

MIKE4-CAN Service



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Please read this note !



Attention: High Voltage !



Warning: Please read carefully this safety instruction !

1. Service

1.1 Open MIKE



For all work on the equipment
pull out the power plug.

Remove the rear wall.

The rear wall is connected to the
apparatus by a ground connection.
Unplug this.



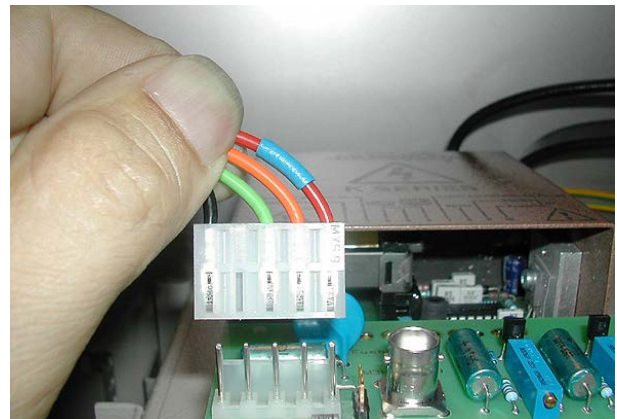
1.2 Open the high voltage unit



Contamination in the high voltage unit leads to corona discharges and leakage currents and thus to a loss of charge. Therefore it is essential to avoid dust. Thoroughly clean (degrease) hands and all tools.

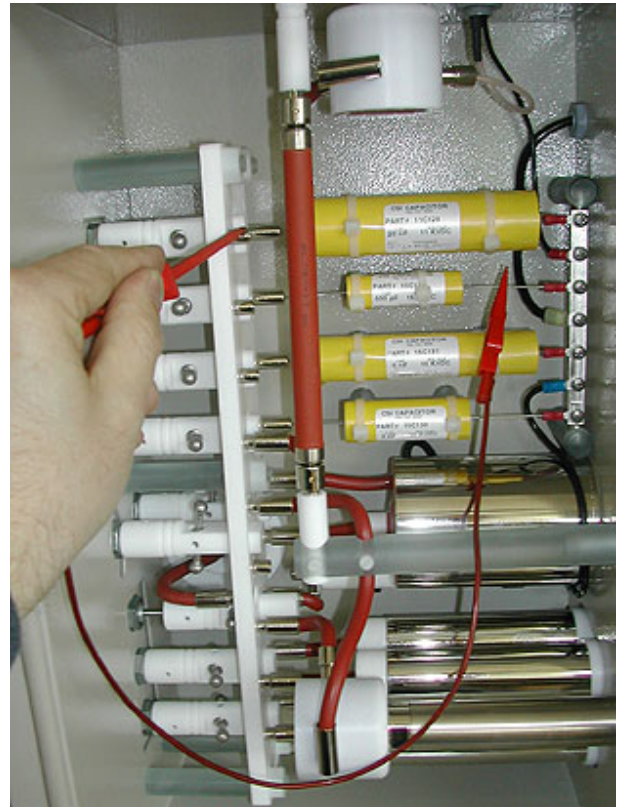


1. Pull out the power cord.
2. **Important:** Disconnect the power supply of the high-voltage generator.
3. Remove the Plexiglas cover of the high voltage unit.

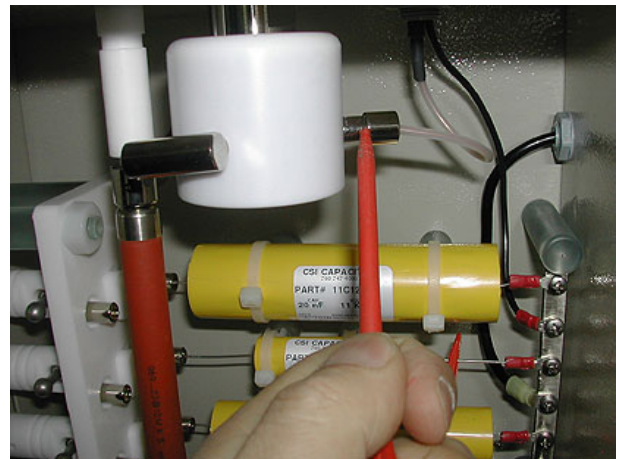




4. The capacitors can still have dangerous charges. Therefore discharge them as shown.



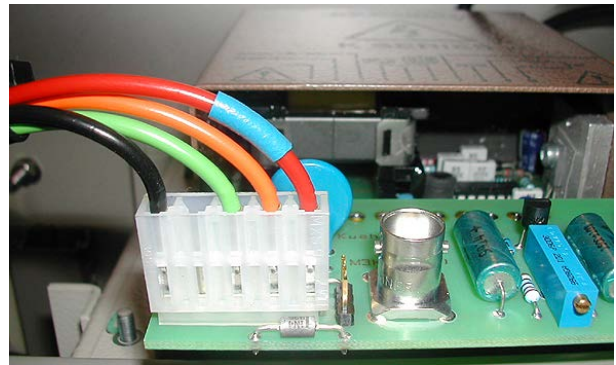
5. The high voltage generator can also have dangerous charges. Therefore discharge it as shown.



1.3 Close the high voltage unit



1. Power cord must be disconnected!
2. Reconnect the power supply of the high voltage generator.



1.4 Close the MIKE

1. Mount the rear wall and side walls.
Do not forget to plug in the ground connections beforehand.
2. Reconnect the power cord.



1.5 Function test of the cylinders

1. See: [1.1 Open MIKE](#)
2. Reconnect the power cord, switch on the MIKE and start the software.
3. Visually check the function of the cylinders for the high voltage switches.

Check / IO-Port

Check: I/O - Port

cylinders

☐ 1 J

☐ 300 mJ

☐ 100 mJ

☒ 30 mJ

☐ 10 mJ

☐ 3 mJ

☐ HE-switch

☐ Inductance

☐ Safety

relays

☐ LE-switch

☐ Charge

☐ 15 kV

control

H-Comp.
☐

L-Comp.
☐

valves

☐ ME

☐ Inlet

☐ Outlet

☐ Flush

☐ Rinse

inputs

ME
☐

Inlet
☐

Outlet
☐

Pressure
☒

Door Lock
☒

- a) Switch on the cylinders individually and observe:
- b) Feedback on the screen? If not: is the LED on the reed switch lit?
- c) Mechanical position of the high voltage switches? Will the contact be closed?

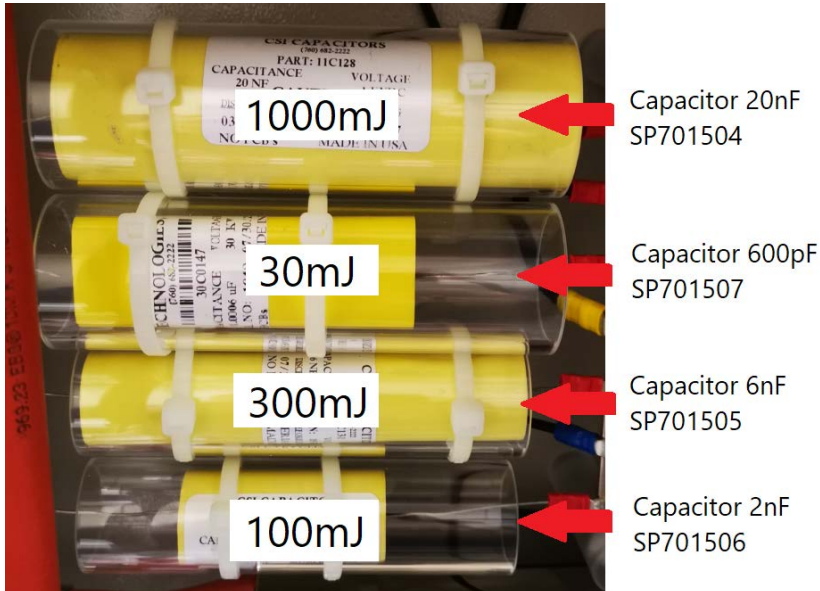
4. See: [1.4 Close the MIKE](#)

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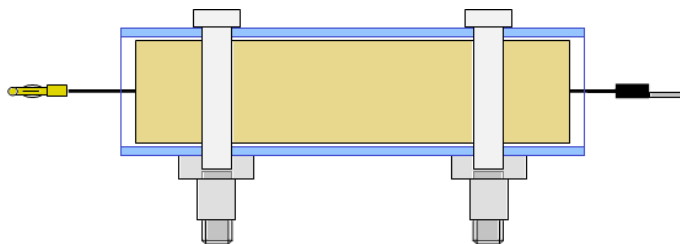
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1.6 Replace capacitor

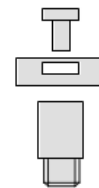
1. See: [1.1 Open MIKE](#)
2. See: [1.2 Open the high voltage unit](#)
3. Replace defective capacitor:



- a) Cut the cable ties of the defective capacitor.
- b) Remove the screw on the right side of the capacitor.
- c) Pull the capacitor to the right and thus detach it from the plug connection.
- d) Slide Plexiglas tube over the new condenser.
- e) Insert the new capacitor on the left.
- f) Screw on the new capacitor on the right side.
- g) Fasten the Plexiglas tube with cable ties.



