

1. Introduction

For the vacuum compatible detectors and Piezo mirror mounts we regularly use the following plugs, sockets and feedthroughs. All following descriptions of the pinouts show the respective external view of the sockets or plugs. If you make your own cables, you have to mirror the graphics for the view of the solder side. The black circles with white numbers shows the pins, the white circles with black numbers show the sockets.

2. Vacuum Piezo mirror mounts

The fixed vacuum compatible cable on the Piezo mirror mounts ends with plug (1). This plug can either be connected to a vacuum compatible extension cable with socket (2) and plug (1) or to the cable feedthrough (3).

The feedthrough can then be connected to an extension cable on the air side. It has the socket (2) with an exchanged housing (4), fitting to the feedthrough, and the connector (1) for connection to the controller (*).

Connectors

Product code (Lemo)	Description
(1) FFA.0S.304.CLAC32	4-pin plug, male
(2) PCA.0S.304.CLLC32	4-pin socket, female
(3) SWH.0S.304.CLLSV	feedthrough
(4) FFA.0S.110.CZZ	plug housing

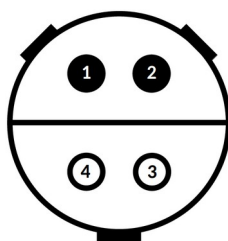
(*) We will be happy to send you instructions for changing the connector housings on request.

Cable assignment

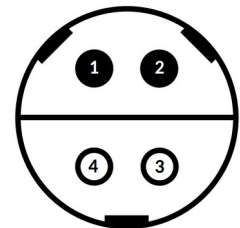
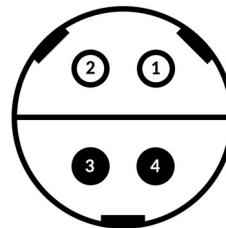
Pin	Signal	Cable in vacuum	Ext. cable in air
1	Y signal	white	white
2	X signal	brown	brown
3	+122 V	green	black
4	GND	yellow	black
Shield	GND		

2.1. Pin assignment

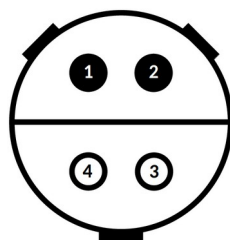
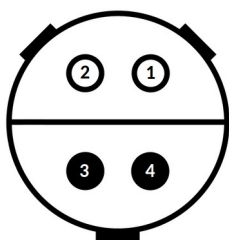
a) Plug (1) on the permanently attached actuator cable:



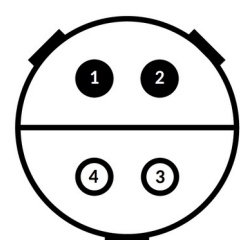
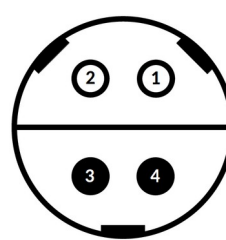
b) Feedthrough (3):



c) Air-side extension cable with socket (2) and replaced plug housing (4) on plug (1):



d) Optional vacuum-compatible extension cable with socket (2) and plug (1):



Data sheet

Connectors of vacuum components



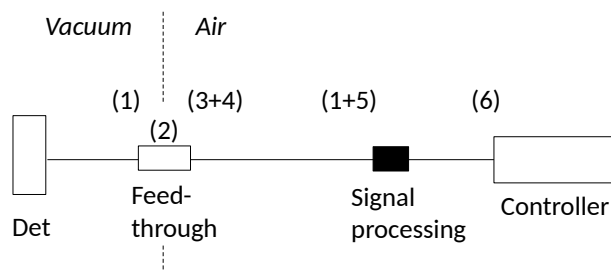
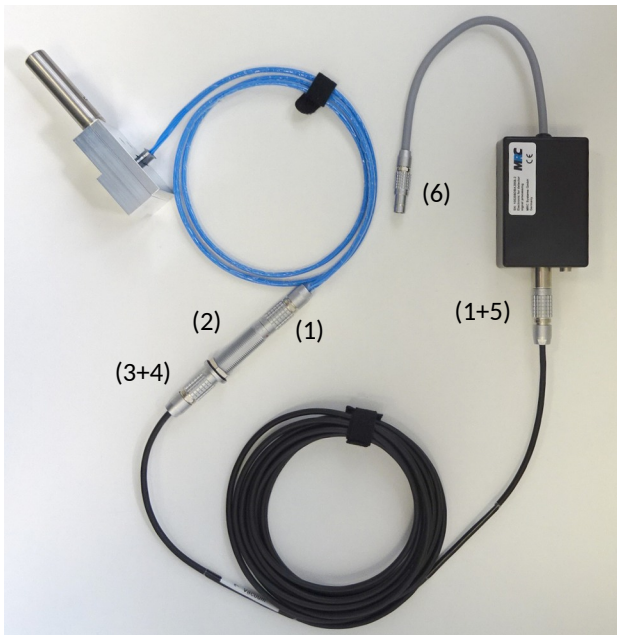
Cable

Designation	Material	Standard length
Vacuum cable on actuator	Metrofunk LiTCT 4x0.06 mm ² , shielded, PTFE, FEP	1 m
Optional extension cable	as vacuum cable	by arrangement
Air-side extension cable	Kabeltronik Sensocord M/D 6x0.09 mm ² , shielded, PP, PVC, PUR	10 m

3. Vacuum detectors

The vacuum-compatible cable plugged into the detector ends with the plug (1). This plug can be connected to the cable gland (2).

