

Mounting of Gas Pressure ADC "PADC"

Always at rear of
CMS DT Muon chamber

Same for
MB1, MB2, MB3, MB4,...

Same for each
+Z and -Z Types

But DIFFERS in orientation for
Services at Left and at Right

040907, update 041201
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File located at: http://www.physik.rwth-aachen/~reithler/041201PADC_installation.pdf
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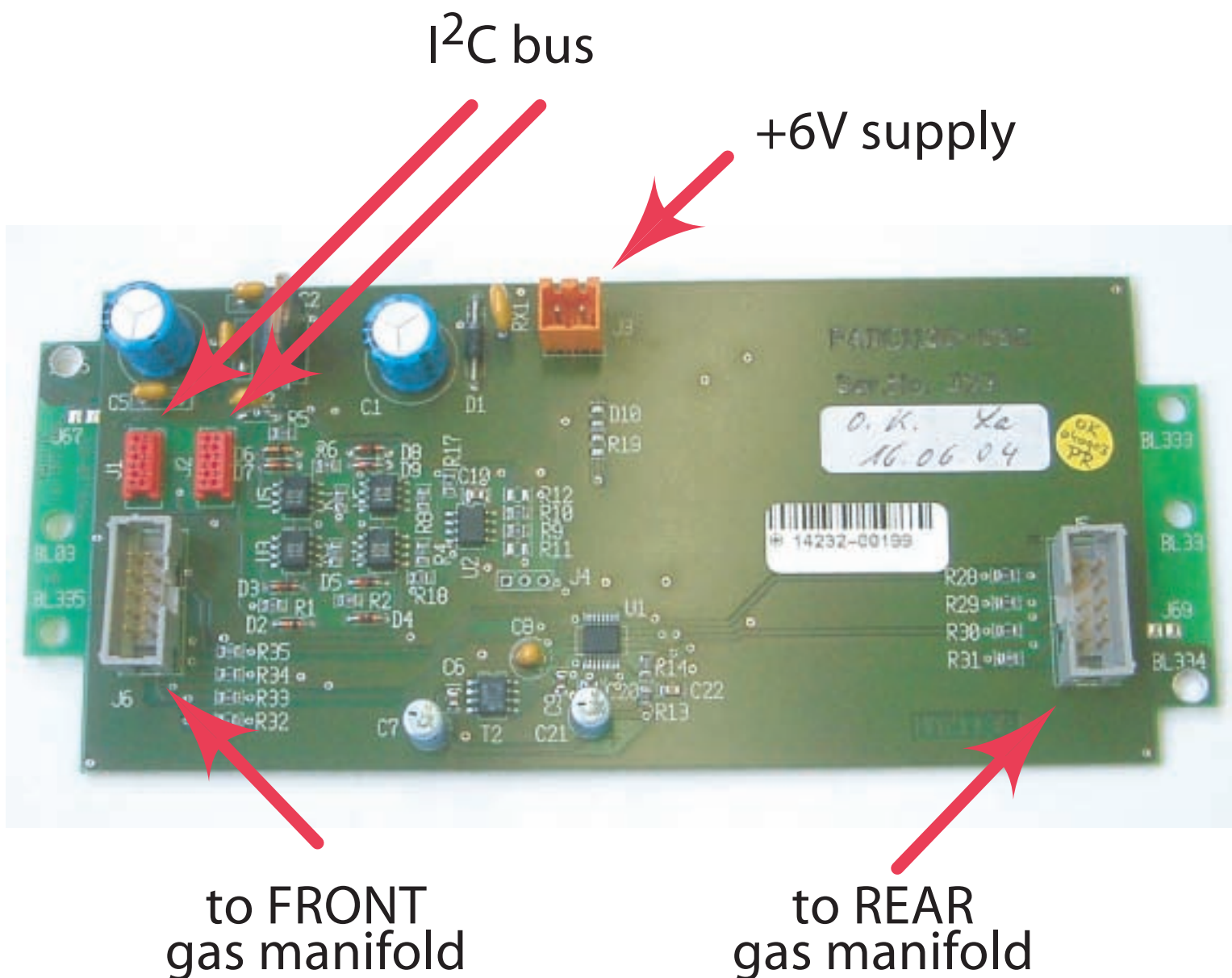


Fig.1: PADC board and its connections.
 Orient the PADC board in its box such that the connector "to REAR" points to the rear gas manifold.
 This means to the left and right for a "left" and "right" chamber, respectively.