Plastic screw
Holder for cable ties
Spacer



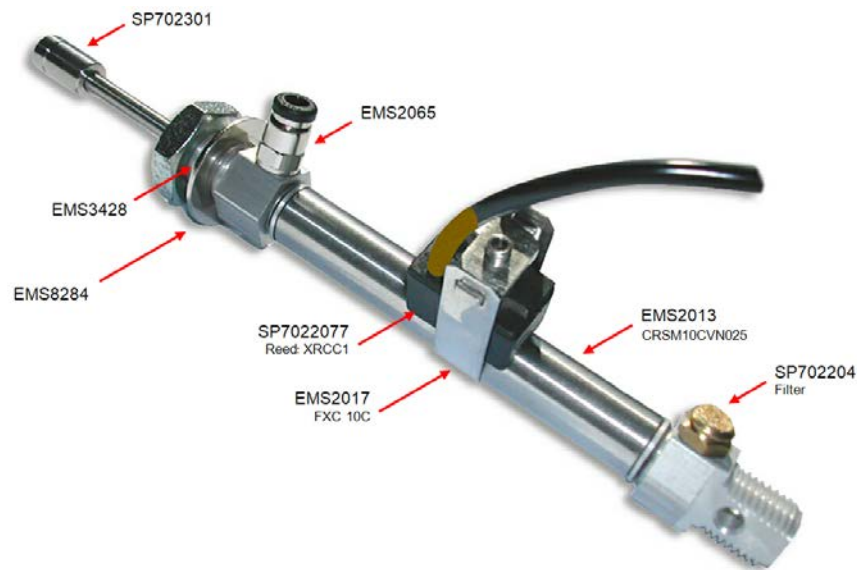
4. See: [1.3 Close the high voltage unit](#)
5. See: [1.4 Close the MIKE](#)



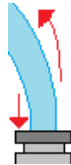
On older MIKEs, the capacitors are installed without a Plexiglas tube.

If the cable ties are tightened too much when replacing capacitors, this can damage the insulation layers inside the capacitors. This is prevented with the Plexiglas tube as mechanical protection. It is therefore essential to use the Plexiglas tube supplied.

1.7 Replace cylinder



1. See: [1.1 Open MIKE](#)
2. See: [1.2 Open the high voltage unit](#)
3. Remove the compressed air tube from the cylinder by pressing the ring and pulling on the tube.



4. Screw off the position sensor.



5. Loosen the screw in the contact holder.



6. Push the contact holder to the right.



7. Loosen the cylinder with a 19 mm wrench and counter with a 14 mm wrench on the left-hand side.

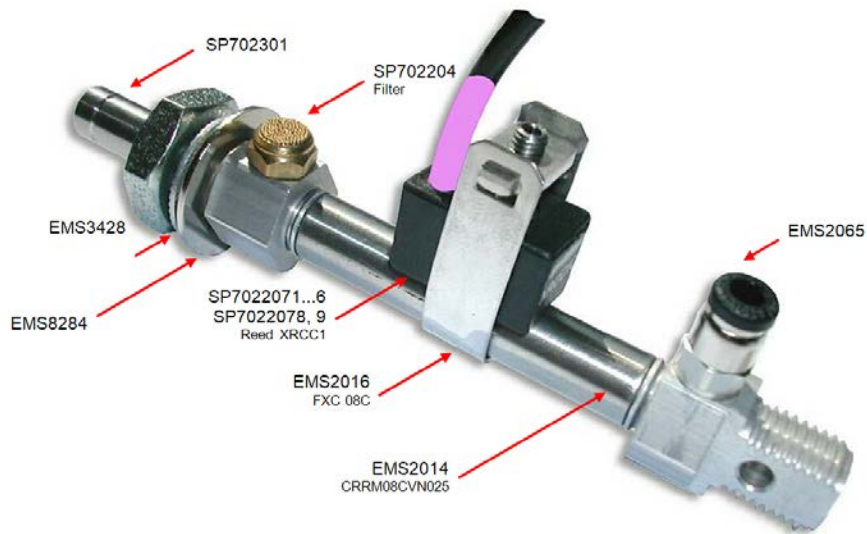


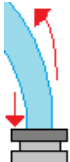
8. Install new cylinder:
Sequence 7...3
(Please use new lock washer)



9. See: [1.3 Close the high voltage unit](#)
10. See: [1.9 Replace position sensor](#)
11. See: [1.10 Adjust position sensor](#)
12. See: [1.4 Close the MIKE](#)

1.8 Replace 'safety' cylinder



1. See: [1.1 Open MIKE](#)
2. See: [1.2 Open the high voltage unit](#)
3. Remove the compressed air tube from the cylinder by pressing the ring and pulling on the tube.
 
4. Screw off the position sensor.
5. Loosen the cylinder with a 19 mm wrench and counter with a 14 mm wrench on the left-hand side.



6. Loosen the screw in the contact holder.



7. Remove the defective cylinder.

8. Install new cylinder:
Sequence 6...3
(Please use new lock washer)



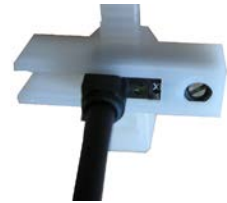
9. See: [1.3 Close the high voltage unit](#)
10. See: [1.9 Replace position sensor](#)
11. See: [1.10 Adjust position sensor](#)
12. See: [1.4 Close the MIKE](#)

