

CABLE ASSEMBLY SCHEMES

for *Injection* cabling

Change History

| Version | Date | Changes | Author |
|---------------------------|---------------------|--|-------------------------------|
| v1 | Nov 1999 | initial suspension cabling | Dattilo, Ceccanti |
| v2r0-r1- r2-r3 | Aug- Dec 2005 | Cabling of the new SIB | Dattilo, Nenci |
| v3r0 | 4 Jan 2006 | Cabling of M0 mirror - cables D2 and D3 | Dattilo |
| V3r1 | Oct 2008 | Cabling of the motorized rotator for a $\lambda/2$ waveplate – B2 cable | Berni, Dattilo, Gherardini |
| V4r0 | Jan-Feb 2014 | Cabling adaptation for AdV: replacement of the pre-existing DB25 with the circular 32-pins peekplugs, added cables for filter F#4, for IP feet piezos&LVDTs, for new SIB1. | Berni, Dattilo, Gherardini |
| v4r1 | 6 May 2014 | Added cable V for ground coils | Berni, Dattilo, Gherardini |

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Informazioni generali

Ciascun spezzone di cavo va terminato ad una estremità da un connettore circolare 32 poli (tipo presa), all'altra estremità con uno o più connettori Lemo multipolari (generalmente tipo spina). I cavi sono del tipo:

- cavo piatto a 18 o 20 conduttori trefolati AWG 24, isolati in goretex, a coppie ritorte e schermate singolarmente (cavo STP).
- cavo assemblato in lab a conduttori solidi AWG 18, isolati in polimide, a coppie ritorte (cavo TP).
- cavo assemblato in lab a conduttori solidi AWG 22, isolati in polimide, a triplette ritorte (cavo TT).

Identificazione componenti

- Ciascun cavo è identificato da una lettera dell'alfabeto.
- Il tipo di cavo utilizzato e' indicato in prossimità del disegno: la sigla comprende il numero di coppie di conduttori, il tipo di schermatura (STP, TP, TT), la sezione (es. AWG24). Es.: la sigla **9.STP.AWG24** specifica un tipo di cavo avente 18 conduttori intrecciati e schermati a coppie, di sezione AWG24
- Ciascun conduttore di un cavo STP è identificato da un numero cardinale relativo alla coppia (**1** per la coppia bianco/rossa a seguire fino ad **9** per le altre coppie bianco/gialle), da una lettera (**A** per il conduttore con isolante a strisce rosse, **B** per l'altro conduttore della coppia, **S** per la calza) (es. la calza nella terza coppia, è identificata da **3.S**).
- Ciascun connettore Lemo è identificato da due caratteri: il primo è la lettera del cavo sul quale è saldato il connettore, il secondo è un numero cardinale, che va da 1 al n. max di connettori Lemo sullo stesso cavo (es. per il cavo **B** terminato da due Lemo, essi sono identificati da **B1** e **B2**)
- I contatti di ciascun connettore Lemo sono identificati dal nome del connettore, seguito dal numero del contatto indicato sull'isolante del connettore (es. il contatto¹ n. 4 che si trova sul connettore Lemo **B3** e' identificato da **B3.4**)
- I contatti di ciascun connettore circolare a 32 poli sono identificati da lettere (A÷Z, a÷j). Per quelli interni vale il pinout serigrafato sul retro dell'isolante, per quo 20elli esterni vale il pinout standard

¹ Nel caso di conduttori Lemo, il contatto n. 1 e' quello col semicerchio bianco, i successivi sono quelli lungo la linea bianca che parte dal contatto n. 1.

Legenda

| | |
|----------------|--|
| F1 + | motore, fase 1, positivo |
| F1 - | motore, fase 1, negativo |
| F2 + | motore, fase 2, positivo |
| F2 - | motore, fase 2, negativo |
| FC cw | motore, fine corsa che si incontra quando l'albero gira in senso orario per un osservatore coincidente con il motore |
| FC ccw | motore, fine corsa che si incontra quando l'albero gira in senso antiorario per un osservatore coincidente con il motore |
| FC com | motore, fine corsa, comune |
| TP sx + | thermal probe, sinistro, positivo |
| TP sx - | thermal probe, sinistro, negativo |
| TP dx + | thermal probe, destro, positivo |
| TP dx - | thermal probe, destro, negativo |
| Ls | LVDT, secondario |
| Lp | LVDT, primario |
| C + | coil attuatore, positivo |
| C - | coil attuatore, negativo |
| fbk | accelerometro, feedback |
| CLP | Closed Loop Picomotor |
| PD | PhotoDiode |
| PM | PicoMotor |
| PSD | Position Sensing Devices (photodiode) |
| PZ | Piezoelectric (closed loop) |
| TP | Thermal Probe |
| TS | Translation Stage |

LEMO pinout of the main devices

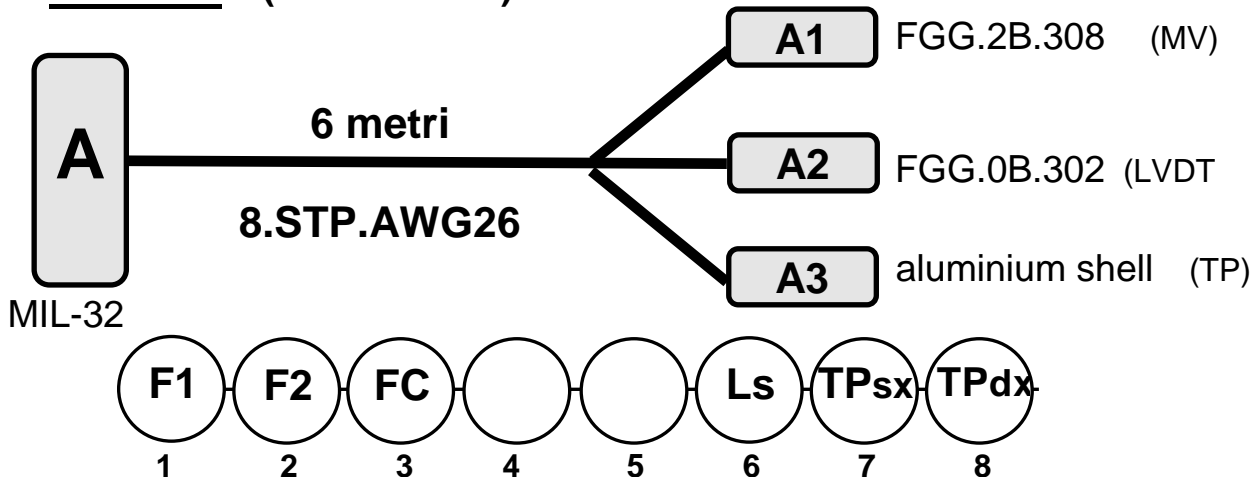
| ACCELEROMETER | |
|----------------------|-------------------|
| LEMO contacts | Contact descript. |
| 1 | Lp |
| 2 | Lp |
| 3 | |
| 4 | F1 + |
| 5 | F1 - |
| 6 | F2 + |
| 7 | F2 - |
| 8 | |
| 9 | FC cw |
| 11 | FC ccw |
| 10 | FC com |
| 12 | fbk |
| 13 | fbk |
| 14 | |
| 15 | Ls |
| 16 | Ls |
| 17 | |
| 18 | |

| LVDT | |
|---------------|-------------------|
| LEMO contacts | Contact descript. |
| 1 | Lp + |
| 2 | Lp - |
| 3 | Ls + |
| 4 | Ls - |

| COIL | |
|---------------|-------------------|
| LEMO contacts | Contact descript. |
| 1 | C + |
| 2 | C - |

| MOTOR | | |
|---------------|-------------------|--------------|
| LEMO contacts | Contact descript. | UTG contacts |
| 1 | F1 + | A |
| 2 | F1 - | B |
| 3 | F1 shield | C |
| 4 | F2 + | D |
| | F2 - | E |
| | F2 shield | F |
| 5 | FC cw | G |
| 6 | FC ccw | H |
| 7 | FC com | J |
| 8 | n.c. | |

cable A (vacuum side)



| Cutting and Stripping phase |
|-----------------------------|
| Date: |
| Operator: |
| Reel: |

| Crimping and Labeling phase |
|-----------------------------|
| Date: |
| Operator: |
| Duration (hours): |

