1   Requirements

- con::cube D-330 running moni::toolV4 or higher
- Internal modules. The following modules are available:
    - D-315-3GLX   Gateway to 3G (older version)
    - D-330-4GLX   Gateway to 4G
    - D-315-out-mA   2 analog outputs (max. 8 modules / 16 outputs possible)
    - D-315-out-Profibus Profibus DP (max. 1 output module)
    - D-315-out-SDI12   SDI 12 (max. 1 output module)
    - D-315-in-mA   2 analog inputs (max. 8 modules / 16 inputs possible)
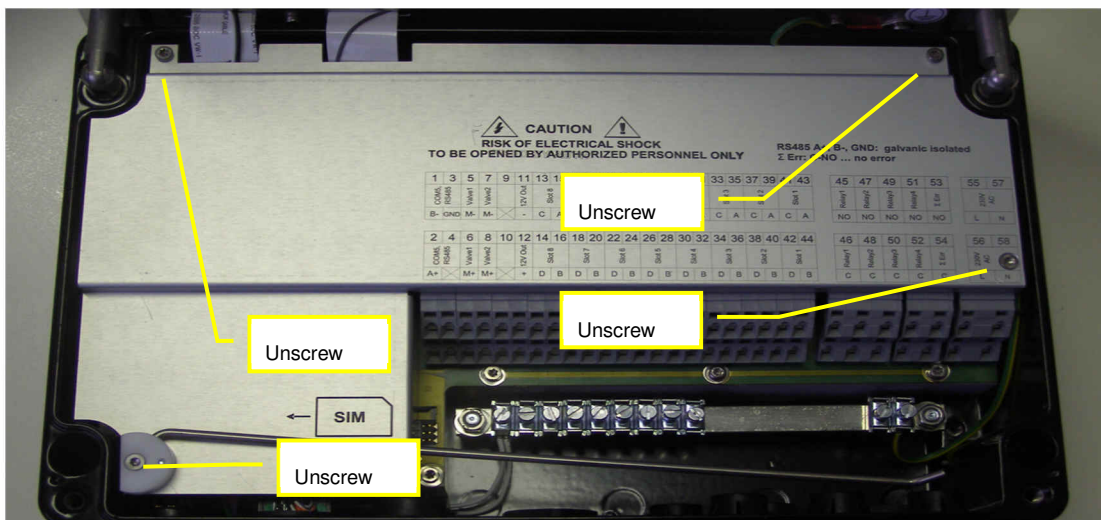   - D-315-in-relay   2 digital inputs (max. 7 modules / 14 inputs possible)

2   Introduction

By adding or removing con::cube internal modules optional features can be added or removed. Normally this is done at the s::can factory. A later upgrading of the con::cube with optional feature on site is possible with help of the following instruction. To read more about optional con::cube features or how to use it, refer to the con::cube and moni::tool manual.
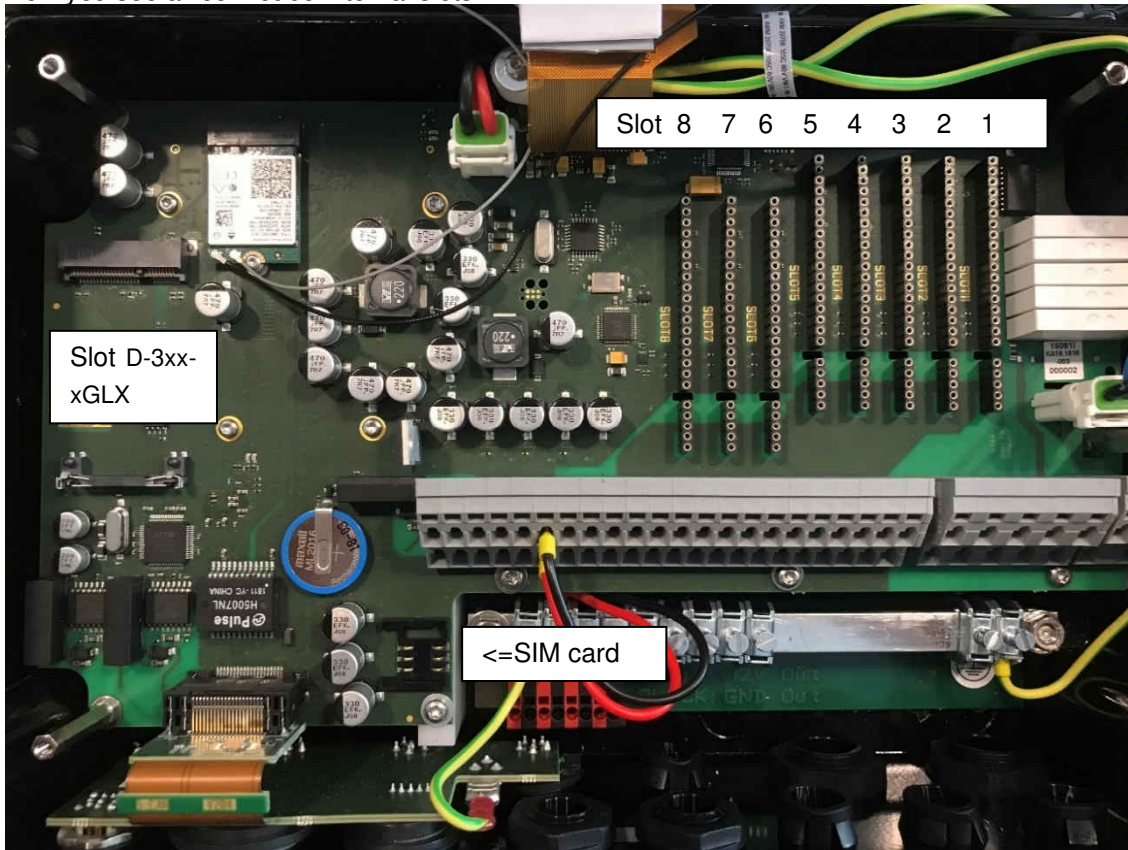
3   Instruction