1.9 Replace position sensor

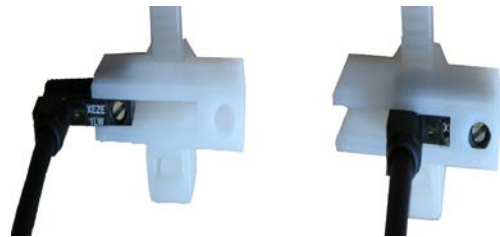
before 2009: SP702200



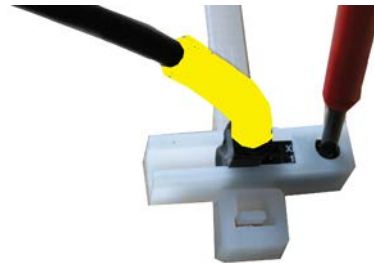
after 2009: SP702207N



1. Slide the sensor into the plastic holder.



2. Use a screwdriver to unlock the sensor.
Unscrew three turns.



3. Mark the cable with colored grommets.

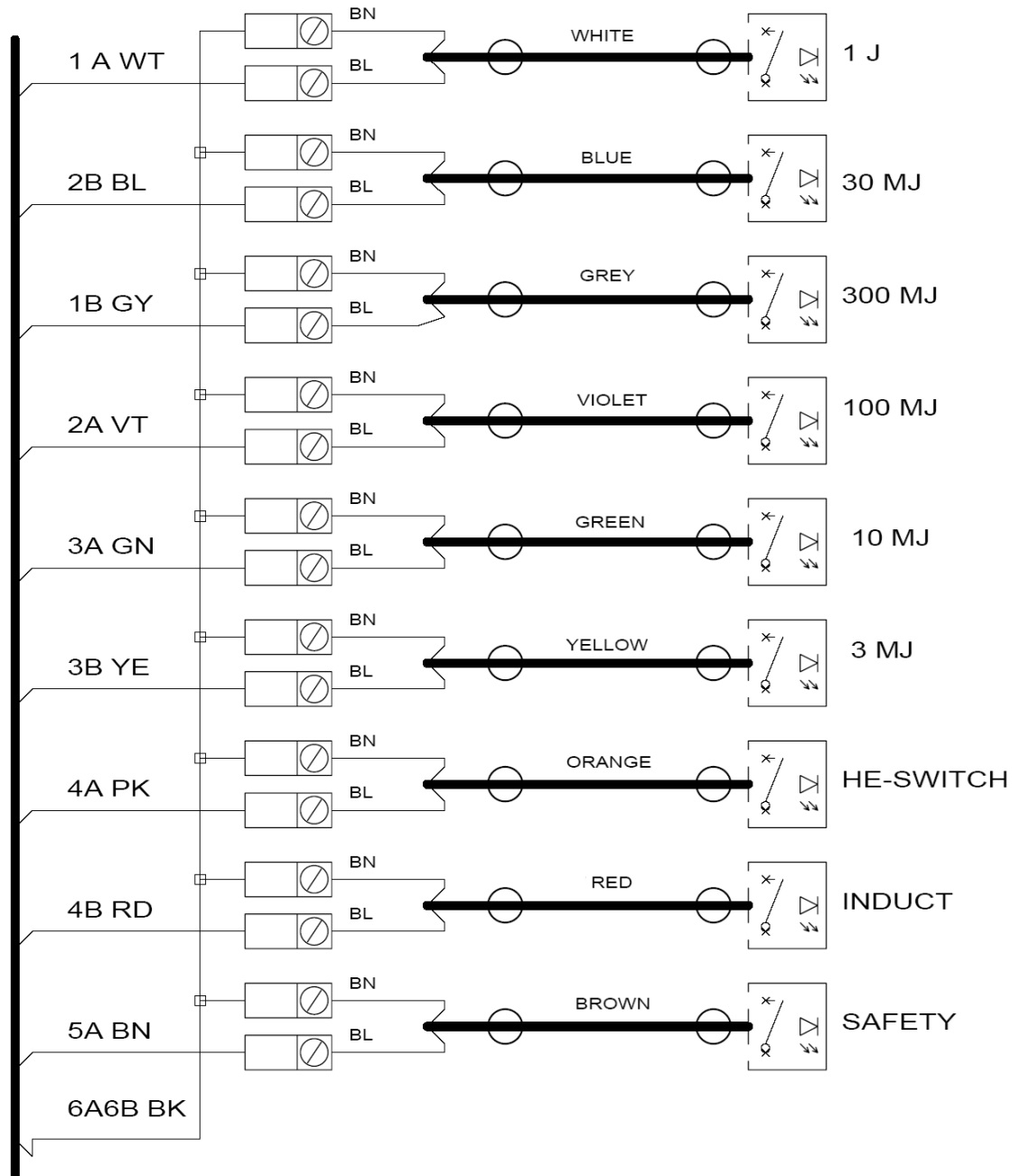
- 1J / white
- 30mJ / blue
- 300mJ / grey
- 100mJ / violet
- 10mJ / green
- 3mJ / yellow
- HE-SW / orange
- Inductance / red
- Safety / brown



4. Slide the position sensor over the cylinder and tighten with the cable tie.



5. Connect position sensor

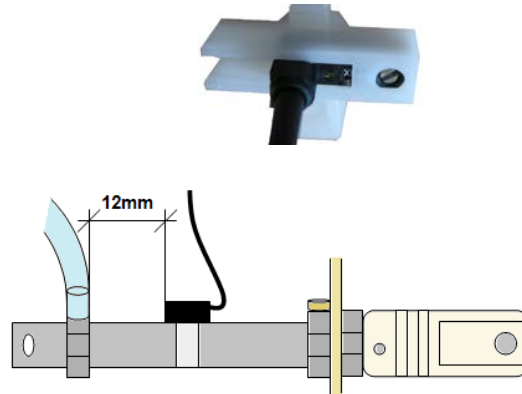
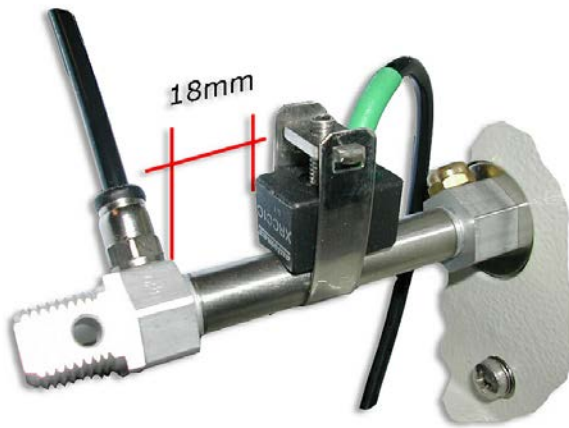


1.10 Adjust position sensor

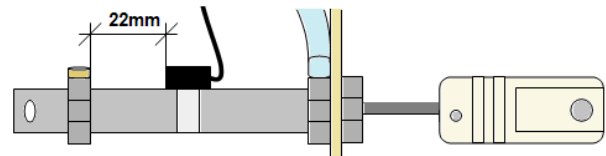
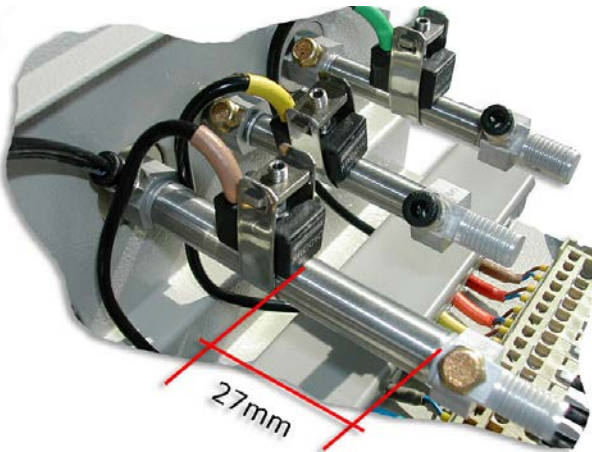
Position sensor before 2009

Position sensor after 2009

Cylinder „3mJ ... 1J, HE-SW“



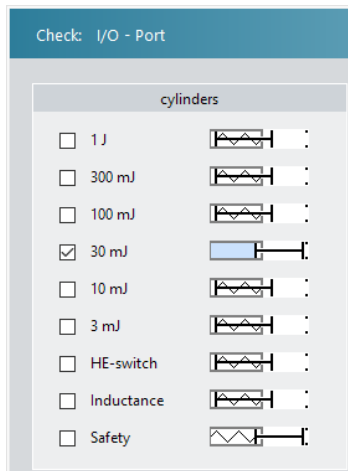
"Safety" cylinder



The distances shown are only guidelines!
The position of the sensor may have to be corrected.

1. Reconnect the power cord, switch on the MIKE and start the software.

Check / IO-Port

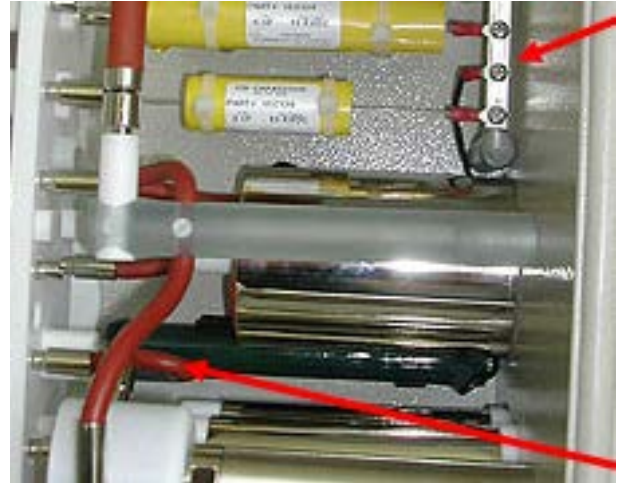


2. Activate the cylinder to be adjusted and observe the LED on the sensor.
3. Move the sensor and look for the left LED-off/on position. Mark this on the cylinder.
4. Move the sensor and find the right LED-off/on position. Mark this on the cylinder as well.
5. Move the sensor to the center of the two markings and fix it with the screw on the cylinder..
6. Check the position by activating and deactivating the cylinder several times.
7. Secure the sensor and screw with nail polish.