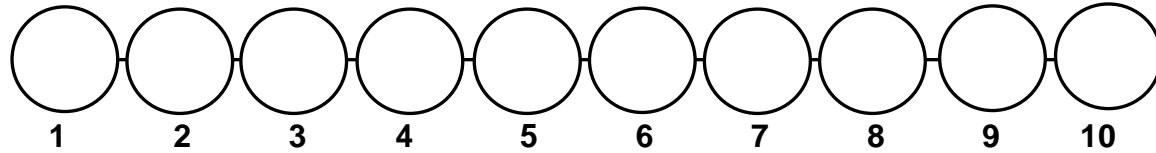
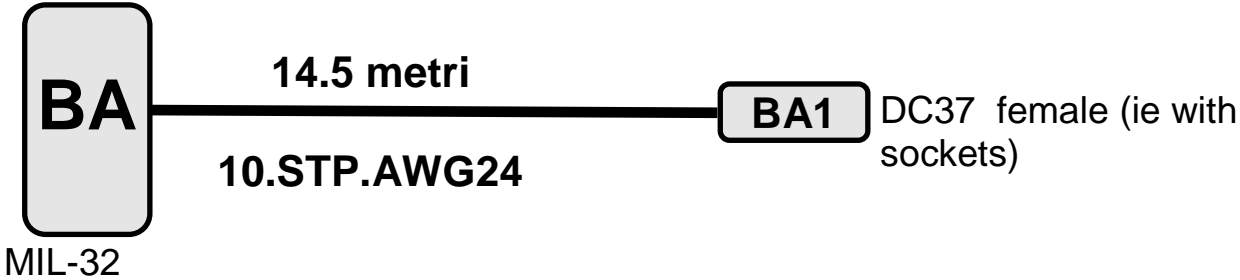
| Quality Control phase |
|-----------------------|
| Date: |
| Operator: |

| Cleaning and Storage phase |
|----------------------------|
| Date: |
| Operator: |

| Notes: |
|---|
| -Modified by Berni and Gherardini during Feb 2014: peekplug replacement (new: MIL-C-26482, older: DB25) and modification of lemo A1 pinout |
| Diramare a 60 cm |

| MIL-32 contacts | conductors | LEMO contacts | contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | A1.1 | F1 + |
| B | 1.B | A1.2 | F1 - |
| C | 1.S | n.c. | |
| D | 2.A | A1.3 | F2 + |
| E | 2.B | A1.4 | F2 - |
| F | 2.S | n.c. | |
| G | 3.A | A1.5 | FC cw |
| H | 3.B | A1.6 | FC ccw |
| J | 3.S | A1.7 | FC com |
| K | 4.A | | |
| L | 4.B | | |
| M | 4.S | | |
| N | 5.A | | |
| P | 5.B | | |
| R | 5.S | | |
| S | 6.A | A2.1 | Ls |
| T | 6.B | A2.2 | Ls |
| U | 6.S | n.c. | |
| V | 7.A | A3 | TP sx + |
| W | 7.B | A3 | TP sx - |
| X | 7.S | n.c. | |
| Y | 8.A | A3 | TP dx + |
| Z | 8.B | A3 | TP dx - |
| a | 8.S | n.c. | |

cables BA ÷ BI (vacuum side)



| Cutting and Stripping phase | |
|-----------------------------|--|
| Date: | |
| Operator: | |
| Reel: | |

| Crimping and Labeling phase | |
|-----------------------------|--|
| Date: | |
| Operator: | |
| Duration (hours): | |

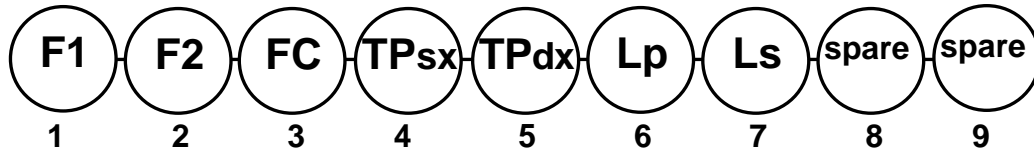
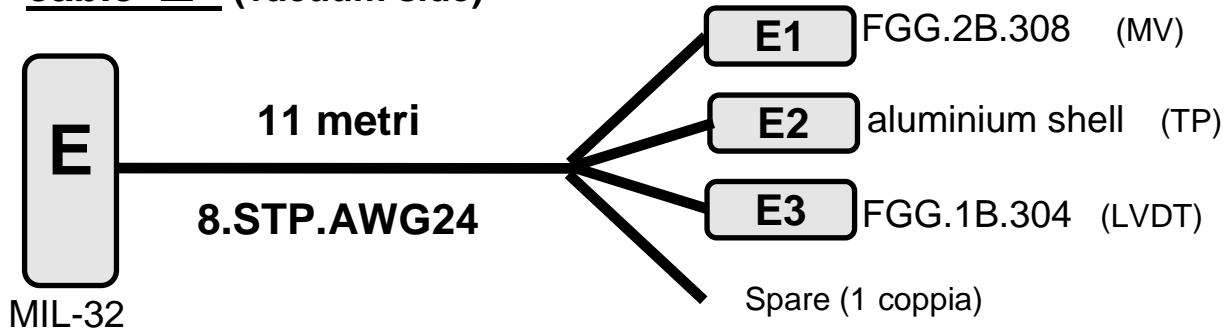
| Quality Control phase | |
|-----------------------|--|
| Date: | |
| Operator: | |

| Cleaning and Storage phase | |
|----------------------------|--|
| Date: | |
| Operator: | |

| Notes: |
|--|
| Cables connecting the device on SIB1. In total 9 identical cables: BA, BB, BC, BD, BE, BF, BG, BH, (the B prefix is for 'Bench') |

| MIL-32 contacts | conductors | DC-37 contacts | contact description |
|-----------------|------------|----------------|---------------------|
| A | 1.A | 1 | |
| B | 1.B | 2 | |
| C | 1.S | 20 | |
| D | 2.A | 21 | |
| E | 2.B | 22 | |
| F | 2.S | 3 | |
| G | 3.A | 4 | |
| H | 3.B | 5 | |
| J | 3.S | 23 | |
| K | 4.A | 24 | |
| L | 4.B | 25 | |
| M | 4.S | 6 | |
| N | 5.A | 7 | |
| P | 5.B | 8 | |
| R | 5.S | 26 | |
| S | 6.A | 27 | |
| T | 6.B | 28 | |
| U | 6.S | 9 | |
| V | 7.A | 10 | |
| W | 7.B | 11 | |
| X | 7.S | 29 | |
| Y | 8.A | 30 | |
| Z | 8.B | 31 | |
| a | 8.S | 12 | |
| b | 9.A | 13 | |
| c | 9.B | 14 | |
| d | 9.S | 32 | |
| e | 10.A | 33 | |
| f | 10.B | 34 | |
| g | 10.S | 15 | |

cable E (vacuum side)



| Cutting and Stripping phase |
|---|
| Date: <i>Feb 2014</i> |
| Operator: <i>F. Berni, F.Gherardini</i> |
| Reel: |

| Crimping and Labeling phase |
|---|
| Date: <i>Feb 2014</i> |
| Operator: <i>F. Berni, F.Gherardini</i> |
| Duration (hours): |

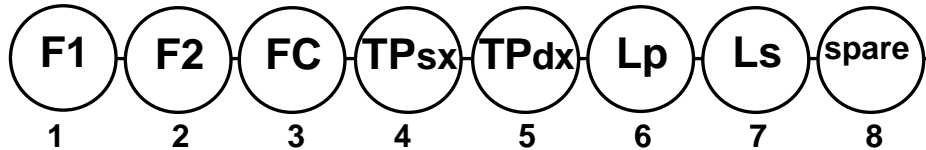
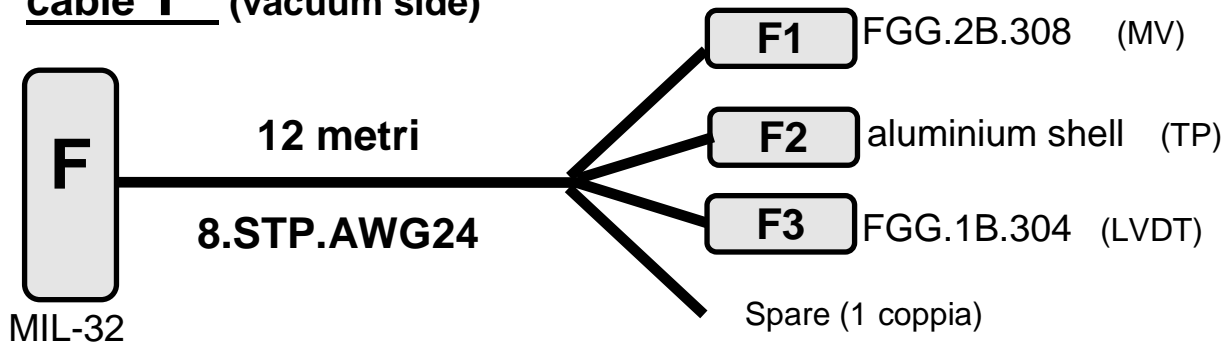
| Quality Control phase |
|-----------------------|
| Date: |
| Operator: |

| Cleaning and Storage phase |
|----------------------------|
| Date: |
| Operator: |

| Notes: |
|---|
| Diramare a 60 cm |
| - obtained by the former H cable (no more used for SIB1 connection) |
| - STP 8 and 9 are erroneously wapped |