3.1   Start

- Power off the con::cube and ensure ESD protected environment.
- Open the con::cube housing (four hexagonal head screws removed)

- Remove the cover as shown in the picture above. You need "Torx T10" for that.

- Now you see all con::cube internal slots:

3.2   Using Slot 1-8

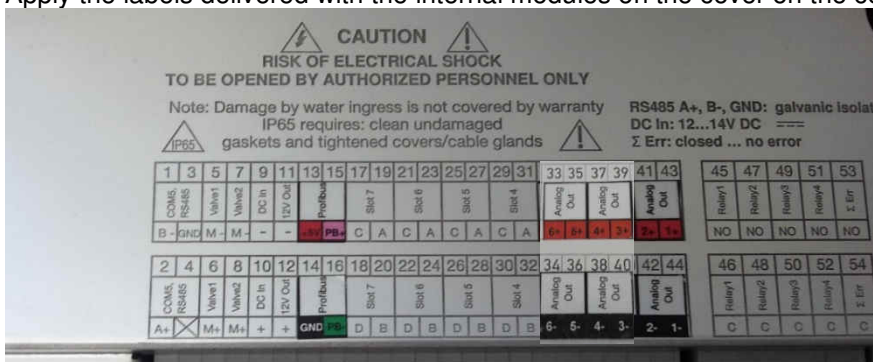- See the next table to see which module works within which slot

Slot	8	7	6	5	4	3	2	1	type
D-315-out-mA	16+15	14+13	12+11	10+9	8+7	6+5	4+3	2+1	analogOut
D-315-out-Profibus	ok	no	no	no	no	no	no	no	fieldbus
D-315-out-SDI12	ok	no	no	no	no	no	no	no	fieldbus
D-315-in-mA	16+15	14+13	12+11	10+9	8+7	6+5	4+3	2+1	analogIn
D-315-in-relay	16+15	14+13	12+11	10+9	8+7	6+5	4+3	2+1	digitalIn

xx … you can insert this module into this slot.
xx … the module is not supported in this slot.

x+y … channel numbers shown in moni::tool, for example: analogOut1 , analogIn4 , digitalIn7

- Insert the module to the next free slot. All combinations are allowed respecting the table above. We recommend beginning from the right side ("Slot 1").

- Apply the labels delivered with the internal modules on the cover on the correct position:

- The example above shows the correct positions for the labels if 3 analog output modules in slot 1, 2, 3 and one Profibus module is in slot 8. Slot 4, 5, 6, 7 are still free.
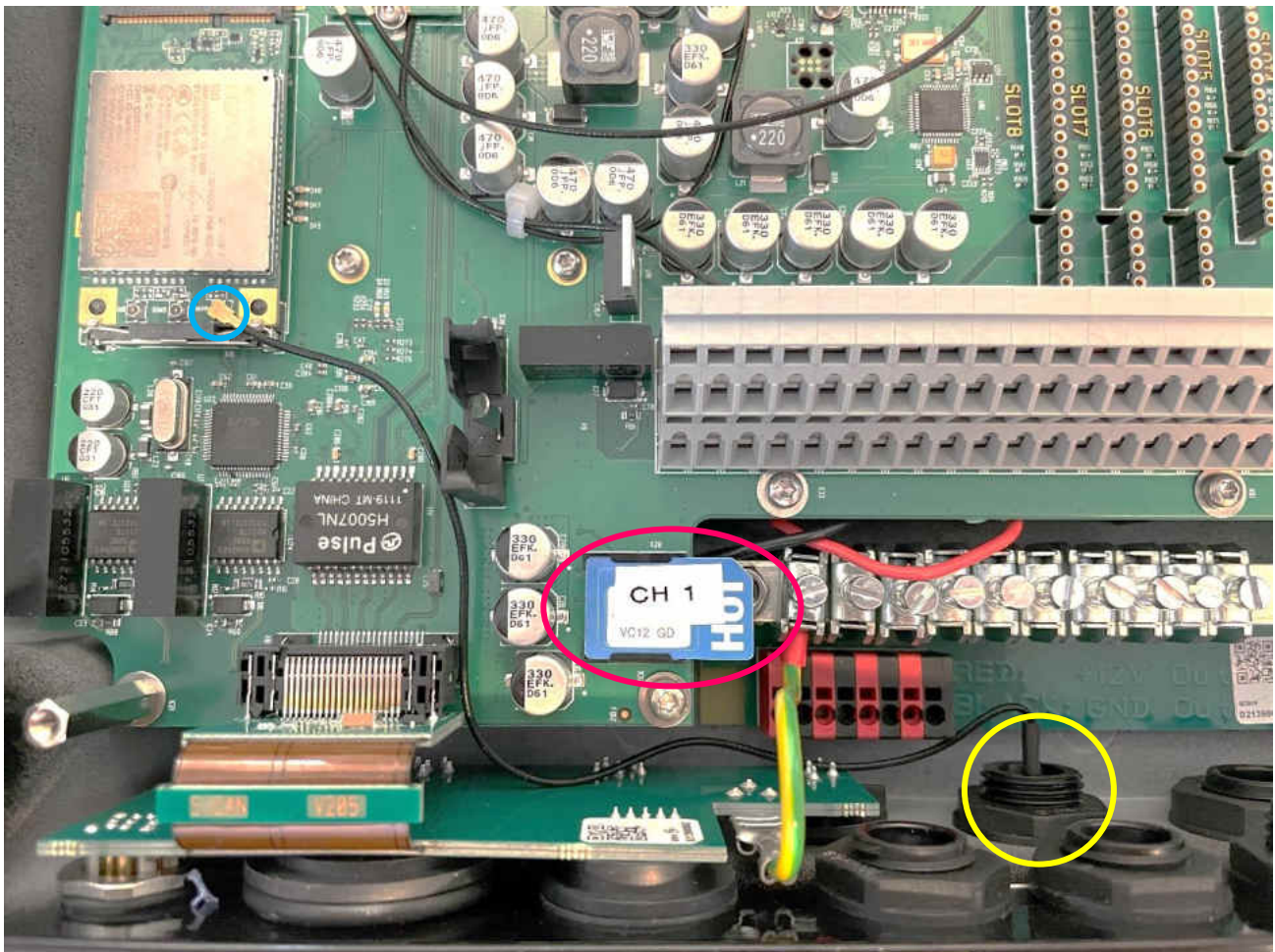
3.3 Install 4G Gateway

Requirements:
- moni::toolV4.3 or higher must be installed
- D-330-4GLX   Gateway to 4G
- D-330-antenna-plug   Internal antenna adapter cable and connector, option for con::cube
- D-330-antenna   External, high range antenna option for con::cube, incl. 13 m extension cable

