VIAMED

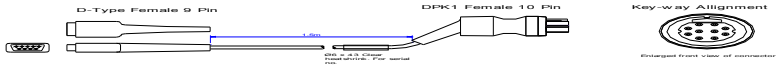
SpO_2 Extension Cable Assembly

COMPANY OPERATING PROCEDURES

0019735 DATEX P973E5

VM3/COP/33.17

Date: 21-Dec-01 **Revision date: 7-Apr-11** Issue: 3



Equipment required: Soldering iron (0060120), solder (0050012), Wire stripper (0060030), Flush Cutter (0060010), Snipe nose pliers (0060021), 'helping hand' (0060145), Heat gun (0060100).

Parts list: Kit and parts required. (Continued over page)

D-Type female 9-pin Side			DPK-1 female 10-pin Side		
Qty	Description	Part No.	Qty	Description	Part No.
1	D-type female 9-pin kit	0010760	1	DPK-1 female 10-pin kit	0010706
(1)	Outer Casing	kit	(1)	Rubber housing	kit
(1)	Cable grip	kit	(1)	Cable grip	kit
(1)	Pin Housing	kit	(1)	Collar	kit
(9)	Pins	kit	(10)	Pins	kit
1	1.6m 6-core cable	0030513 (roll)	(1)	Upper casing	kit
1	∅1.6 x 17mm heat shrink	0032310 (roll)	(1)	Cable clamp	kit
1	∅6 x 10mm heat shrink	0032321 (roll)	(1)	(grey) Pin housing	kit
			(2)	Screws	kit
			(1)	Lower casing	kit

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			(1)	| Grey Coller	kit
			1	20 kΩ Resistor	0032090
			1	150 ρF Capacitor	0032250
			1	∅6 x 43mm Clear heat shrink	0032331 (roll)
			1	∅1.6 x 20mm heat shrink	0032310 (roll)
			1	∅6 x 25mm heat shrink	0032321 (roll)

ASSEMBLY OPERATIONS

1. Pre Heat soldering iron temperature to 240°c.
2. Collect all required parts and equipment listed above.
3. Cut a 1.6 metre length of standard 6-core cable. Shown below.

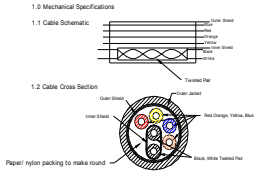


Fig 1.

D-Type female 9-pin side:

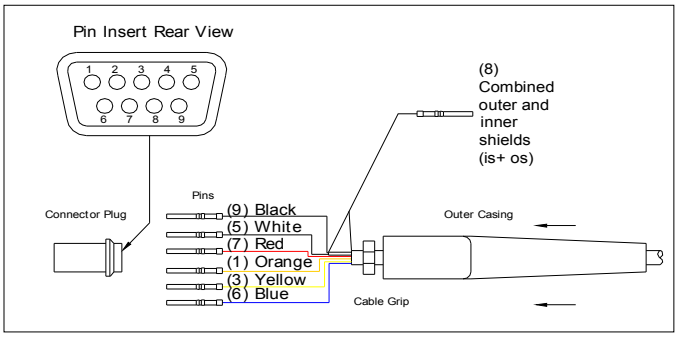


Fig 2.1

1. Feed outer casing, cable grip and ∅6 x 10mm heat shrink (black) over end of cable.
2. Strip 20mm off outer jacket of wire to reveal coloured wires, outer shield, and nylon/paper wire packing.
3. Cut all packing to the base.
4. Strip 20mm off inner jacket to reveal black and white wires and the inner shield.
5. Twist outer and inner shields together.
6. Trim ends of wires and shields to the same length.
7. Strip jacket of every wire 2mm to reveal copper core.
8. Heat ∅1.6 x 17mm heat shrink over twisted inner and outer shields to cover naked wire, and solder end to the rear of one pin.
9. Clamp cable grip approximately 2mm from end of outer jacket.
10. Place ∅6 x 10mm heat shrink over cable grip and beginning of wires and heat to shrink firmly over.
11. Insert pins into correct locations (as shown in fig 2.1) and push firmly into place.
12. Push outer casing over cable grip and wires to fit around the pin housing.

