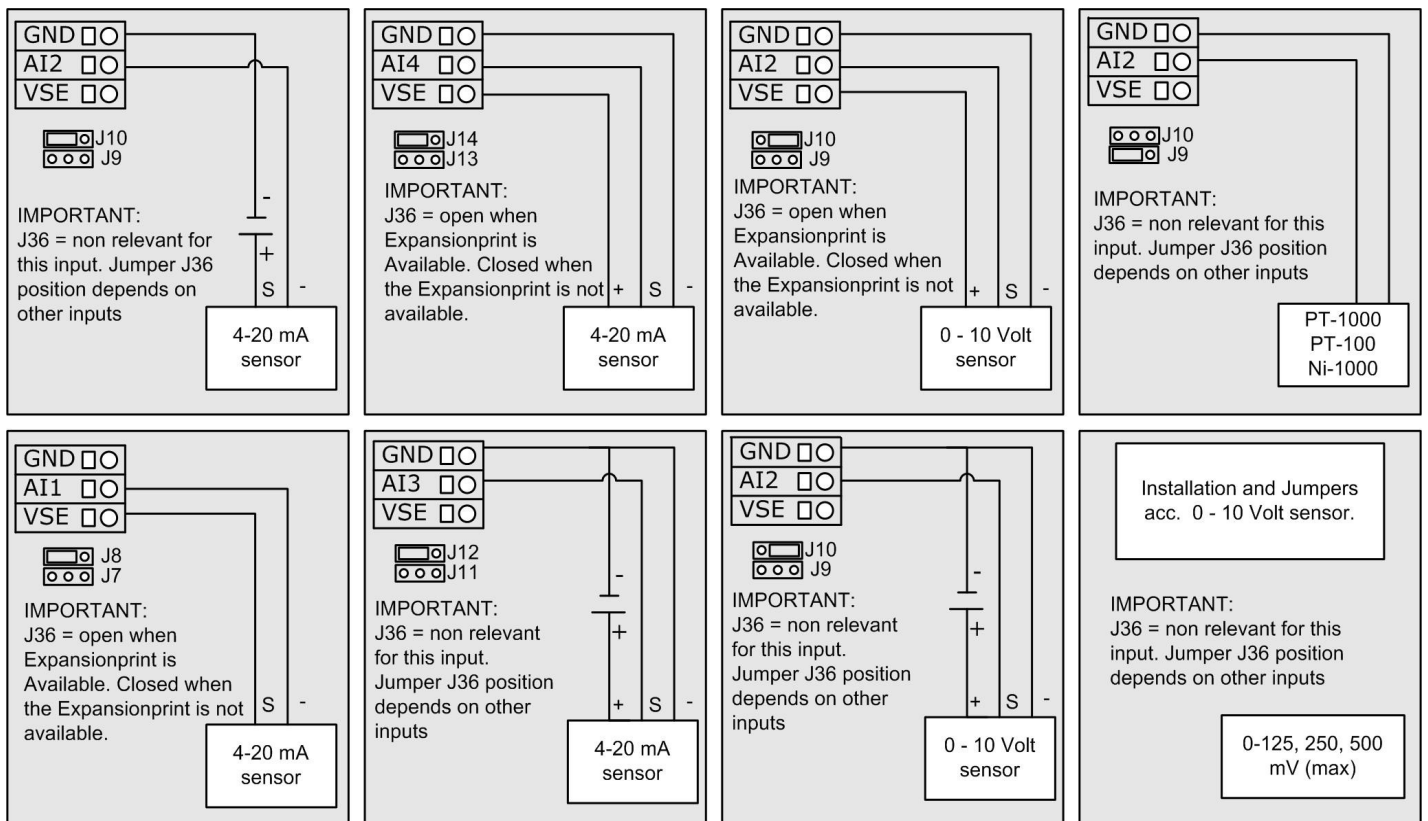
The LegioBox C3 can be used in Low Power mode. The LegioBox C3 will, when possible, switch off as many power consuming components as possible. When necessary the C3 will activate itself. This function can be configured by using Avision. By means of jumper J26 the C3 can be configured to have its modem active in Low Power mode for incoming Wakeup calls. 0/4-20 mA and 0-10 V sensors may be used in Low Power mode. The C3 is able (configurable by Avision) to shut down the power of these sensors also.

Forcing communication

The LegioBox C3 will do this automatically on configurable (using the Web application) time intervals. The LegioBox C3 can be forced to communicate. This causes all data stored in the LegioBox C3 to be transmitted to the central application. This is necessary, for instance, when changing the battery, or to establish the correct functioning of the unit. Forcing communication is done by momentarily removing jumper JMP J29. See the function of LED L1. This LED is an indicator of the communication process.

Technical Data C3

Type nr.	LegioBox C3
Housing	Aluminium
Dimensions, front view	Aprox. 150 x 160 x 60 (h x b x d) (incl. Glands, excl. GPRS en WAP antenna) With GPRS antenna 50 mm higher. With WAP antenna (to be used with Wireless Modules) another 175 mm higher.
Weight	Approximately 1200 gram, including modem
Weight	-5°C to 50 °C, 0 - 95% RH, non condensing
Protection class	IP65 (IP67 on demand)
Power supply	12 - 24 V AC/DC, max 1.5 mm2
Current	0,3 - 0,5 A continuous, maximum 2A when a GPRS/GSM modem is applied.
External devices connected to	RS-485, RS 232 Consult supplier for details and possibilities.
Analogue Inputs	AI1..AI7: Pt-100(0), Ni-1000, 0 -10 VDC, 0 - 2,5 Volt, 0-20 mA, 0-250 mV 13 bit, jumper selectable
Digital Inputs	4 x 24 VAC/DC, optically separated, maximum pulse rate 15 Hz, min. pulse length 33 msec. Potential (12 to maximum 24 VAC/DC) or potential free contacts. (See jumper settings)
Digital outputs	2 x Relay 24VAC/DC, max. 1A, nominal 0,5A
IO terminals	max. 1.5 mm ²
User interface	Via WEB-browser, Avision and online manual. consult supplier for details and possibilities.
Battery	LiMn , 3 years duty cycle



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