Instruction:
- Insert D-330-4GLX into slot and connect D-330-antenna-plug to module "Main" plug as shown in picture below (blue circle).
- Install SMA-Adapter of D-330-antenna-plug as shown in picture below (yellow circle)
  Remove one M16x1,5 cable gland 19 mm and 22 mm wrench. Insert the SMA-adapter in the empty slot. Note, that to retain the IP65 ingress protection of the con::cube unit, the O-ring (A000759) must be correctly installed. The SMA-adapter is fixed with an M16 nut (A230032).
- Connect the external antenna (item no. D-330-antenna)
- Insert SIM card (size mini sim) as shown in picture below (red circle)
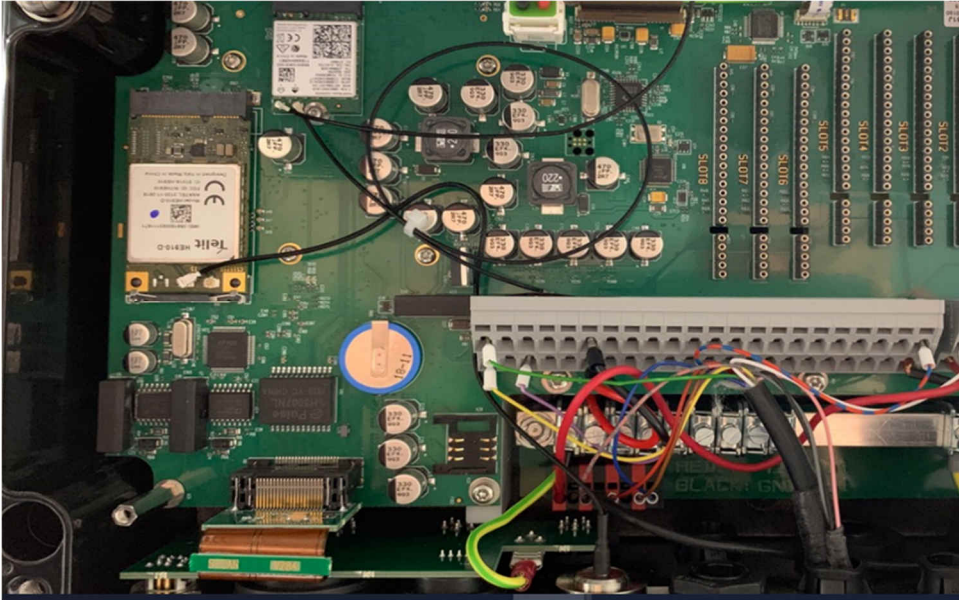
3.4 Install 3G Gateway (older version)

Requirements:
- D-315-3GLX   Gateway to 3G (output module quad-band)
- D-315-antenna-plug   Internal antenna adapter cable and connector, option for con::cube
- D-315-antenna-pro   External, high range antenna option for con::cube, incl. 10 m extension cable

Instruction:
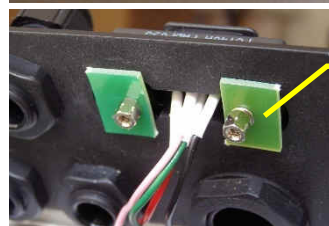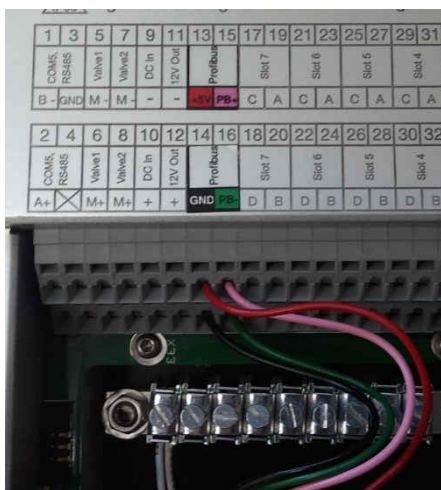- Insert D-315-3GLX into slot and connect D-315-antenna-plug

- Connect D-315-antenna-pro external antenna

3.5 Finish

- Re-install the cover and close the moni::tool housing. Power on the con::cube.
- All changes of con::cube internal modules will be detected automatically except D-330-out-Profibus and D-330-out-SDI12. See below how to proceed when installing these internal modules.
- Refer also to the con::cube & moni::tool manual for using the new features.

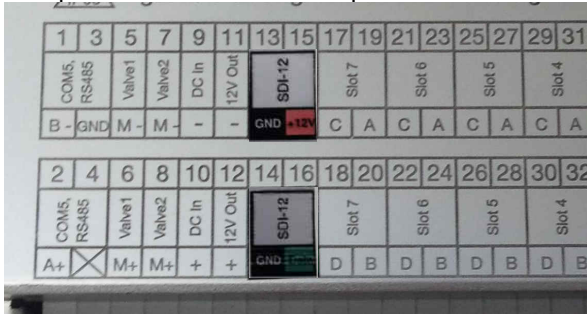## 4 Appendix A: Special instruction needed for Profibus and SDI-12 module