| MIL-32 contacts | conductors | LEMO contacts | contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | E1.1 | F1 + |
| B | 1.B | E1.2 | F1 - |
| C | 1.S | n.c. | |
| D | 2.A | E1.3 | F2 + |
| E | 2.B | E1.4 | F2 - |
| F | 2.S | n.c. | |
| G | 3.A | E1.5 | FC cw |
| H | 3.B | E1.6 | FC ccw |
| J | 3.S | E1.7 | FC com |
| K | 4.A | E2 | TP sx + |
| L | 4.B | E2 | TP sx - |
| M | 4.S | n.c. | |
| N | 5.A | E2 | TP dx + |
| P | 5.B | E2 | TP dx - |
| R | 5.S | n.c. | |
| S | 6.A | E3.1 | Lp |
| T | 6.B | E3.2 | Lp |
| U | 6.S | n.c. | |
| V | 7.A | E3.3 | Ls |
| W | 7.B | E3.4 | Ls |
| X | 7.S | n.c. | |
| Y | 9.A | n.c | |
| Z | 9.B | n.c. | |
| a | 9.S | n.c. | |
| b | 8.A | n.c | |
| c | 8.B | n.c. | |
| d | 8.S | n.c. | |

cable F (vacuum side)



| Cutting and Stripping phase |
|----------------------------------|
| Date: Feb 2014 |
| Operator: F. Berni, F.Gherardini |
| Reel: |

| Crimping and Labeling phase |
|----------------------------------|
| Date: Feb 2014 |
| Operator: F. Berni, F.Gherardini |
| Duration (hours): |

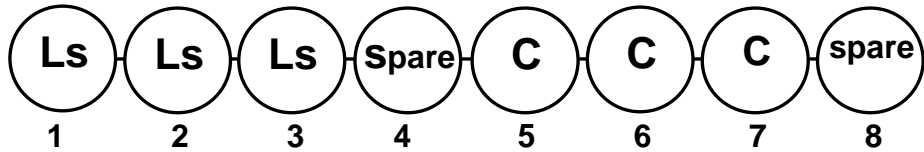
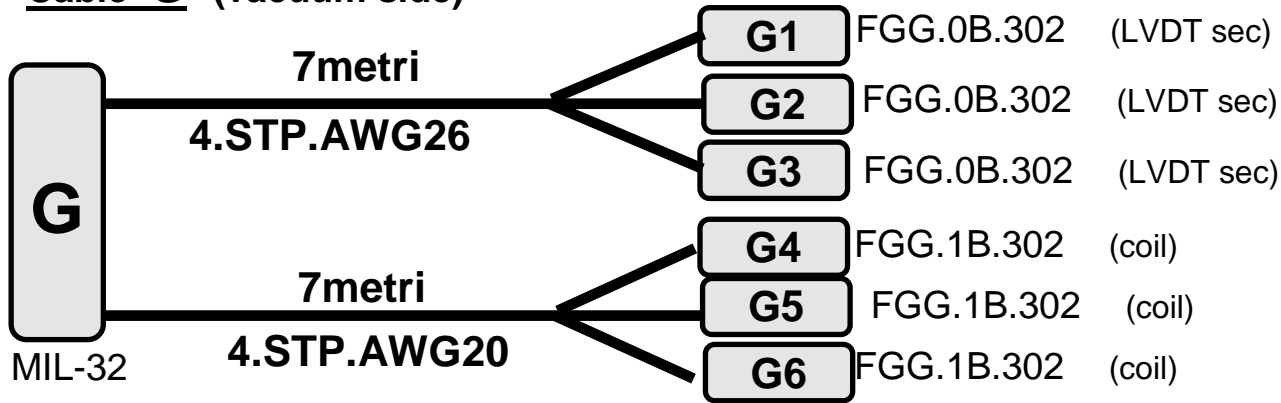
| Quality Control phase |
|-----------------------|
| Date: |
| Operator: |

| Cleaning and Storage phase |
|----------------------------|
| Date: |
| Operator: |

| Notes: |
|---|
| Diramare a 60 cm |
| - obtained by the former B cable (no more used for SIB1 connection) |
| - use the pre-existing TP aluminium shell of former cable F |

| MIL-32 contacts | conductors | LEMO contacts | contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | F1.1 | F1 + |
| B | 1.B | F1.2 | F1 - |
| C | 1.S | n.c. | |
| D | 2.A | F1.3 | F2 + |
| E | 2.B | F1.4 | F2 - |
| F | 2.S | n.c. | |
| G | 3.A | F1.5 | FC cw |
| H | 3.B | F1.6 | FC ccw |
| J | 3.S | F1.7 | FC com |
| K | 4.A | F2 | TP sx + |
| L | 4.B | F2 | TP sx - |
| M | 4.S | n.c. | |
| N | 5.A | F2 | TP dx + |
| P | 5.B | F2 | TP dx - |
| R | 5.S | n.c. | |
| S | 6.A | F3.1 | Lp |
| T | 6.B | F3.2 | Lp |
| U | 6.S | n.c. | |
| V | 7.A | F3.3 | Ls |
| W | 7.B | F3.4 | Ls |
| X | 7.S | n.c. | |
| Y | 8.A | n.c. | |
| Z | 8.B | n.c. | |
| a | 8.S | n.c. | |

Cable G (vacuum side)



| Fase di Taglio |
|-----------------------------------|
| Data: 19 jul 99 |
| Operatore/i: Ceccanti |
| Bobina di provenienza: 136490-100 |

| Fase di Crimpaggio e Labeling |
|-------------------------------|
| Data: 19 jul 99 |
| Operatore/i: Ceccanti |
| Tempo impiegato (ore): 2h30m |

| Fase di Controllo Qualita' |
|----------------------------|
| Data: 19 jul 99 |
| Operatore/i: Ceccanti |

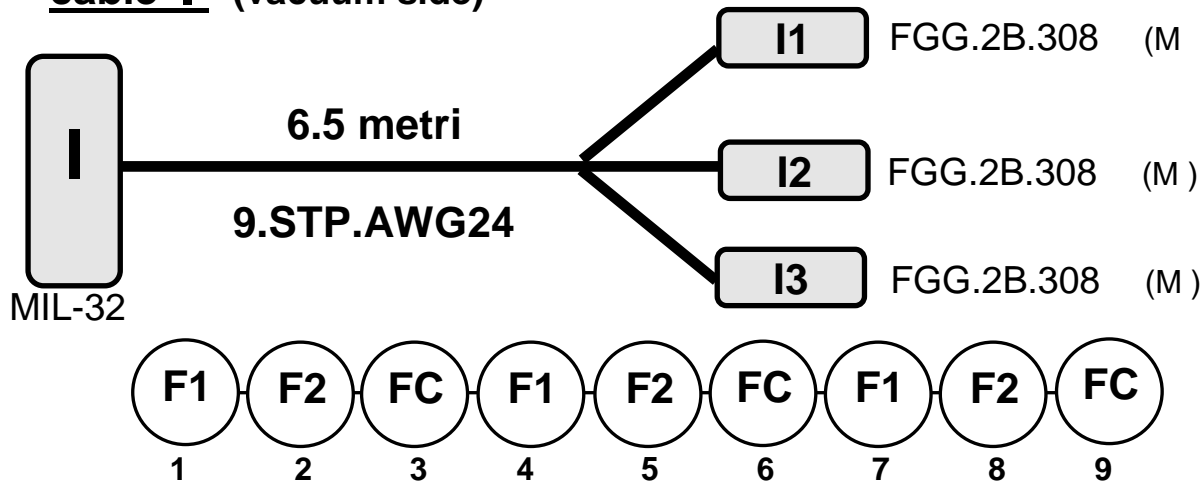
| Fase di Lavaggio e Storage |
|----------------------------|
| Data: |
| Operatore/i: |

Note:

- diramato ad 1.5 metri. Tagliato Ramo G1 e G4 piu' corti di 1 metro, Ramo G2 e G5 piu' corti di 0.5 metri (rispetto a 7 metri).
- Modified by Berni and Gherardini during February 2014: peekplug replacement (new: **MIL-C-26482**, older: DB25)

| MIL-32 contacts | conductors | LEMO contacts | Contact description |
|-----------------|------------|---------------|---------------------|
| A | G.1A | G1.1 | Ls |
| B | G.1B | G1.2 | Ls |
| C | G.1S | n.c. | |
| D | G.2A | G2.1 | Ls |
| E | G.2B | G2.2 | Ls |
| F | G.2S | n.c. | |
| G | G.3A | G3.1 | Ls |
| H | G.3B | G3.2 | Ls |
| J | G.3S | n.c. | |
| K | G.4A | n.c. | |
| L | G.4B | n.c. | |
| M | G.4S | n.c. | |
| N | G.5A | G4.1 | C + |
| P | G.5B | G4.2 | C - |
| R | G.5S | n.c. | |
| S | G.6A | G5.1 | C + |
| T | G.6B | G5.2 | C - |
| U | G.6S | n.c. | |
| V | G.7A | G6.1 | C + |
| W | G.7B | G6.2 | C - |
| X | G.7S | n.c. | |
| Y | G.8A | n.c. | |
| Z | G.8B | n.c. | |
| a | G.8S | n.c. | |

cable I (vacuum side)



| Cutting and Stripping phase |
|-----------------------------|
| Date: |
| Operator: |
| Reel: |

| Crimping and Labeling phase |
|-----------------------------|
| Date: |
| Operator: |
| Duration (hours): |