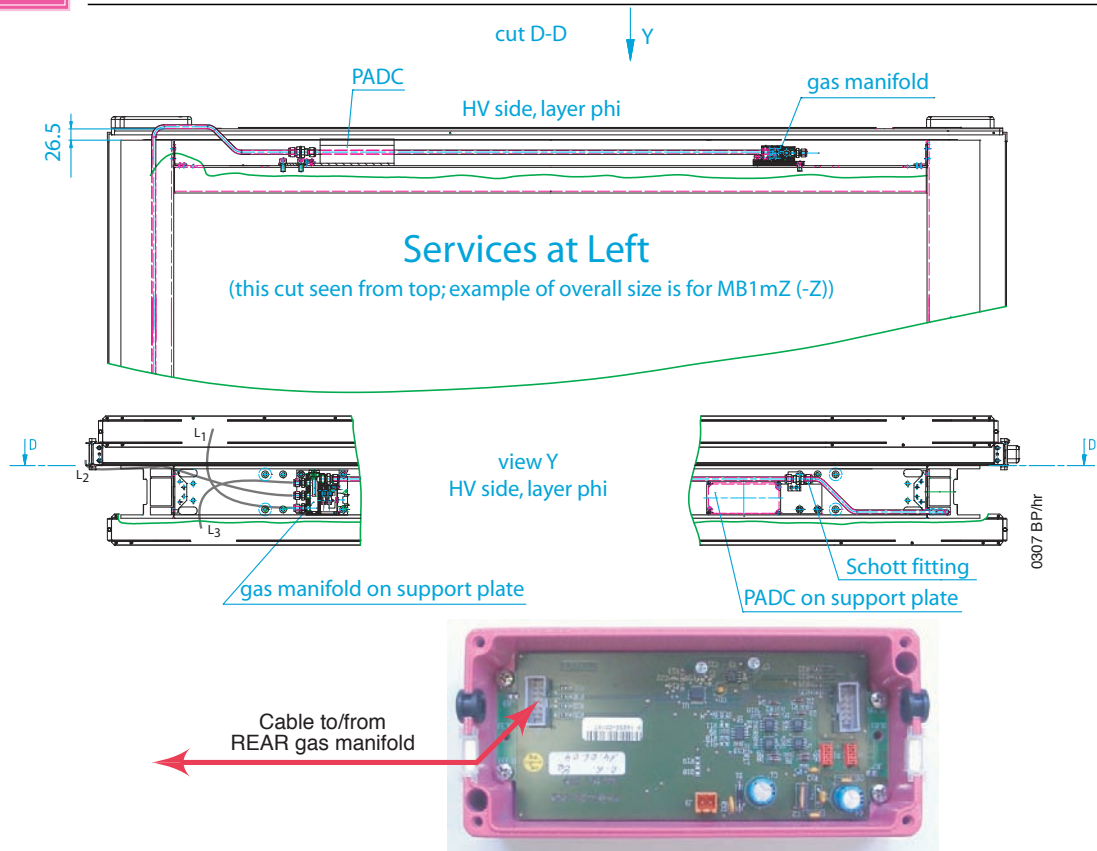


Fig.2: PADC on a "left" chamber.

Gas manifold and PADC-box are attached to the C-profile through spacer plates to ensure free access to the outer two threaded holes at left and right, for handling of the chamber. On all MB4 chambers (have no SLtheta and honeycomb panel is accordingly thicker) the fixation holes are ~27 mm higher but this also holds for the alignment passages. Therefore the same gas components also fit on MB4; keep the lateral gas pipe at the upper border of its passage.