4.1 Installation of PROFIBUS SUB-D connector

1 x Preassembled Sub D female

1 x Cover SUB-D 9

2 x Cover 18x12x2

- Install the supplied SUB-D connector. From the outside insert SUB-D connector, Cover SUB-D and O-Ring. From the backside add the covers and fix the connector by the two screws. To not loose IP65 rating the screws must be firmly screwed.
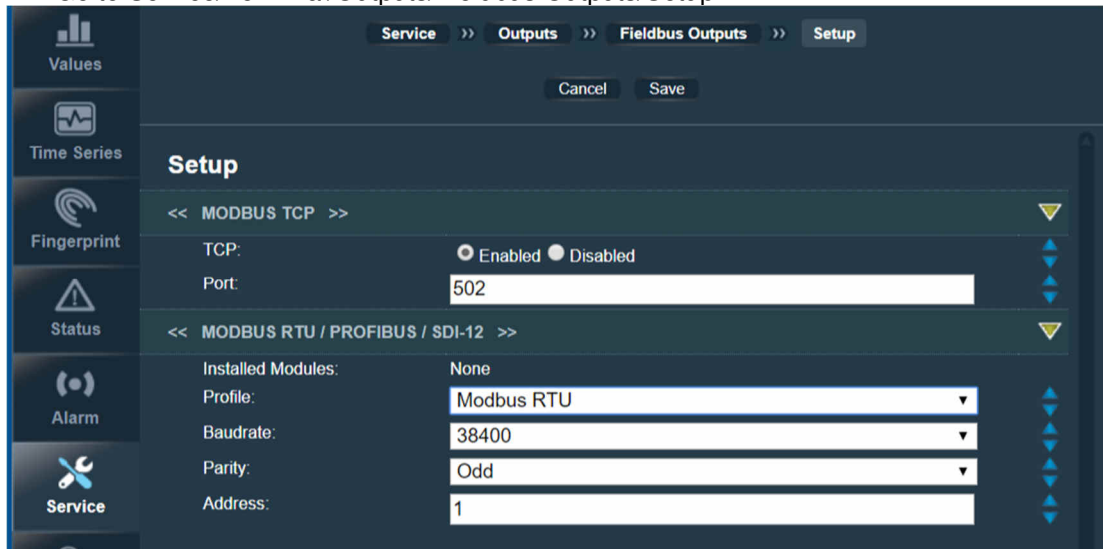
4.2 Installation of SDI-12

- See picture below for correct position of labels:
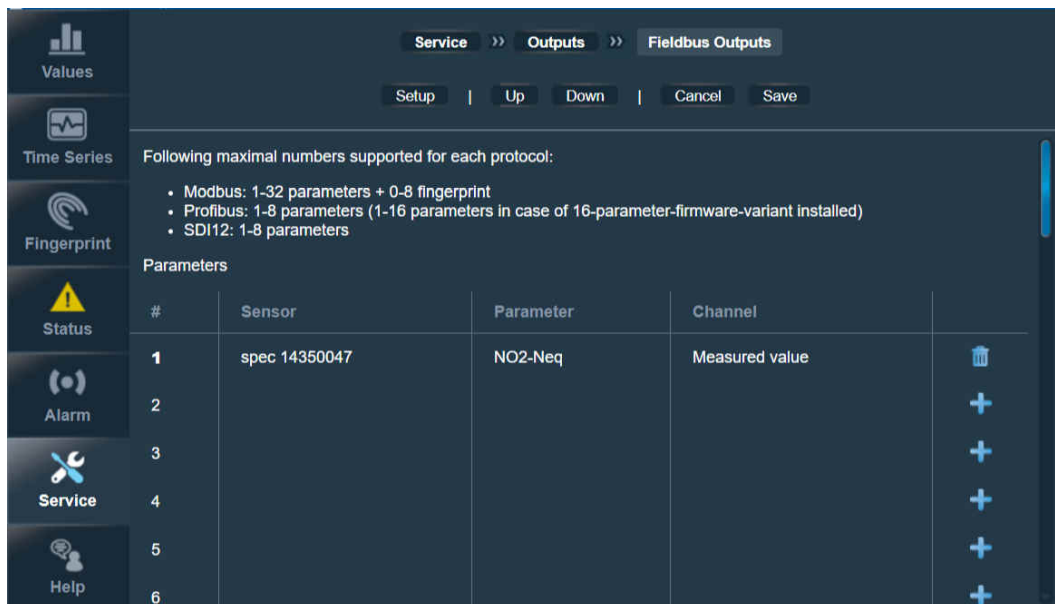

4.3 Software Configuration

- Go to Service/Terminal/Outputs/Fieldbus Outputs/Setup…

- The currently installed module you will see within "Installed Modules:"
- Select "Profile" and adjust the setup of the field bus output. A help text can be expand for every element by pushing the blue arrows.
- Push "Save" so take over the new setup.

Mapping of output parameters:
- Go to Service/Terminal/Outputs/Fieldbus Outputs

- Configure the outputs as desired and confirm pushing "Save"