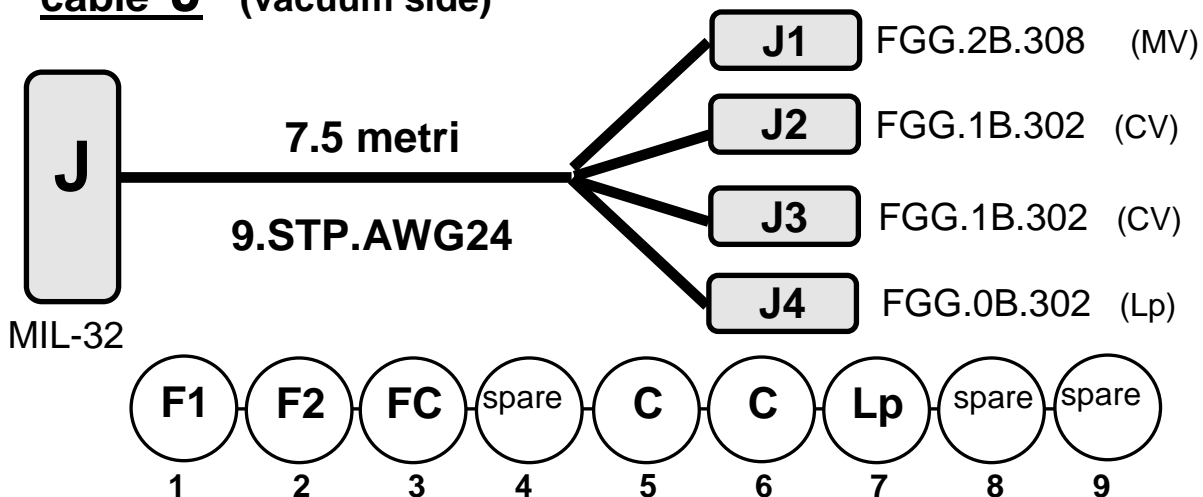
| Quality Control phase |
|-----------------------|
| Date: |
| Operator: |

| Cleaning and Storage phase |
|----------------------------|
| Date: |
| Operator: |

| Notes: |
|---|
| - obtained by the former D cable (no more used for SIB1 connection) |
| Diramare di <u>2,5 metri</u> ; |
| Scorciare I2 di <u>1.5 metri</u> . |

| MIL-32 contacts | conductors | LEMO contacts | contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | I1.1 | F1 + |
| B | 1.B | I1.2 | F1 - |
| C | 1.S | n.c. | |
| D | 2.A | I1.3 | F2 + |
| E | 2.B | I1.4 | F2 - |
| F | 2.S | n.c. | |
| G | 3.A | I1.5 | FC cw |
| H | 3.B | I1.6 | FC ccw |
| J | 3.S | I1.7 | FC com |
| K | 4.A | I2.1 | F1 + |
| L | 4.B | I2.2 | F1 - |
| N | 4.S | n.c. | |
| N | 5.A | I2.3 | F2 + |
| P | 5.B | I2.4 | F2 - |
| R | 5.S | n.c. | |
| S | 6.A | I2.5 | FC cw |
| T | 6.B | I2.6 | FC ccw |
| U | 6.S | I2.7 | FC com |
| V | 7.A | I3.1 | F1 + |
| W | 7.B | I3.2 | F1 - |
| X | 7.S | n.c. | |
| Y | 8.A | I3.3 | F2 + |
| Z | 8.B | I3.4 | F2 - |
| a | 8.S | n.c. | |
| b | 9.A | I3.5 | FC cw |
| c | 9.B | I3.6 | FC ccw |
| d | 9.S | I3.7 | FC com |

cable J (vacuum side)



| Cutting and Stripping phase |
|---|
| Date: <i>Mar 2014</i> |
| Operator: <i>F. Berni, F.Gherardini</i> |
| Reel: |

| Crimping and Labeling phase |
|---|
| Date: <i>Mar 2014</i> |
| Operator: <i>F. Berni, F.Gherardini</i> |
| Duration (hours): |

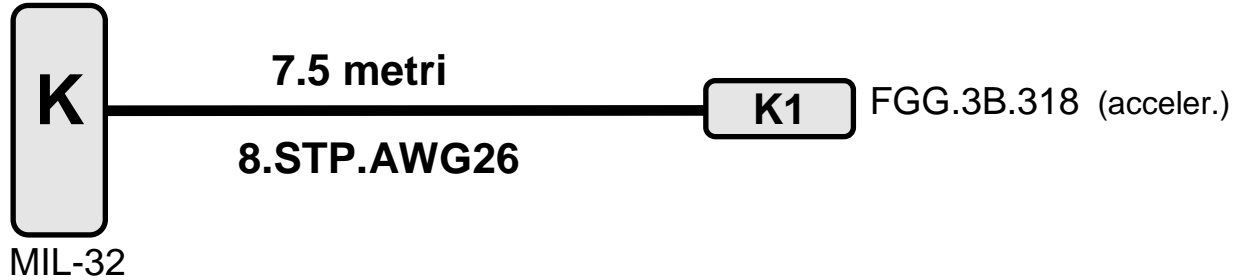
| Quality Control phase |
|-----------------------|
| Date: |
| Operator: |

| Cleaning and Storage phase |
|----------------------------|
| Date: |
| Operator: |

| Notes: |
|---|
| - obtained by the former xxx cable (no more used for SIB1 connection) |
| Diramare a 120 cm tra J2 e J3; |
| Diramare J3 e J4 di 25 cm; |
| Scorciare J1 di 120 cm; |
| Scorciare J2 di 20 cm. |

| MIL-32 contacts | conductors | LEMO contacts | contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | J1.1 | F1 + |
| B | 1.B | J1.2 | F1 - |
| C | 1.S | n.c. | |
| D | 2.A | J1.3 | F2 + |
| E | 2.B | J1.4 | F2 - |
| F | 2.S | n.c. | |
| G | 3.A | J1.5 | FC cw |
| H | 3.B | J1.6 | FC ccw |
| J | 3.S | J1.7 | FC com |
| K | 4.A | | |
| L | 4.B | | |
| M | 4.S | | |
| N | 5.A | J2.1 | C+ |
| P | 5.B | J2.2 | C- |
| R | 5.S | n.c. | |
| S | 6.A | J3.1 | C+ |
| T | 6.B | J3.2 | C- |
| U | 6.S | n.c. | |
| V | 7.A | J4.1 | Lp |
| W | 7.B | J4.2 | Lp |
| X | 7.S | n.c. | |
| Y | 8.A | | |
| Z | 8.B | | |
| a | 8.S | | |
| b | 9.A | | |
| c | 9.B | | |
| d | 9.S | | |

Cable K (vacuum side)



| Fase di Taglio e Spelatura |
|-----------------------------------|
| Data: 7 jul 99 |
| Operatore/i: M. Ceccanti |
| Bobina di provenienza: 136490-100 |

| Fase di Crimpaggio e Labeling |
|-------------------------------|
| Data: 8 jul 99 |
| Operatore/i: M. Ceccanti |
| Tempo impiegato (ore): 2h30m |

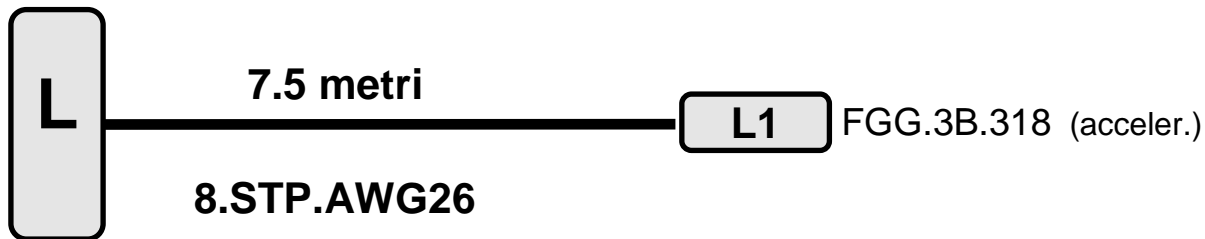
| Fase di Controllo Qualita' |
|----------------------------|
| Data: 8 jul 99 |
| Operatore/i: M. Ceccanti |

| Fase di Lavaggio e Storage |
|----------------------------|
| Data: |
| Operatore/i: |