An extension cable can then be connected to this on the air side. This has the socket (3) with the replaced plug housing (4) and the plug (1) (*) to match the cable feedthrough. Between the extension cable and the controller there is a small cable box with the signal processing that has been relocated from the vacuum with the print socket (5) and the plug (6) for connection to the controller.



Connectors

Product code (Lemo)	Description
(1) FGG.1B.308.CLAD42	8-pin plug, male
(2) SJG.1B.308.CLASV	Feedthrough
(3) PHG.1B.308.CLLD42	8-pin socket, female
(4) FGJ.1B.110.CZZ	Plug housing
(5) EPG.1B.308.HLN	8-pin socket, female
(6) FGG.0B.307.CLAD52	7-pin-socket male

(*) We will be happy to send you instructions for changing the connector housings on request.

Cable material

Cable on detector	Samtec DWCT-28-01-TC 8x28 AWG, shielded, FEP
Optional vacuum extension cable	Lemo 108260, 8x0.2 mm ² , shielded, PTFE
Air-side extension cable	Kabeltronik Sensocord M/D, 8x0.09 mm ² , shielded, PP, PVC, PUR

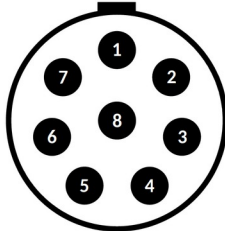
Standard cable lengths

Cable on detector	1 m (max. 2 m)
Optional vacuum extension cable	by arrangement
Air-side extension cable	4 m (to cable box)
Cable between external signal processing and controller	0.25 m

Note: As an alternative to adjusting the detector sensitivity via the computer interface, it can also be adjusted via an (optional) analog signal line on the external signal processing unit. A Lemo → BNC cable is used for this purpose.

3.1. Pin assignment

a) Plug (1) on the vacuum cable:



#1 - #4 designate the quadrants of the sensor as follows:

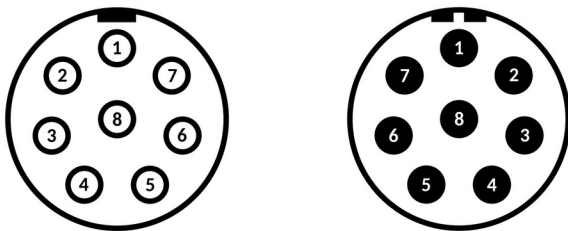
#2	#1
#3	#4

Cable assignments

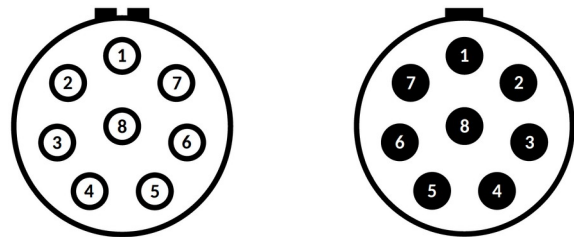
Pin	Signal	Cable on detector	Ext. cable- vacuum	Ext. cable air
1	GND	blue	black	brown
2	+ 9 V	blue	brown	green
3	#4	blue	rod	yellow
4	#1	blue	orange	gray
5	#2	blue	yellow	pink
6	#3	blue	green	blue
7	- 9 V	blue	blue	white
8	Sens	blue	violet	red
Shield	GND			

Sens stands for the signal line for remote setting of the detector sensitivity.

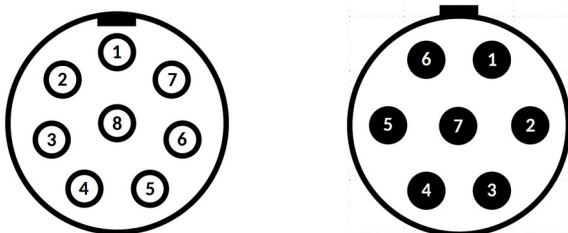
b) Feedthrough (4):



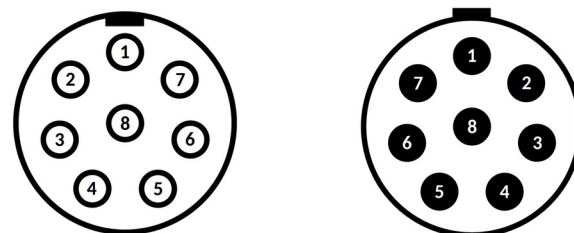
c) Air-side extension cable with socket (3) / replaced plug housing (4) and plug (1):



d) Cable box with signal processing with print socket (5) and plug (6):



e) If a long cable to the wall is required in a vacuum, an extension cable with socket (7) and plug (8) can be used:



Plug of the optional vacuum extension cable

Product code (Lemo)	Description
(7) PHG.1B.308.CLLD52	8-pin socket, female
(8) FGG.1B.308.CLAD52	8-pin socket, male



Contact

MRC Systems GmbH
Hans-Bunte-Str. 10
D-69123 Heidelberg, Germany
Phone: +49 6221/13803-00
Email: info@mrc-systems.de

Subject to change without prior notice.