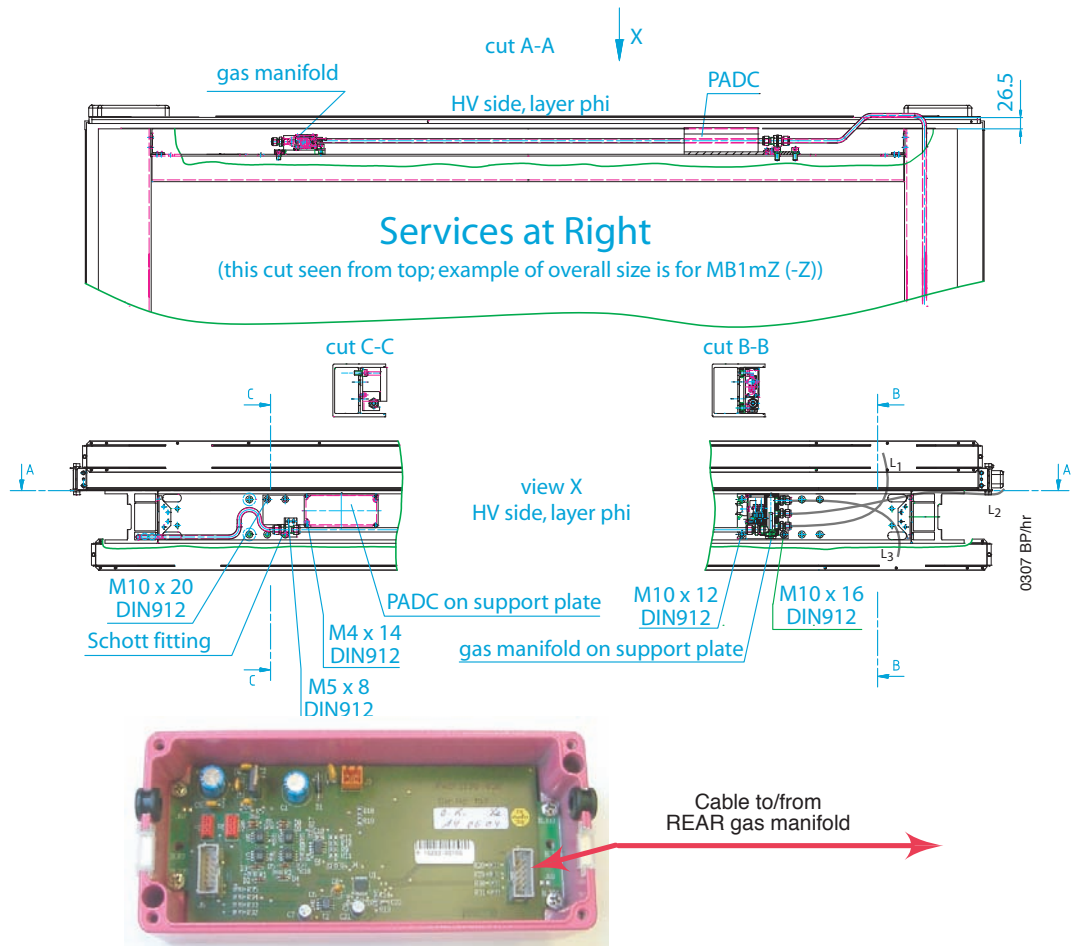


Fig.3: PADC on a "right" chamber.

Note that the gas pipe also passes through the lower lateral channel. Watch the orientation of the PADC board inside its box. The orientation of the box itself is independent from the orientation of the PADC.