Note:
 Modified by Berni and Gherardini during February 2014:
 peekplug replacement (new: **MIL-C-26482**, older: DB25) and **modification of Lemo K1 pinout**

| MIL-32 contacts | conductors | LEMO contacts | Contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | | |
| B | 1.B | | |
| C | 1.S | | |
| D | 2.A | | |
| E | 2.B | | |
| F | 2.S | | |
| G | 3.A | K1.1 | Lp |
| H | 3.B | K1.2 | Lp |
| J | 3.S | K1.3 | |
| K | 4.A | K1.4 | F1 + |
| L | 4.B | K1.5 | F1 - |
| M | 4.S | K1.8 | |
| N | 5.A | K1.6 | F2 + |
| P | 5.B | K1.7 | F2 - |
| R | 5.S | K1.18 | |
| S | 6.A | K1.9 | FC cw |
| T | 6.B | K1.11 | FC ccw |
| U | 6.S | K1.10 | FC com |
| V | 7.A | K1.12 | fbk |
| W | 7.B | K1.13 | fbk |
| X | 7.S | K1.14 | |
| Y | 8.A | K1.15 | Ls |
| Z | 8.B | K1.16 | Ls |
| a | 8.S | K1.17 | |

Cable L (vacuum side)



| Fase di Taglio e Spelatura |
|-----------------------------------|
| Data: 14 jul 99 |
| Operatore/i: M. Ceccanti |
| Bobina di provenienza: 136490-100 |

| Fase di Crimpaggio e Labeling |
|-------------------------------|
| Data: 15 jul 99 |
| Operatore/i: M. Ceccanti |
| Tempo impiegato (ore): 2h30m |

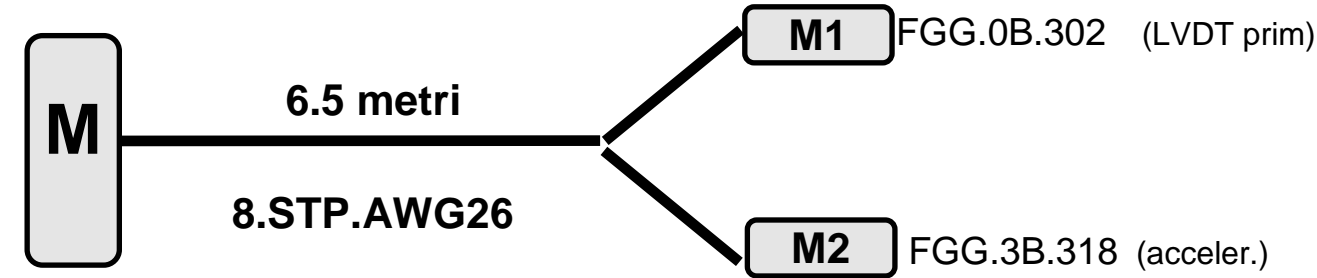
| Fase di Controllo Qualita' |
|----------------------------|
| Data: 15 jul 99 |
| Operatore/i: M. Ceccanti |

| Fase di Lavaggio e Storage |
|----------------------------|
| Data: |
| Operatore/i: |

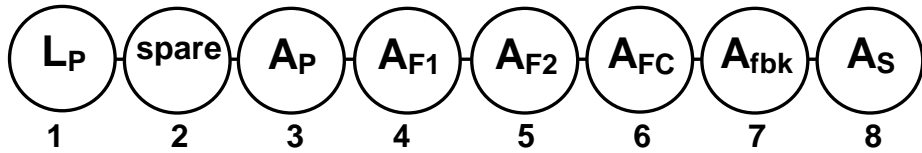
Note:
 Modified by Berni and Gherardini during February 2014:
 peekplug replacement (new: **MIL-C-26482**, older: DB25) and **modification of Lemo L1 pinout**

| MIL-32 contacts | conductors | LEMO contacts | Contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | | |
| B | 1.B | | |
| C | 1.S | | |
| D | 2.A | | |
| E | 2.B | | |
| F | 2.S | | |
| G | 3.A | L1.1 | Lp |
| H | 3.B | L1.2 | Lp |
| J | 3.S | L1.3 | |
| K | 4.A | L1.4 | F1 + |
| L | 4.B | L1.5 | F1 - |
| M | 4.S | L1.8 | |
| N | 5.A | L1.6 | F2 + |
| P | 5.B | L1.7 | F2 - |
| R | 5.S | L1.18 | |
| S | 6.A | L1.9 | FC cw |
| T | 6.B | L1.11 | FC ccw |
| U | 6.S | L1.10 | FC com |
| V | 7.A | L1.12 | fbk |
| W | 7.B | L1.13 | fbk |
| X | 7.S | L1.14 | |
| Y | 8.A | L1.15 | Ls |
| Z | 8.B | L1.16 | Ls |
| a | 8.S | L1.17 | |

Cable M (vacuum side)



MIL-32



| Fase di Taglio e Spelatura |
|-----------------------------------|
| Data: 13 jul 99 |
| Operatore/i: Ceccanti |
| Bobina di provenienza: 136490-100 |

| Fase di Crimpaggio e Labeling |
|-------------------------------|
| Data: 13 jul 99 |
| Operatore/i: Ceccanti |
| Tempo impiegato (ore): 2h30m |

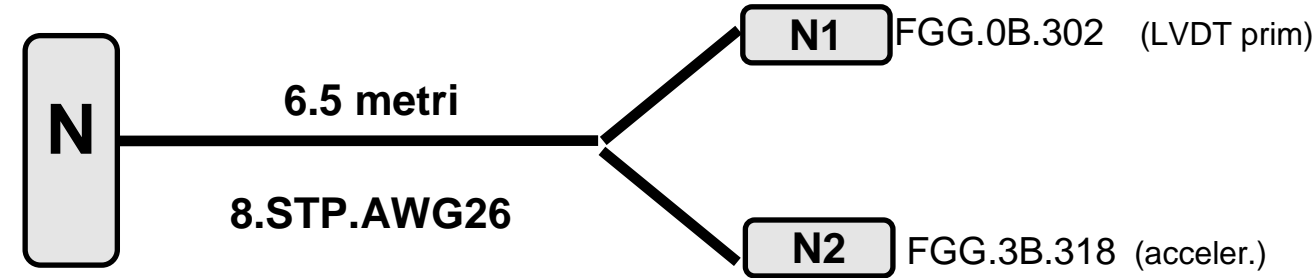
| Fase di Controllo Qualita' |
|----------------------------|
| Data: 13 jul 99 |
| Operatore/i: Ceccanti |

| Fase di Lavaggio e Storage |
|----------------------------|
| Data: |
| Operatore/i: |

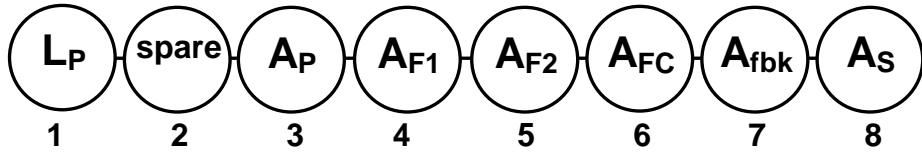
Note:
 Modified by Berni and Gherardini during February 2014:
 peekplug replacement (new: MIL-C-26482, older: DB25) and **modification of Lemo M2 pinout**

| MIL-32 contacts | conductors | LEMO contacts | Contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | M1.1 | Lp |
| B | 1.B | M1.2 | Lp |
| C | 1.S | n.c. | |
| D | 2.A | | |
| E | 2.B | | |
| F | 2.S | | |
| G | 3.A | M2.1 | Lp |
| H | 3.B | M2.2 | Lp |
| J | 3.S | M2.3 | |
| K | 4.A | M2.4 | F1 + |
| L | 4.B | M2.5 | F1 - |
| M | 4.S | M2.8 | |
| N | 5.A | M2.6 | F2 + |
| P | 5.B | M2.7 | F2 - |
| R | 5.S | M2.18 | |
| S | 6.A | M2.9 | FC cw |
| T | 6.B | M2.11 | FC ccw |
| U | 6.S | M2.10 | FC com |
| V | 7.A | M2.12 | fbk |
| W | 7.B | M2.13 | fbk |
| X | 7.S | M2.14 | |
| Y | 8.A | M2.15 | Ls |
| Z | 8.B | M2.16 | Ls |
| a | 8.S | M2.17 | |

Cable N (vacuum side)



MIL-32



| Fase di Taglio e Spelatura |
|-----------------------------------|
| Data: 13 jul 99 |
| Operatore/i: Ceccanti |
| Bobina di provenienza: 136490-100 |

| Fase di Crimpaggio e Labeling |
|-------------------------------|
| Data: 13 jul 99 |
| Operatore/i: Ceccanti |
| Tempo impiegato (ore): 2h30m |