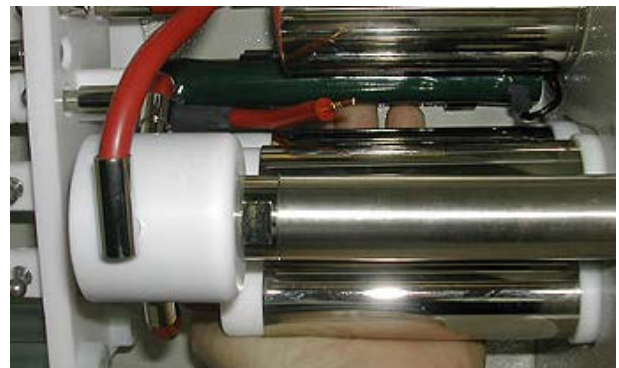


1.11 Replace discharge resistor

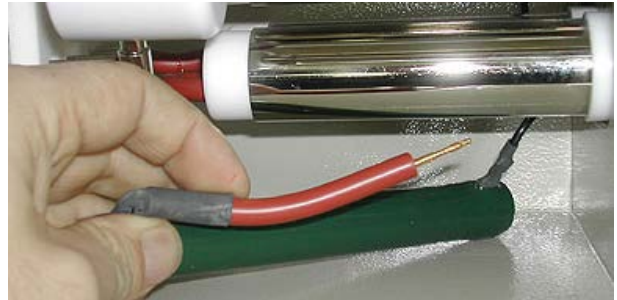
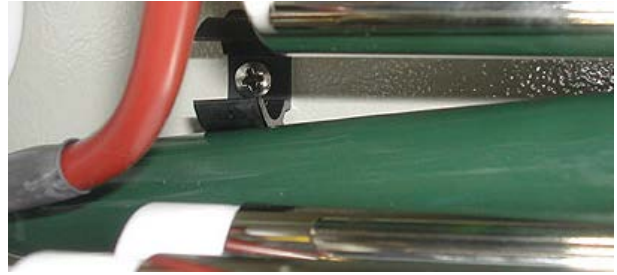
1. See: [1.1 Open MIKE](#)
2. See: [1.2 Open the high voltage unit](#)
3. Unscrew or unplug the two connecting wires of the old resistor.



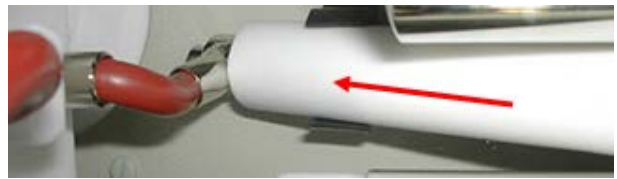
4. Remove the old resistor:
Lift out of the two holders.



5. Slide it under the condenser unit and remove it.



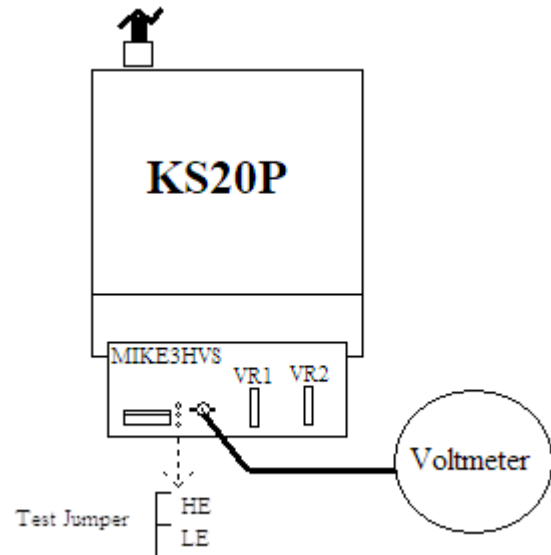
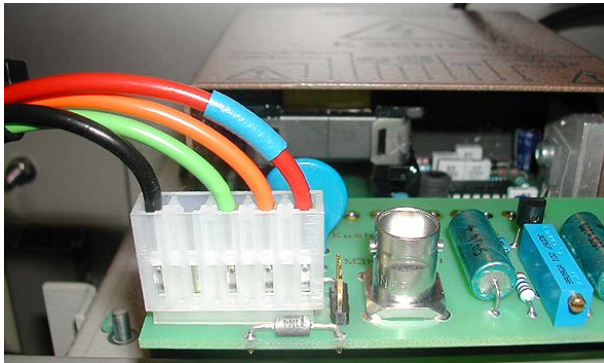
6. Install and connect the new resistor SP701301 according to the following pictures.



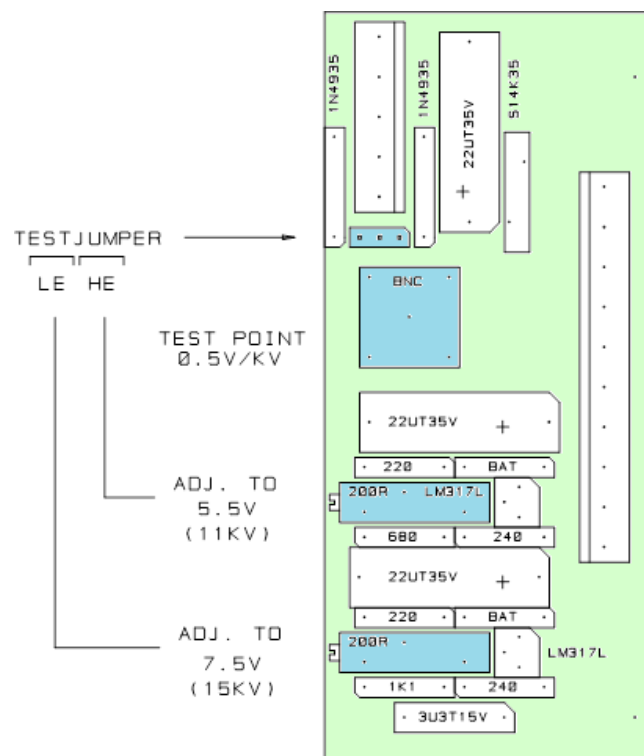
7. See: [1.3 Close the high voltage unit](#)
8. See: [1.4 Close the MIKE](#)

1.12 Adjust high voltage

1. See: [1.1 Open MIKE](#)
2. Connect a voltmeter on M3HVS



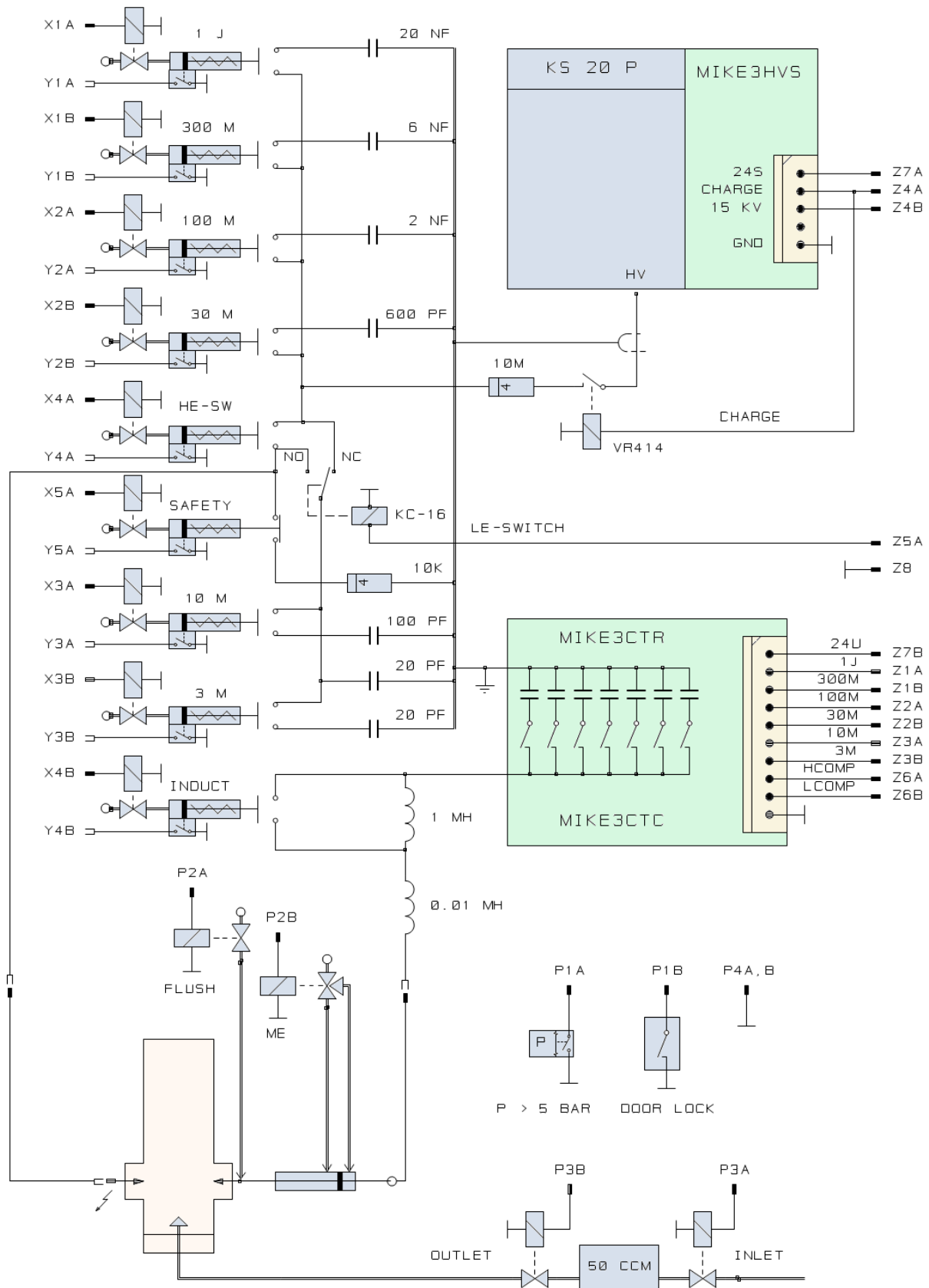
3. Set a test jumper, switch MIKE on and adjust according to the following drawing:



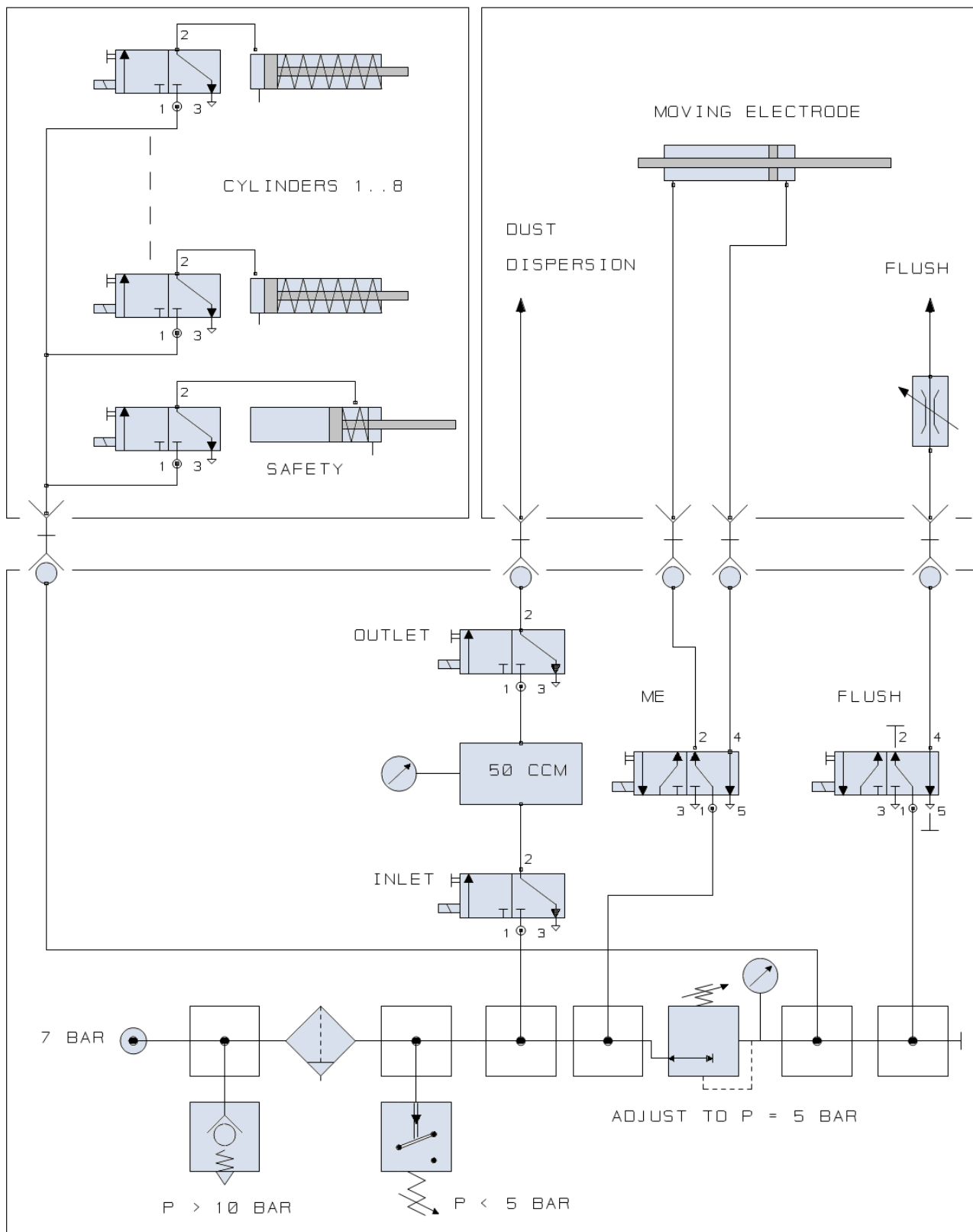
4. Remove the test jumper
5. See: [1.4 Close the MIKE](#)