<u>DPK-1 female 10-pin side:</u>

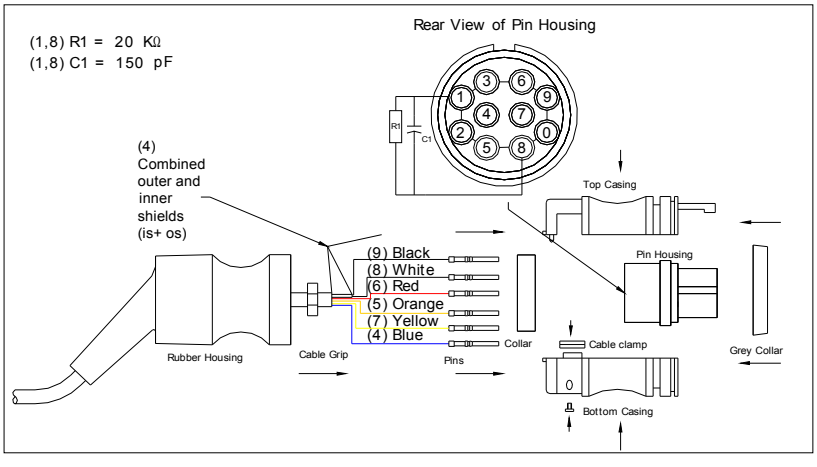


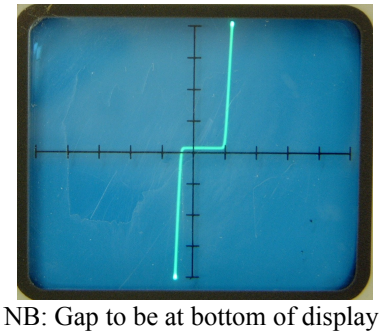
Fig 2.2

1. Feed ∅6 x 43mm (clear) heat shrink, rubber housing, collar, cable grip and ∅6 x 25mm (black) heat shrink over the end of the cable.
2. Strip 25mm off outer jacket of wire to reveal coloured wires, outer shield, and nylon/paper wire packing.
3. Cut all packing to the base.
4. Strip 25mm off inner jacket to reveal black and white wires and the inner shield.
5. Strip jacket of the blue wire 5 mm and twist together with both inner and outer shields (apply small amount of solder to hold together). Heat ∅1.6 x 20mm heat shrink over combined shields and blue wire.
6. Trim ends of wires to the same length.

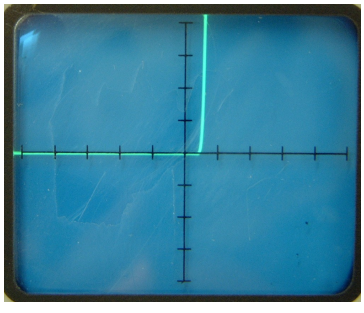
7. Strip jacket of every wire 2mm to reveal copper core, and solder all except white wire to the rear of individual pins.
8. Cut each leg of the resistor to 15mm each.
9. Cut the legs of the capacitor so the overall length is the same as the resistor.
10. Bend legs of both resistor and capacitor to fit into the rear of two separate pins (one leg of each in one pin) then solder to pins.
11. Insert all pins into correct locations except in pin 8 to which the white wire needs to be soldered to the same pin as that of the capacitor and resistor before inserting.
12. Insert pin housing into the bottom casing, and screw cable clamp over cable.
13. Push top casing onto bottom casing, and push the collar over mating cases.
14. Push rubber housing over cases, and then the grey collar over the casing.

TESTING

1. Attach DPK-1 female 10-pin side to the test box connector marked 'M'.
2. Attach D-type female 9-pin side to a Datex finger probe.
3. Check display is showing correct characteristics as shown below. (At correct switch positions)



NB: Gap to be at bottom of display
Position 2. IR, LED.



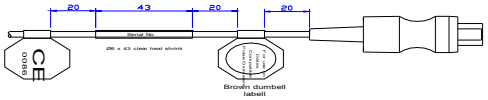
Position 4. Detector

4. If the gap is at the top of the screen then the LED is wired incorrectly.
5. 'Play' with wire at connections to see if any change in the display (i.e. flickering etc).
6. If there is any movement of signal, the extension wire must be taken apart and all connections checked and re-soldered. Then tested again until results are satisfactory.
7. Check the cable is of correct quality standard. (See VM/COP/30.11 for details).
8. Connect female 10 pin side to the Datex monitor and attach probe on finger to check SpO_2 level. (Ideal reading 95-100.)

Labelling

1. Labels: to be attached facing upwards as looking at the top of the probe.
   - 1 x CE Label
   - 1 x Serial no. Label

- 1 x Brown Datex Dumbbell Label



Quality Assurance (QA)

1. Attach DPK-1 female 10-pin side to the test box connector marked 'M'.
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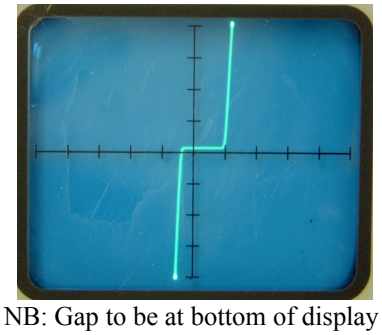
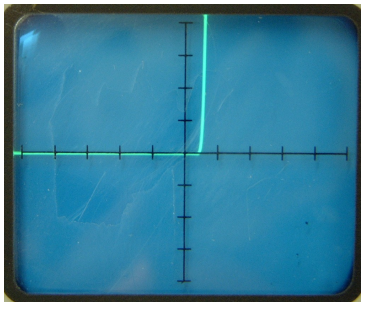


NB: Gap to be at bottom of display
Position 2. IR, LED.



Position 4. Detector

4. If the gap is at the top of the screen then the LED is wired incorrectly.
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6. If there is any movement of signal, the extension wire must be taken apart and all connections checked and re-soldered. Then tested again until results are satisfactory.
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8. Connect female 10 pin side to the Datex monitor and attach probe on finger to check SpO_2 level. (Ideal reading 95-100.)
9. Fill and sign attached paperwork.
10. Test 10 % of batch on DL3000 simulator.
11. Log all results on compatibility sheet.

Packaging

1. Visually check all labels are attached properly
2. Using a twist tie (bunny clip) wrap the cable and place in a small blue Viamed plastic box, ensuring the cable is inserted in a neat and tidy presentable manor.

3. Place a serial number sticker (supplied with the batch) on the front face of the box.
4. Place a packed and tested sticker (also containing initials of the individual who is packing) on the right hand side top left corner of the box. Do not close box.

Final QA

1. Final inspection. Visually ensure cable sit neatly within the box and is in a presentable state.
2. Boxes are ready to stock in stores.