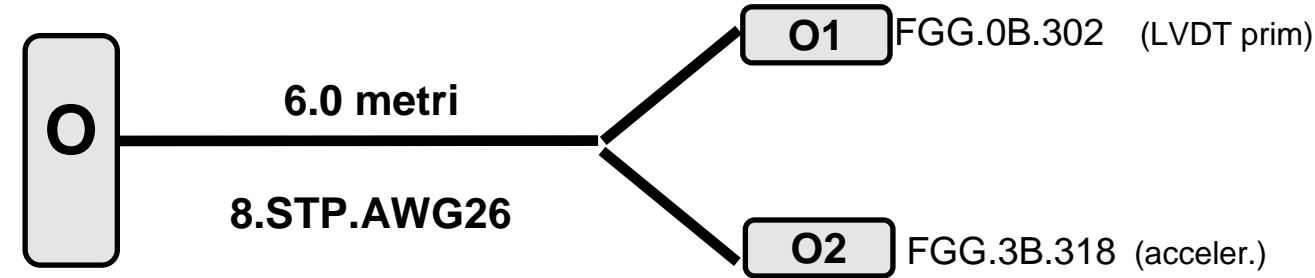
| Fase di Controllo Qualita' |
|----------------------------|
| Data: 13 jul 99 |
| Operatore/i: Ceccanti |

| Fase di Lavaggio e Storage |
|----------------------------|
| Data: |
| Operatore/i: |

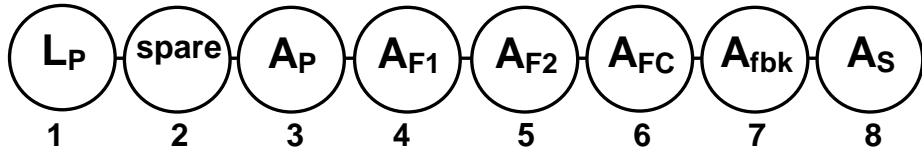
Note:
Modified by Berni and Gherardini during February 2014:
peekplug replacement (new: MIL-C-26482, older: DB25) and **modification of Lemo N2 pinout**

| MIL-32 contacts | conductors | LEMO contacts | Contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | N1.1 | Lp |
| B | 1.B | N1.2 | Lp |
| C | 1.S | n.c. | |
| D | 2.A | | |
| E | 2.B | | |
| F | 2.S | | |
| G | 3.A | N2.1 | Lp |
| H | 3.B | N2.2 | Lp |
| J | 3.S | N2.3 | |
| K | 4.A | N2.4 | F1 + |
| L | 4.B | N2.5 | F1 - |
| N | 4.S | N2.8 | |
| P | 5.A | N2.6 | F2 + |
| R | 5.B | N2.7 | F2 - |
| S | 5.S | N2.18 | |
| T | 6.A | N2.9 | FC cw |
| U | 6.B | N2.11 | FC ccw |
| V | 6.S | N2.10 | FC com |
| W | 7.A | N2.12 | fbk |
| X | 7.B | N2.13 | fbk |
| Y | 7.S | N2.14 | |
| Z | 8.A | N2.15 | Ls |
| a | 8.B | N2.16 | Ls |
| | 8.S | N2.17 | |

Cable O (vacuum side)



MIL-32



| Fase di Taglio e Spelatura |
|-----------------------------------|
| Data: 12 jul 99 |
| Operatore/i: Ceccanti |
| Bobina di provenienza: 136490-100 |

| Fase di Crimpaggio e Labeling |
|-------------------------------|
| Data: 12 jul 99 |
| Operatore/i: Ceccanti |
| Tempo impiegato (ore): 3h |

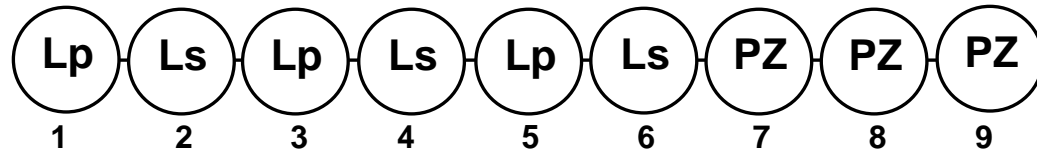
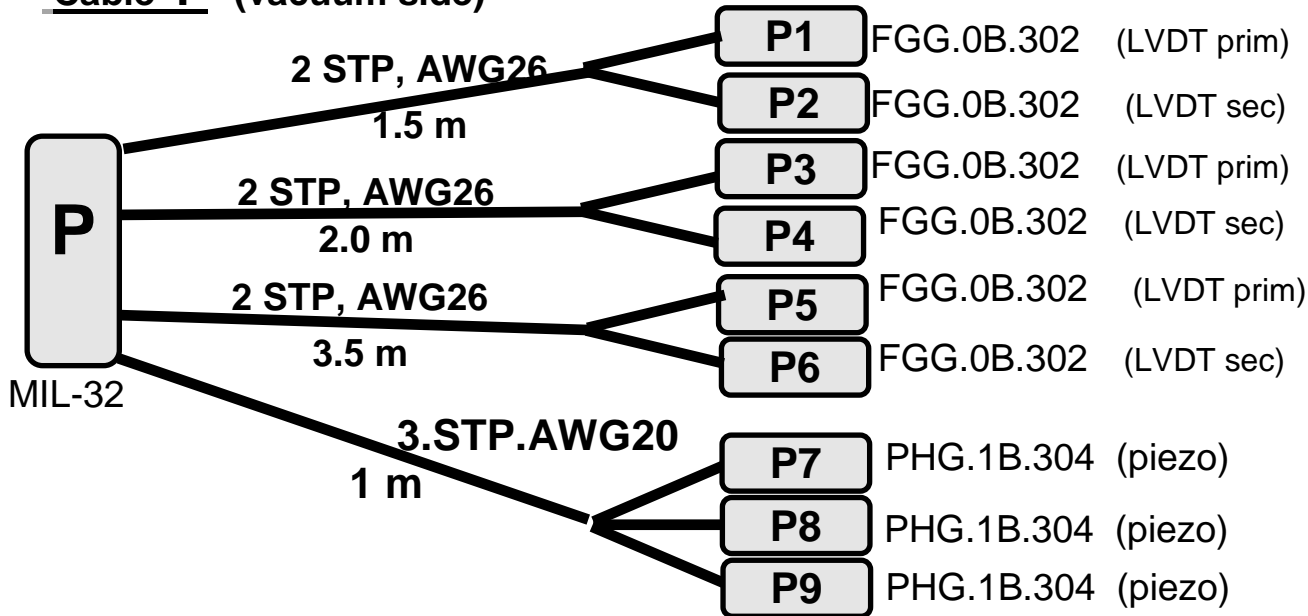
| Fase di Controllo Qualita' |
|----------------------------|
| Data: 12 jul 99 |
| Operatore/i: Ceccanti |

| Fase di Lavaggio e Storage |
|----------------------------|
| Data: |
| Operatore/i: |

Note:
Modified by Berni and Gherardini during February 2014:
peekplug replacement (new: MIL-C-26482, older: DB25) and **modification of Lemo O2 pinout**

| MIL-32 contacts | conductors | LEMO contacts | Contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | O1.1 | Lp |
| B | 1.B | O1.2 | Lp |
| C | 1.S | n.c. | |
| D | 2.A | | |
| E | 2.B | | |
| F | 2.S | | |
| G | 3.A | O2.1 | Lp |
| H | 3.B | O2.2 | Lp |
| J | 3.S | O2.3 | |
| K | 4.A | O2.4 | F1 + |
| L | 4.B | O2.5 | F1 - |
| N | 4.S | O2.8 | |
| N | 5.A | O2.6 | F2 + |
| P | 5.B | O2.7 | F2 - |
| R | 5.S | O2.18 | |
| S | 6.A | O2.9 | FC cw |
| T | 6.B | O2.11 | FC ccw |
| U | 6.S | O2.10 | FC com |
| V | 7.A | O2.12 | fbk |
| W | 7.B | O2.13 | fbk |
| X | 7.S | O2.14 | |
| Y | 8.A | O2.15 | Ls |
| Z | 8.B | O2.16 | Ls |
| a | 8.S | M2.17 | |

Cable P (vacuum side)



| Cutting and Stripping phase |
|--------------------------------|
| Data: Mar 2014 |
| Operatore/i: Berni, Gherardini |
| Bobina di provenienza: |

| Crimping and Labeling phase |
|--------------------------------|
| Data: Mar 2014 |
| Operatore/i: Berni, Gherardini |
| Tempo impiegato (ore): |