2. Diagrams

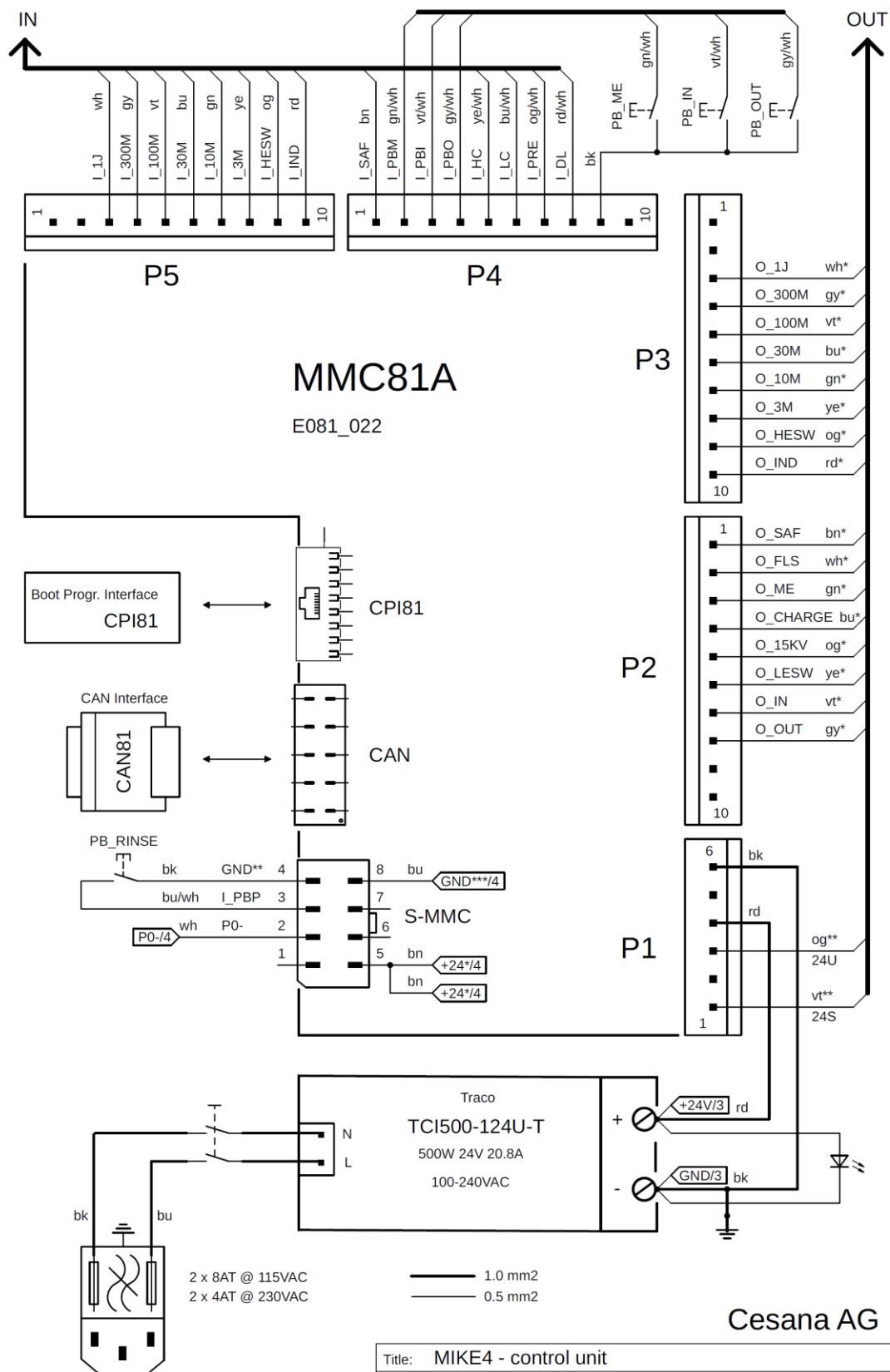
2.1 High voltage unit

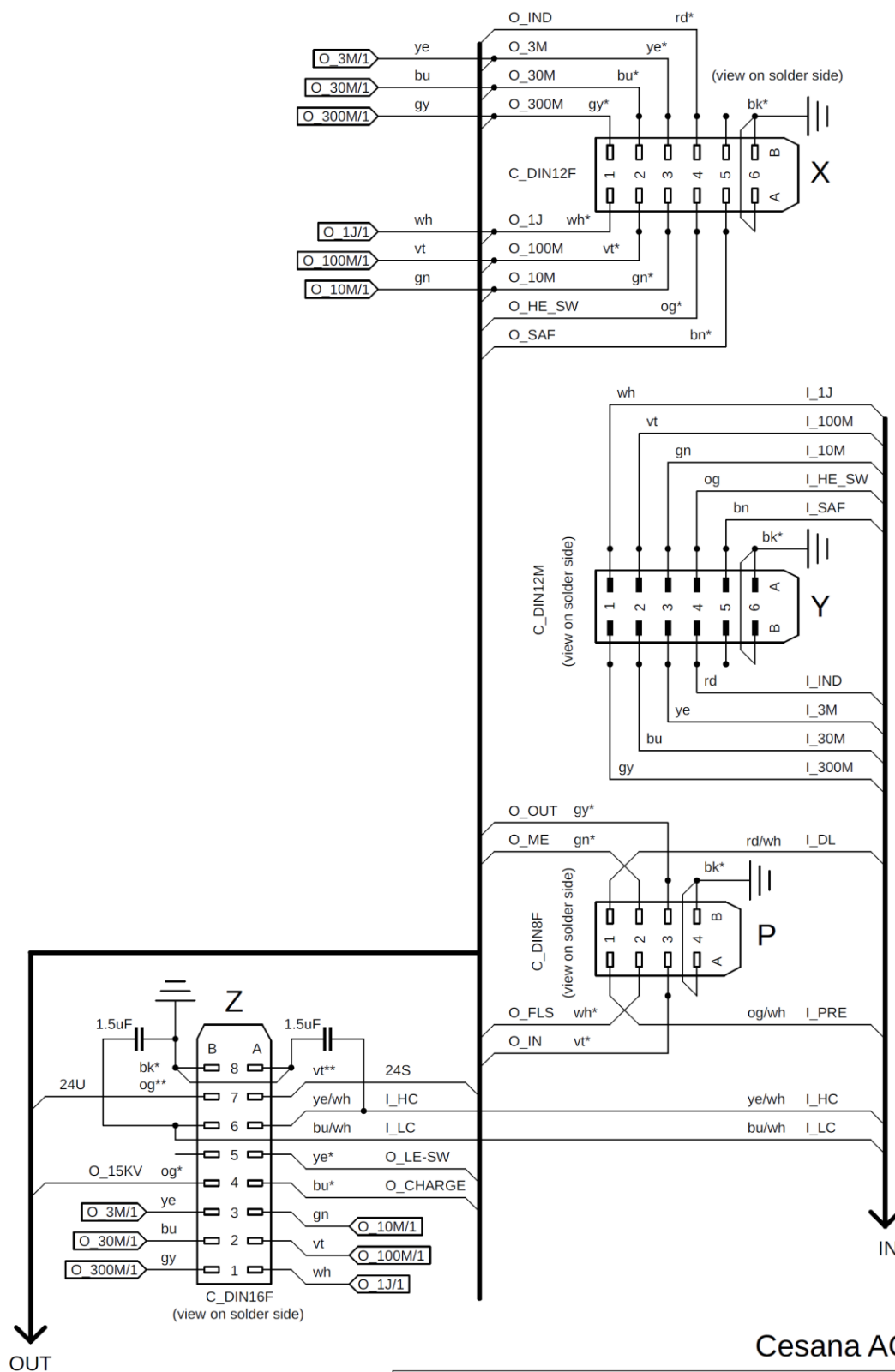


2.2 Pneumatic



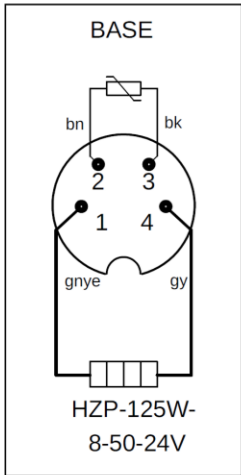
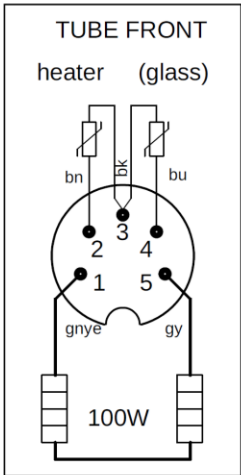
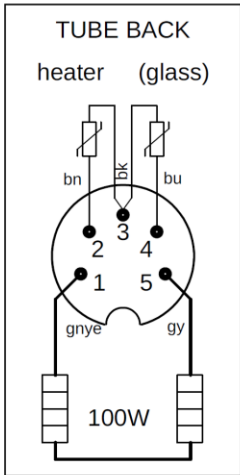
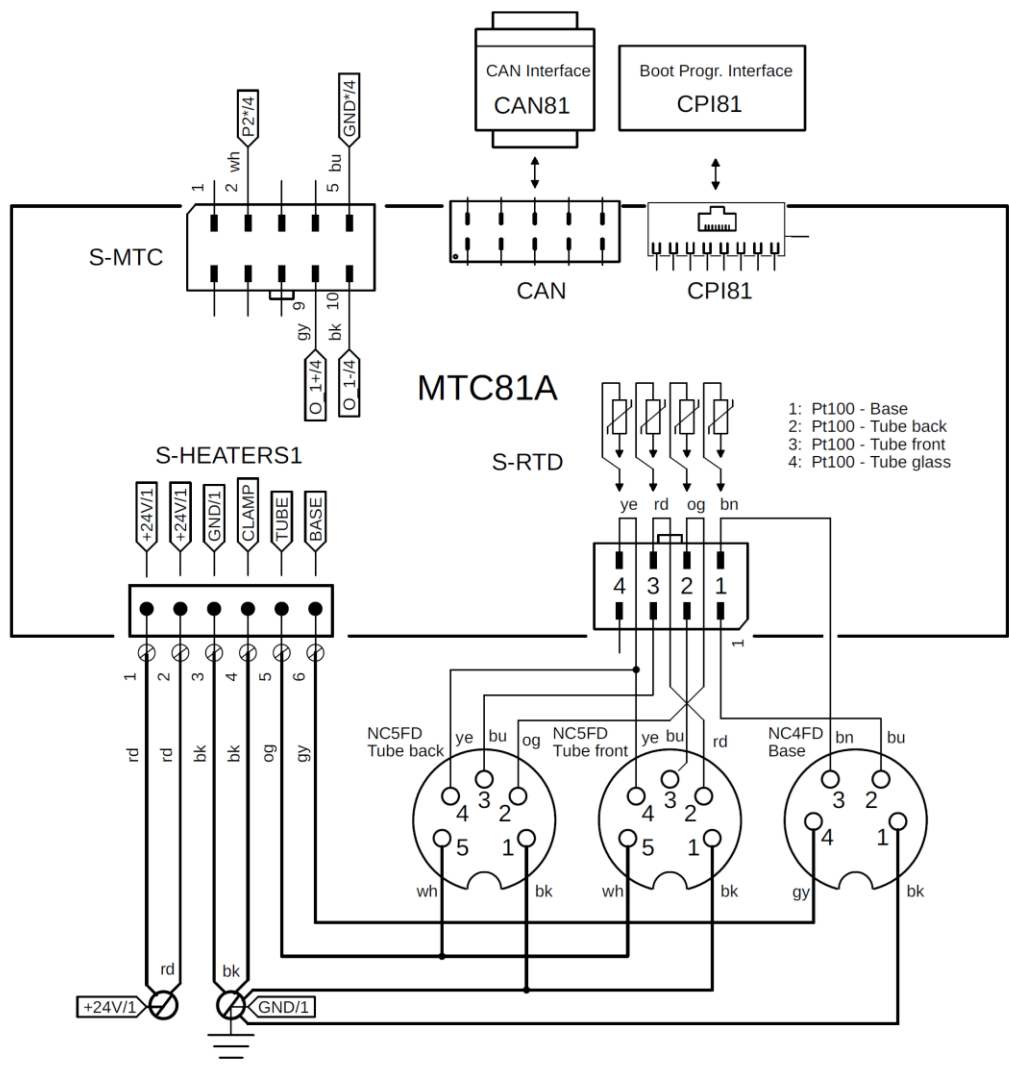
2.3 Control unit MIKE4-CAN