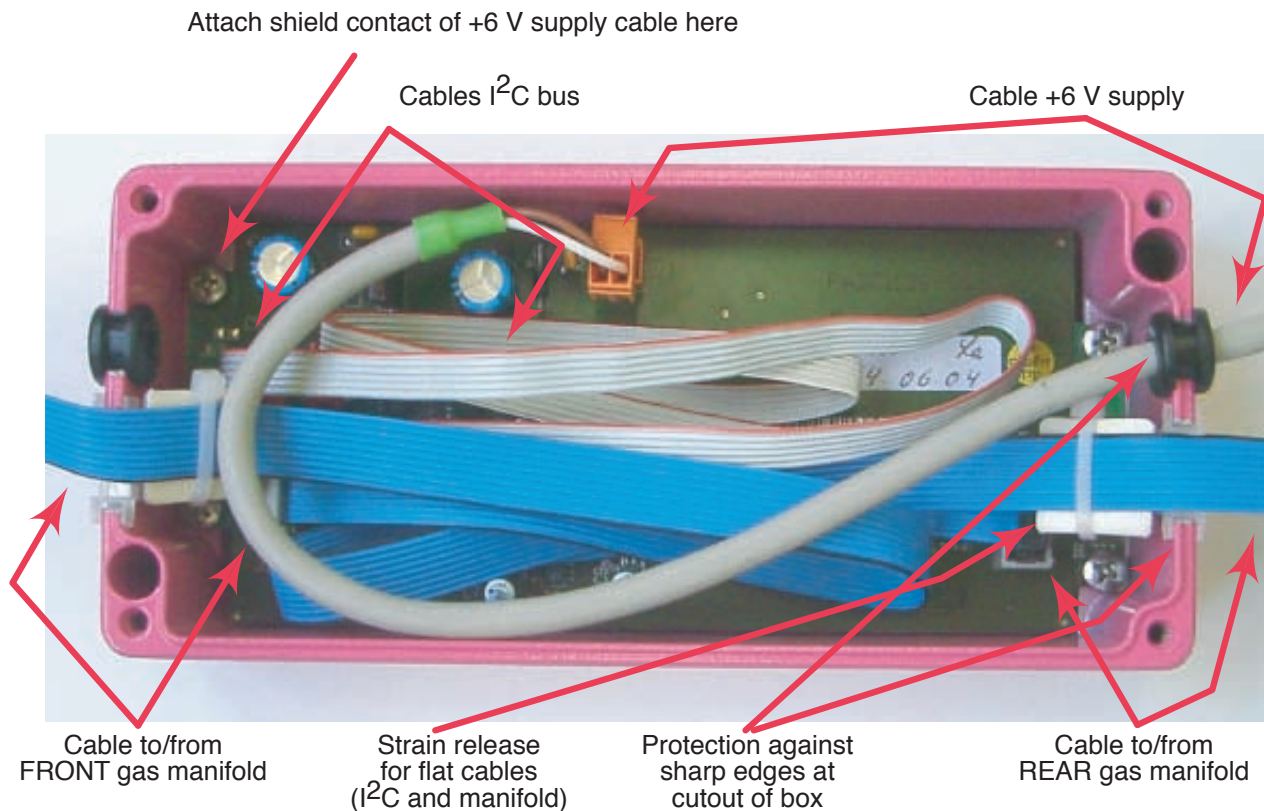


Fig.4: PADC cabling, here on a "right" chamber.

Note that the gas pipe also passes through the lower lateral channel. Watch the orientation of the PADC board inside its box. The orientation of the box itself is independent from the orientation of the PADC. Please note that the spare length of all cables is housed inside the box. Finally, the PADC board can be connected to local ground (default), or isolated from it if needed, by ensuring/removing the contact at the four screws attaching the PADC board to its box.

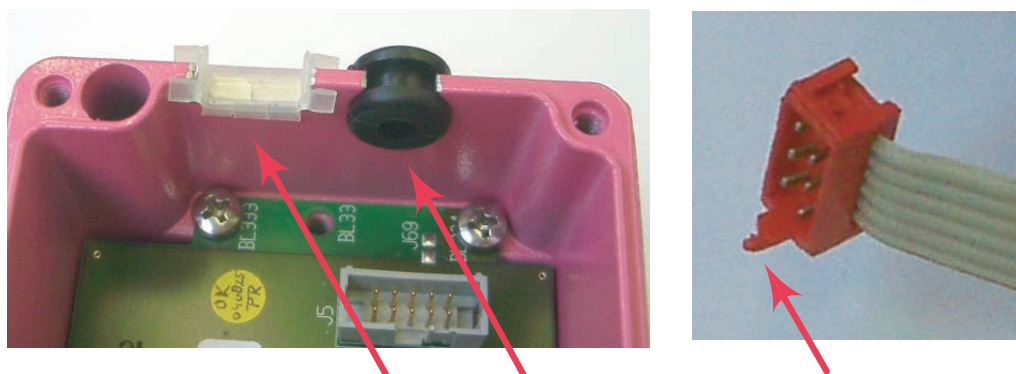


Fig.5: PADC cabling warnings.

Always make sure that the protections against sharp edges (see left photo) are in place. Note that the small connectors of the I²C bus cables are very weak and do not have any own strain release. These connectors do have a KEY in the form of a small protruding "nose" (see right photo) which fits into a hole in the PCB - this "nose" is very weak.

Fig.6: Cable for +6 V supply to PADC, PADC end.
When attaching the shield contact to one of the four screws inside the PADC box, please add a contact ring.

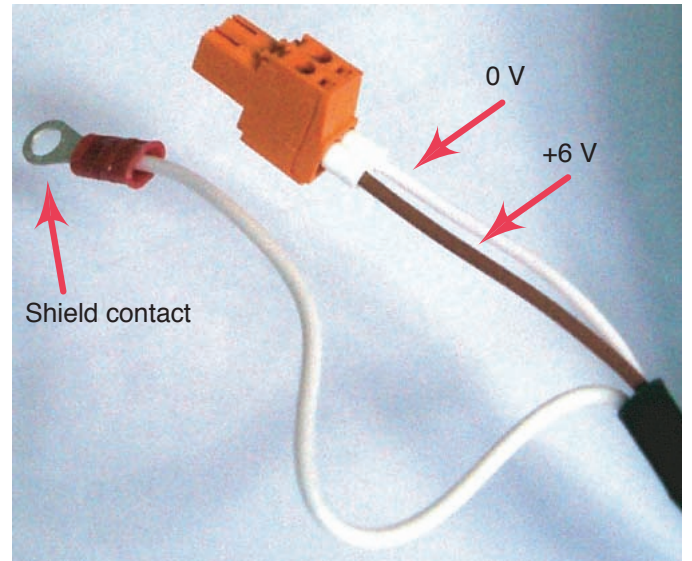


Fig.7: Cable for +6 V supply to PADC, far end.
This connector is plugged at the LV patch panel located on the front face of the magnet yoke iron "wheel", close to the front-end of the chambers. On the two photos the connector on the cable is open and is plugged into his matching patch panel connector, to show the details of the assembly. The LV cable for the minicrate is connected to the same patch panel. At this end of the PADC_LV cable the shield remains dc-floating; inside the patch panel it is connected capacitively to the shield of the cable from the supply.