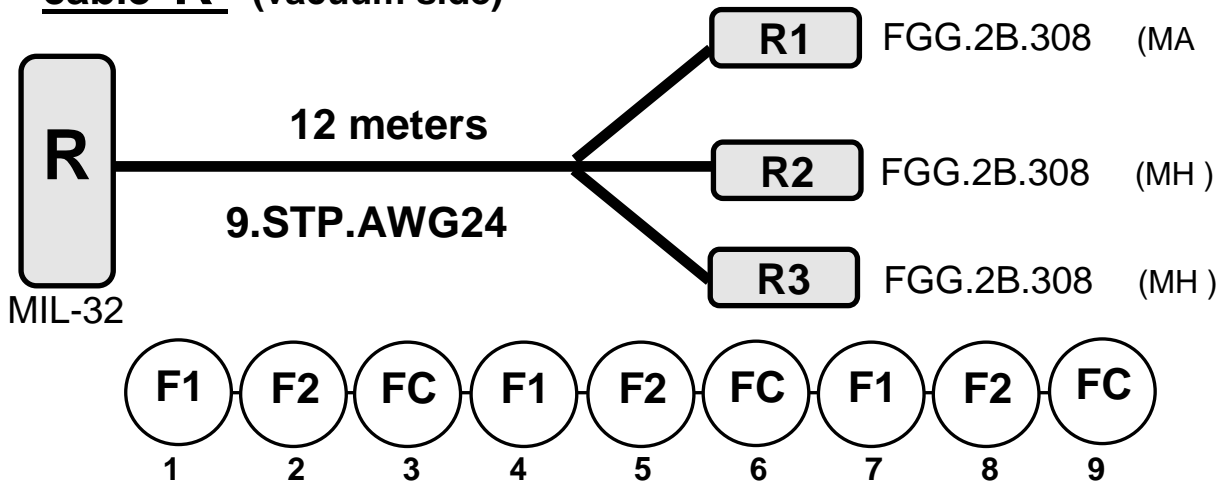
| Quality Control phase |
|--------------------------------|
| Data: Mar 2014 |
| Operatore/i: Berni, Gherardini |

| Cleaning and Storage phase |
|--------------------------------|
| Data: Mar 2014 |
| Operatore/i: Berni, Gherardini |

Notes:
 Diramare opportunamente, considerando che gli LVDT sono disposti a 120 gradi lungo i piedi dell'IP.

| MIL-32 contacts | conductors | LEMO contacts | contact description |
|-----------------|-------------|---------------|--|
| A | 1.A | P1.1 | Lp |
| B | 1.B | P1.2 | Lp |
| C | 1.S | n.c. | |
| D | 2.A | P2.3 | Ls |
| E | 2.B | P2.4 | Ls |
| F | 2.S | n.c. | |
| G | 3.A | P3.5 | Lp |
| H | 3.B | P3.6 | Lp |
| J | 3.S | n.c. | |
| K | 4.A | P4.7 | Ls |
| L | 4.B | P4.8 | Ls |
| M | 4.S | n.c. | |
| N | 5.A | P5.1 | Lp |
| P | 5.B | P5.2 | Lp |
| R | 5.S | n.c. | |
| S | 6.A | P6.1 | Ls |
| T | 6.B | P6.2 | Ls |
| U | 6.S | n.c. | |
| V | 7.A | P7.1 | inner conductor intermediate shield outer shield |
| W | 7.B | P7.2 | |
| X | 7.S n.c. | P7.3 P7.4 | |
| Y | 8.A | P8.1 | inner conductor intermediate shield outer shield |
| Z | 8.B | P8.2 | |
| a | 8.S n.c. | P8.3 P8.4 | |
| b | 9.A | P9.1 | inner conductor intermediate shield outer shield |
| c | 9.B | P9.2 | |
| d | 9.S n.c. | P9.3 P9.4 | |

cable R (vacuum side)



| Cutting and Stripping phase |
|-----------------------------|
| Date: |
| Operator: |
| Reel: |

| Crimping and Labeling phase |
|-----------------------------|
| Date: |
| Operator: |
| Duration (hours): |

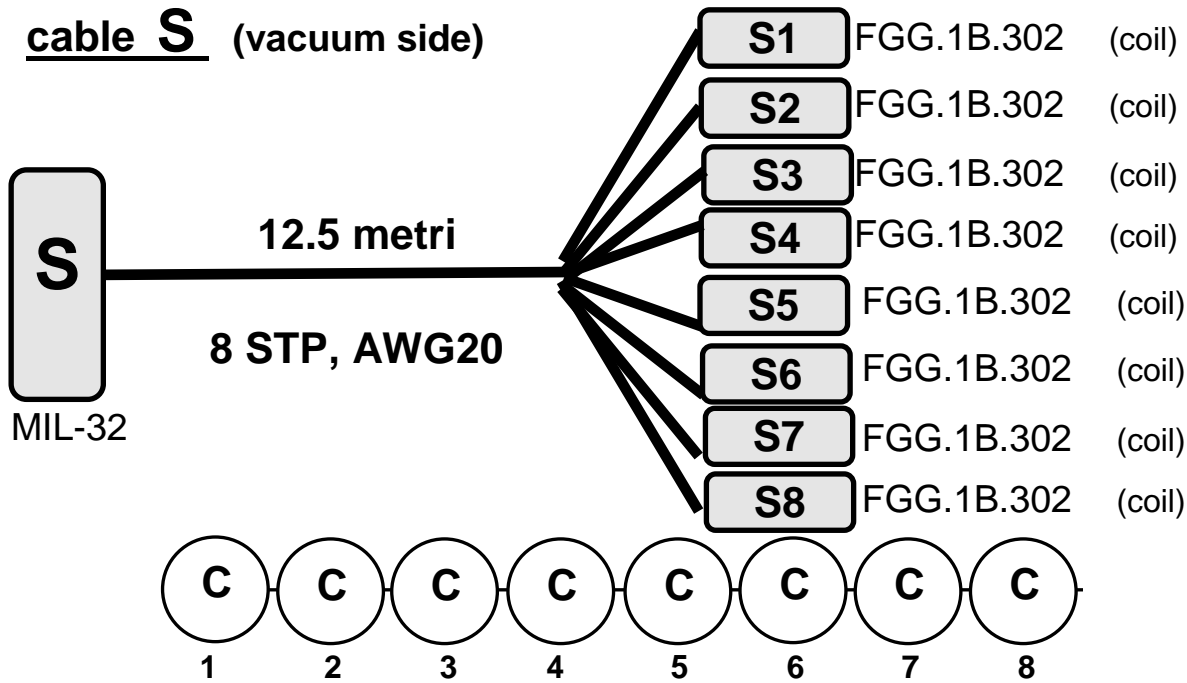
| Quality Control phase |
|-----------------------|
| Date: |
| Operator: |

| Cleaning and Storage phase |
|----------------------------|
| Date: |
| Operator: |

| Notes: |
|---|
| - obtained by the former C cable (no more used for SIB1 connection) |
| Diramare di <u>30 cm</u> ; |

| MIL-32 contacts | conductors | LEMO contacts | contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | R1.1 | F1 + |
| B | 1.B | R1.2 | F1 - |
| C | 1.S | n.c. | |
| D | 2.A | R1.3 | F2 + |
| E | 2.B | R1.4 | F2 - |
| F | 2.S | n.c. | |
| G | 3.A | R1.5 | FC cw |
| H | 3.B | R1.6 | FC ccw |
| J | 3.S | R1.7 | FC com |
| K | 4.A | R2.1 | F1 + |
| L | 4.B | R2.2 | F1 - |
| M | 4.S | n.c. | |
| N | 5.A | R2.3 | F2 + |
| P | 5.B | R2.4 | F2 - |
| H | 5.S | n.c. | |
| S | 6.A | R2.5 | FC cw |
| T | 6.B | R2.6 | FC ccw |
| U | 6.S | R2.7 | FC com |
| V | 7.A | R3.1 | F1 + |
| W | 7.B | R3.2 | F1 - |
| X | 7.S | n.c. | |
| Y | 8.A | R3.3 | F2 + |
| Z | 8.B | R3.4 | F2 - |
| a | 8.S | n.c. | |
| b | 9.A | R3.5 | FC cw |
| c | 9.B | R3.6 | FC ccw |
| d | 9.S | R3.7 | FC com |

cable S (vacuum side)



| MIL-32 contacts | conductors | LEMO contacts | contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | S1.1 | C + |
| B | 1.B | S1.2 | C - |
| C | 1.S | n.c. | |
| D | 2.A | S2.1 | C + |
| E | 2.B | S2.2 | C - |
| F | 2.S | n.c. | |
| G | 3.A | S3.1 | C + |
| H | 3.B | S3.2 | C - |
| J | 3.S | n.c. | |
| K | 4.A | S4.1 | C + |
| L | 4.B | S4.2 | C - |
| M | 4.S | n.c. | |
| N | 5.A | S5.1 | C + |
| P | 5.B | S5.2 | C - |
| R | 5.S | n.c. | |
| S | 6.A | S6.1 | C + |
| T | 6.B | S6.2 | C - |
| U | 6.S | n.c. | |
| V | 7.A | S7.1 | C + |
| W | 7.B | S7.2 | C - |
| X | 7.S | n.c. | |
| Y | 8.A | S8.1 | C + |
| Z | 8.B | S8.2 | C - |
| a | 8.S | n.c. | |

| Fase di Taglio |
|--------------------------|
| Data: 26 jul 99 |
| Operatore/i: M. Ceccanti |
| Bobina di provenienza: |