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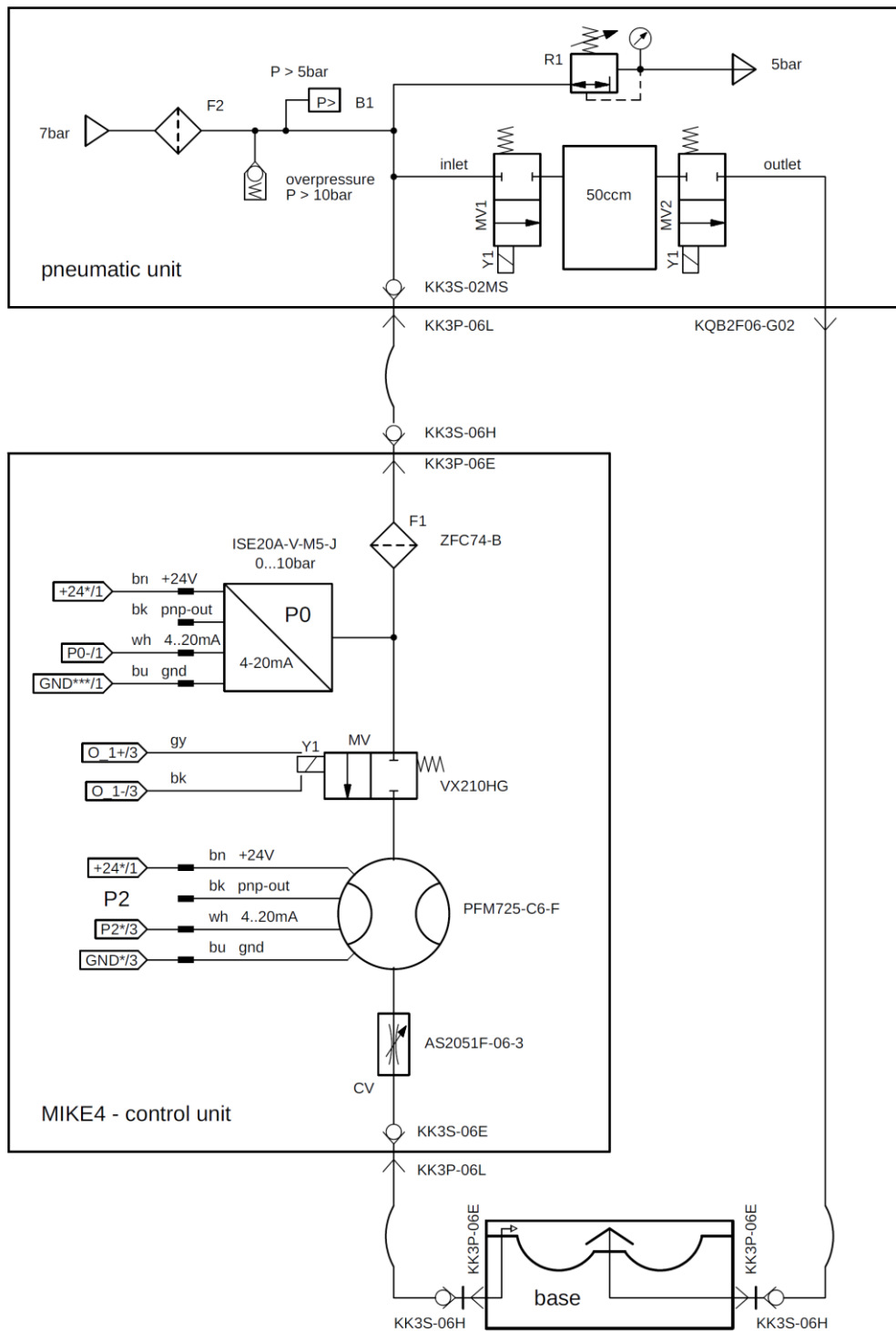
Title:	MIKE4 - control unit		
Doc:	E022_031		
Rev:	29.05.24 CC	Sheet:	2 of 4



4 x HZP-200W-6.5-100-24V

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Title:	MIKE4 - control unit	
Doc:	E022_031	
Rev:	29.05.24 CC	Sheet: 3 of 4



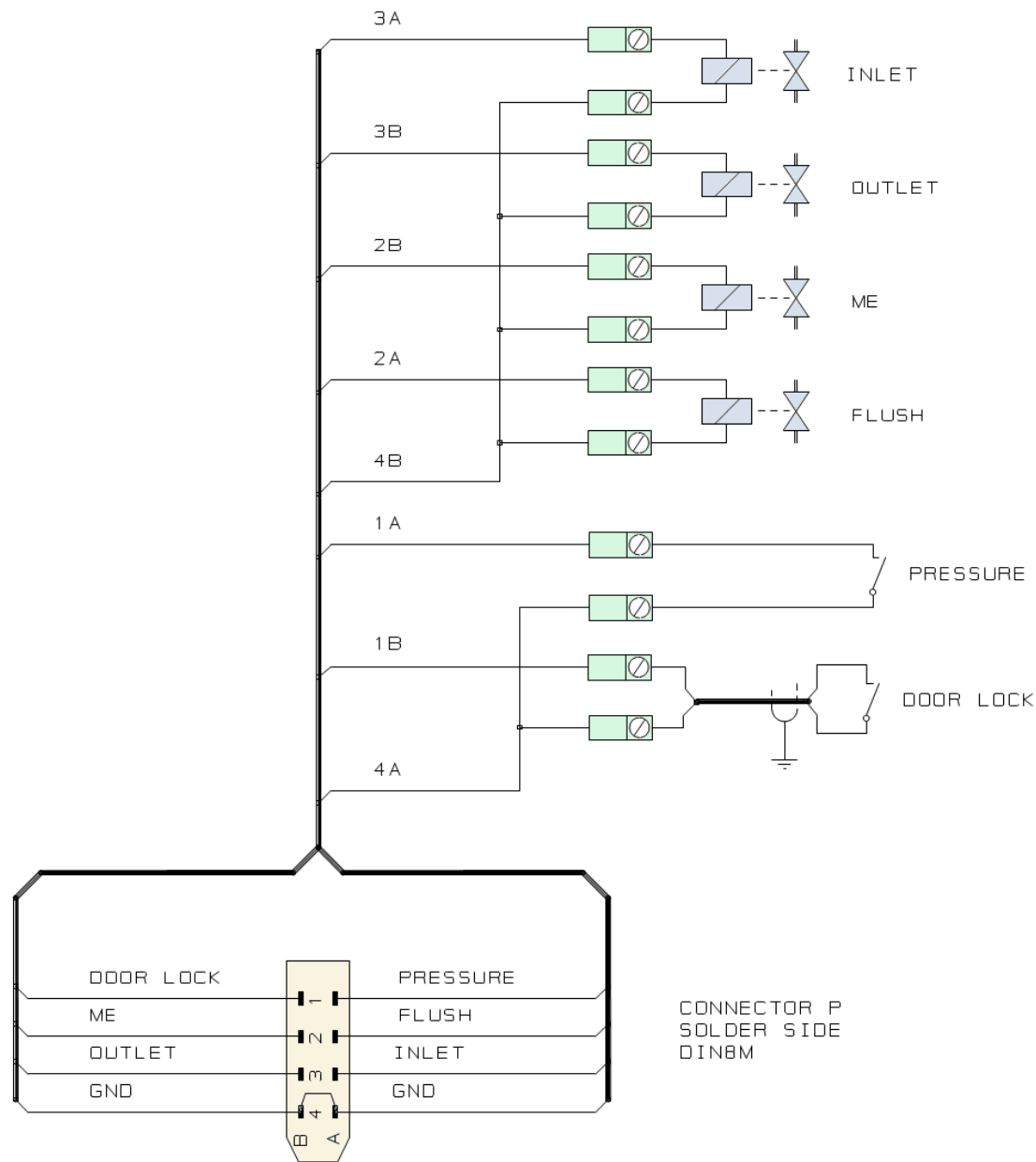
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Title:	MIKE4 - control unit
Doc:	E022_031
Rev:	29.05.24 CC