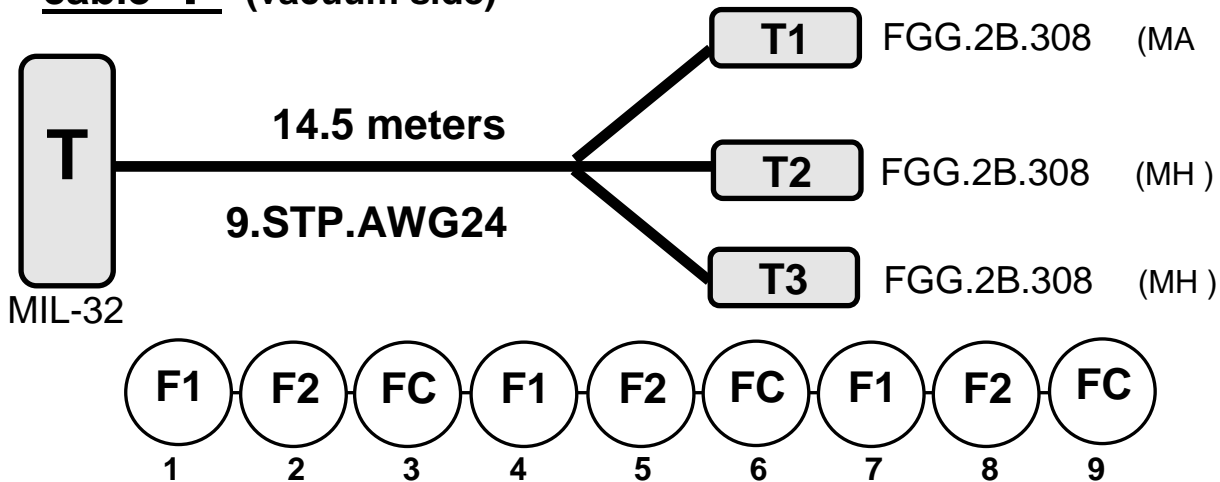
| Fase di Crimpaggio e Labeling |
|-------------------------------|
| Data: 26 jul 99 |
| Operatore/i: M. Ceccanti |
| Tempo impiegato (ore): 2h30m |

| Fase di Controllo Qualita' |
|----------------------------|
| Data: 26 jul 99 |
| Operatore/i: M. Ceccanti |

| Fase di Lavaggio e Storage |
|----------------------------|
| Data: 26 jul 99 |
| Operatore/i: M. Ceccanti |

Note:
 Modified by Berni and Gherardini during feb 2014: peekplug replacement (new: **MIL-C-26482**, older: DB25)

cable T (vacuum side)



| Cutting and Stripping phase |
|-----------------------------|
| Date: |
| Operator: |
| Reel: |

| Crimping and Labeling phase |
|-----------------------------|
| Date: |
| Operator: |
| Duration (hours): |

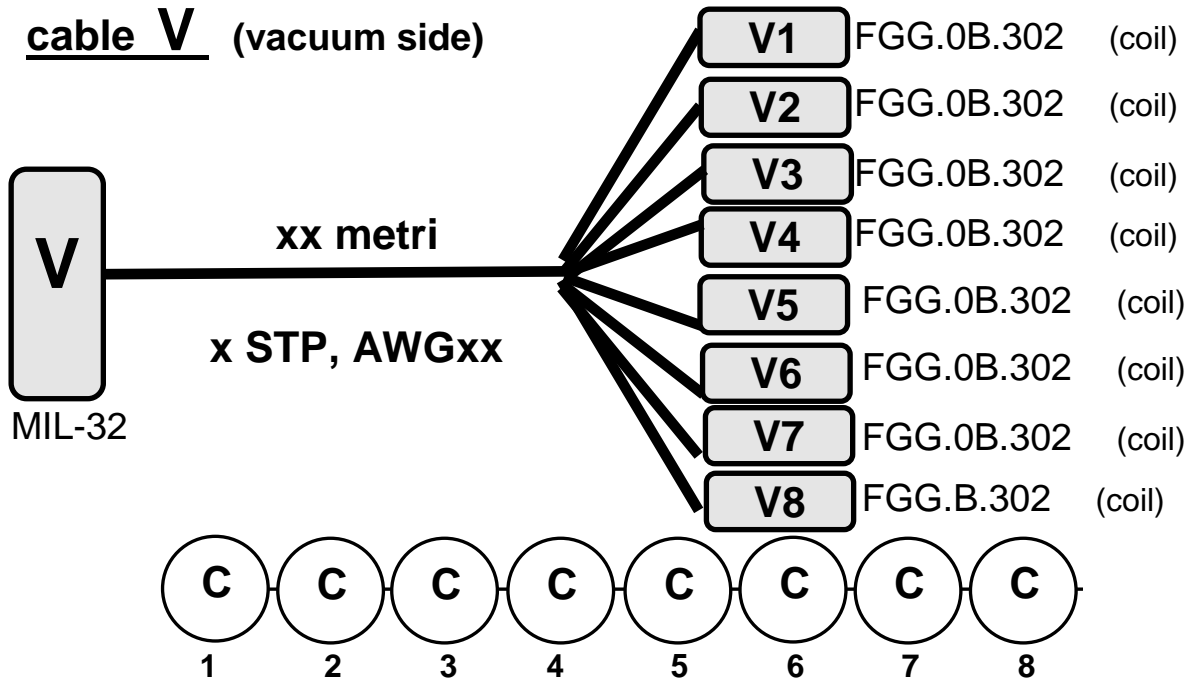
| Quality Control phase |
|-----------------------|
| Date: |
| Operator: |

| Cleaning and Storage phase |
|----------------------------|
| Date: |
| Operator: |

| Notes: |
|---|
| - obtained by the former V cable of WI |
| Diramare T1 di 120cm e poi scorciarlo di 100cm; |

| MIL-32 contacts | conductors | LEMO contacts | contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | T1.1 | F1 + |
| B | 1.B | T1.2 | F1 - |
| C | 1.S | n.c. | |
| D | 2.A | T1.3 | F2 + |
| E | 2.B | T1.4 | F2 - |
| F | 2.S | n.c. | |
| G | 3.A | T1.5 | FC cw |
| H | 3.B | T1.6 | FC ccw |
| J | 3.S | T1.7 | FC com |
| K | 4.A | T2.1 | F1 + |
| L | 4.B | T2.2 | F1 - |
| M | 4.S | n.c. | |
| N | 5.A | T2.3 | F2 + |
| P | 5.B | T2.4 | F2 - |
| H | 5.S | n.c. | |
| S | 6.A | T2.5 | FC cw |
| T | 6.B | T2.6 | FC ccw |
| U | 6.S | T2.7 | FC com |
| V | 7.A | T3.1 | F1 + |
| W | 7.B | T3.2 | F1 - |
| X | 7.S | n.c. | |
| Y | 8.A | T3.3 | F2 + |
| Z | 8.B | T3.4 | F2 - |
| a | 8.S | n.c. | |
| b | 9.A | T3.5 | FC cw |
| c | 9.B | T3.6 | FC ccw |
| d | 9.S | T3.7 | FC com |

cable V (vacuum side)



| MIL-32 contacts | conductors | LEMO contacts | contact description |
|-----------------|------------|---------------|---------------------|
| A | 1.A | V1.1 | C + |
| B | 1.B | V1.2 | C - |
| C | 1.S | n.c. | |
| D | 2.A | V2.1 | C + |
| E | 2.B | V2.2 | C - |
| F | 2.S | n.c. | |
| G | 3.A | V3.1 | C + |
| H | 3.B | V3.2 | C - |
| J | 3.S | n.c. | |
| K | 4.A | V4.1 | C + |
| L | 4.B | V4.2 | C - |
| M | 4.S | n.c. | |
| N | 5.A | V5.1 | C + |
| P | 5.B | V5.2 | C - |
| R | 5.S | n.c. | |
| S | 6.A | V6.1 | C + |
| T | 6.B | V6.2 | C - |
| U | 6.S | n.c. | |
| V | 7.A | V7.1 | C + |
| W | 7.B | V7.2 | C - |
| X | 7.S | n.c. | |
| Y | 8.A | V8.1 | C + |
| Z | 8.B | V8.2 | C - |
| a | 8.S | n.c. | |

| Fase di Taglio |
|------------------------|
| Data: |
| Operatore/i: |
| Bobina di provenienza: |

| Fase di Crimpaggio e Labeling |
|-------------------------------|
| Data: |
| Operatore/i: |
| Tempo impiegato (ore): |

| Fase di Controllo Qualita' |
|----------------------------|
| Data: |
| Operatore/i: |

| Fase di Lavaggio e Storage |
|----------------------------|
| Data: |
| Operatore/i: |

Note:
Realized ex-novo for AdV by Berni/Gherardini