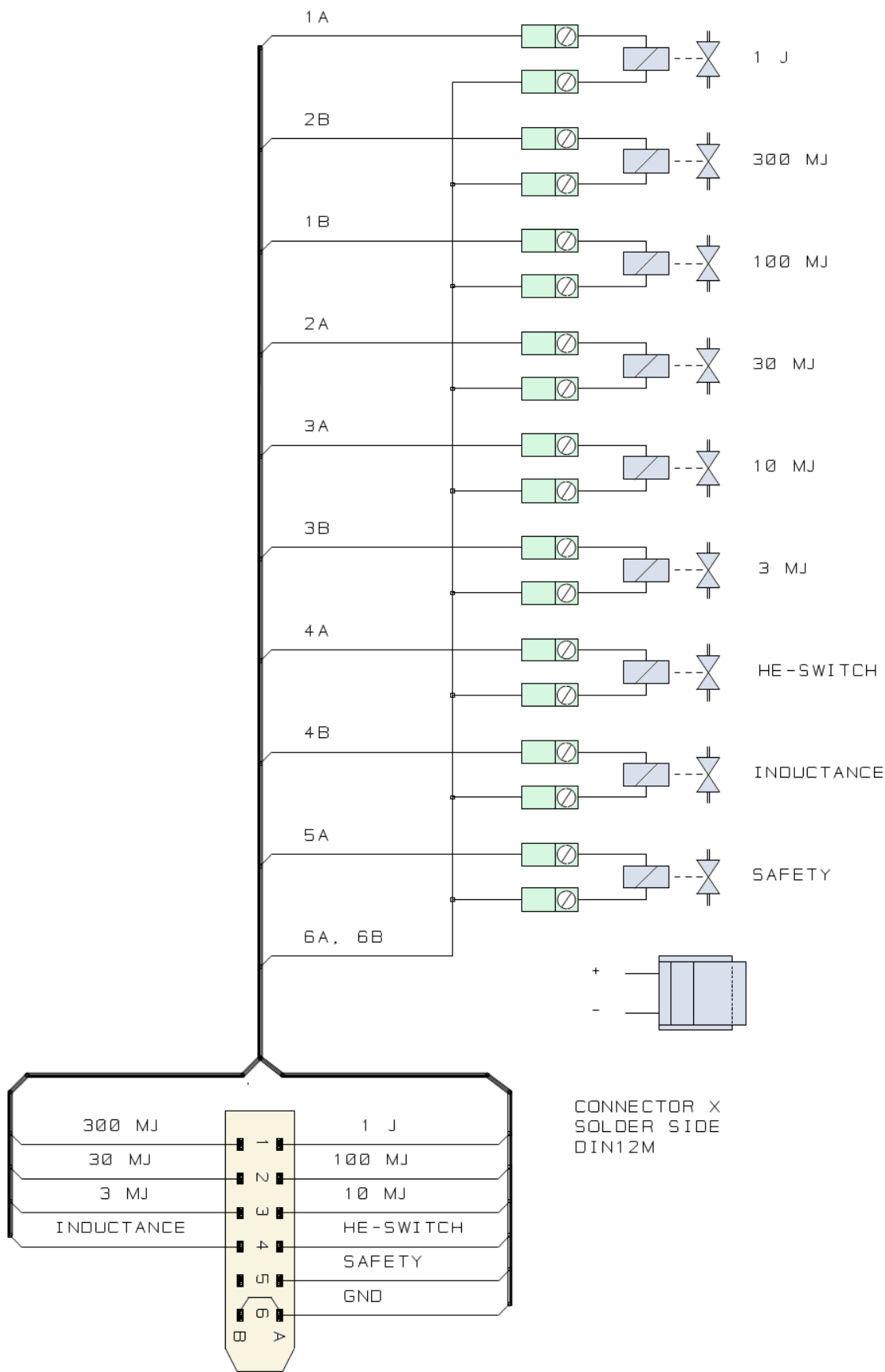
Sheet: 4 of 4

2.4 Wiring MIKE4

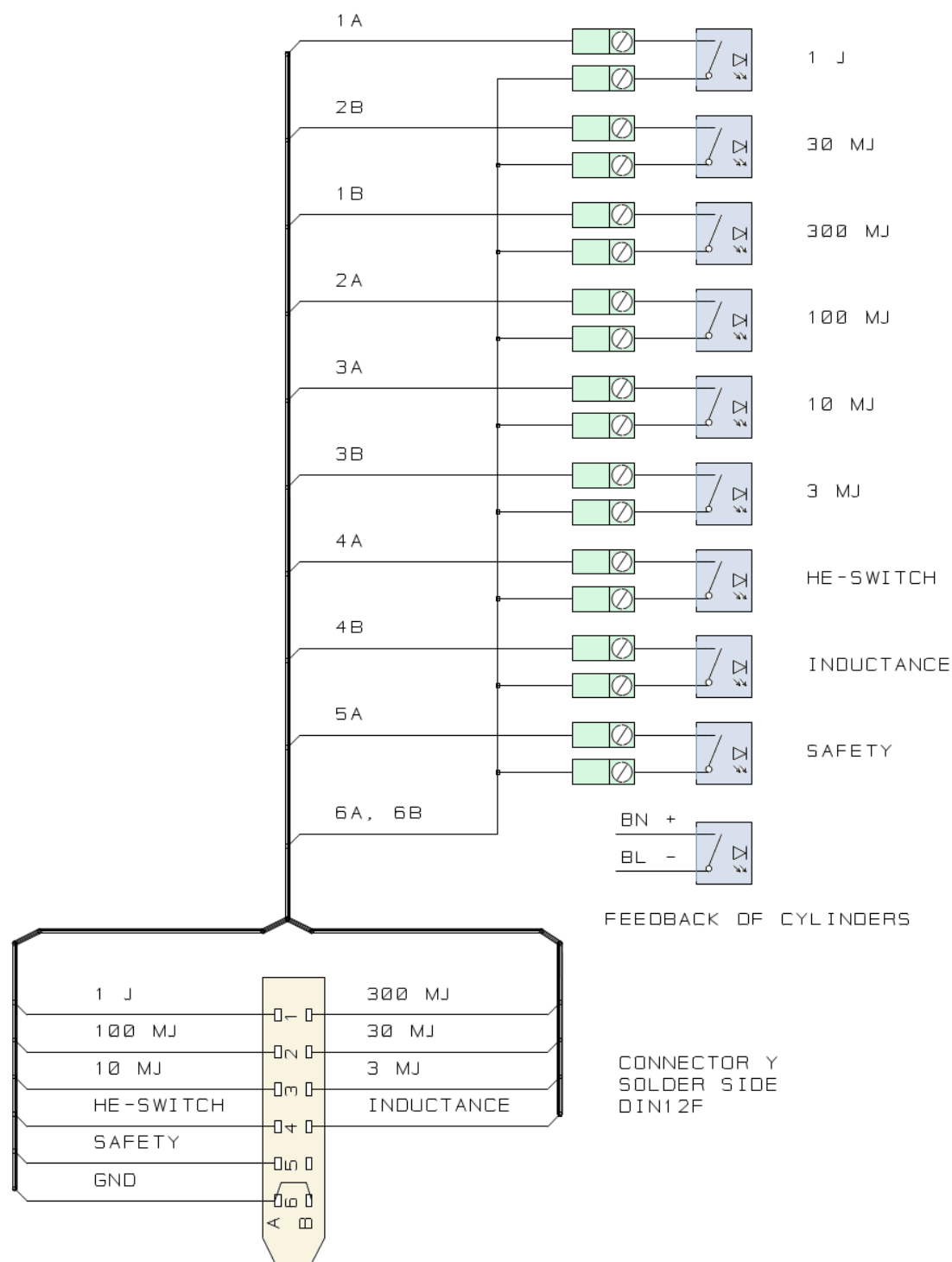
2.4.1 Connector P



2.4.2 Connector X



2.4.3 Connector Y



2.4.4 Connector Z

