

SpO2 Assembly Instructions				
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Equipment type: Finger probe Part Number:		
Batch Size		
Nos	Viamed Part number	Description
1	0010100	Viamed SpO2 finger probe service kit(white pads)
1	0010753	Sub miniature D connector plug kit
1	0032093	Resistor - 33K2, metal film
1	0032250	Capacitor, 150pF
1m	0030513	SpO2 cable - version D (production)
30mm	0032331	Heatshrink tubing - clear, 6.0mm, 7m reel
5mm	0032312	Heatshrink tubing - black, 3.2mm, 25m reel
22mm	0032310	Heatshrink tubing - black, 1.6mm, 25m reel

Assembly Clip

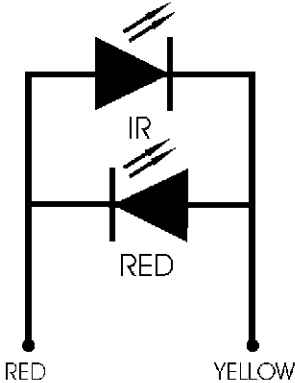
1. Prepare Clip end of cable as follows
 - a. Attach strain relief "0010150," to relevant replacement cable, and glue in position.
 - b. Strip back outer cable cover of exposed end 1mm from end of strain relief.
 - c. Remove outer shield and paper, and cut off Kevlar fibres and any unused wires.
 - d. Strip and tin relevant coloured wires (from red, yellow, blue, orange) to 13mm from end of cable cover. Strip and tin last 1mm of each wire.
 - e. Cut inner white cable to 78mm from end of outer cable cover, strip last 8mm of inner cable cover, strip and tin last 1mm of black and white wires, cut off inner shield and discard
 - f. Strip and tin ends of black and white wires.
2. Solder wires to components as per relevant diagram
3. Fit components into pads as follows
 - a. Position components in drying rack.
 - b. Place a small amount of flowable non-corrosive silicone sealant onto the face of the components.
 - c. Place pads onto components, ensuring that both emitter and detector are central in pad windows. Also note that the silicone on the outside of the pad must run to the contour of the pad to make a smooth window - there should be no doming or sinking of the window. Any excess can be removed with a small screwdriver, also any deficit can be topped

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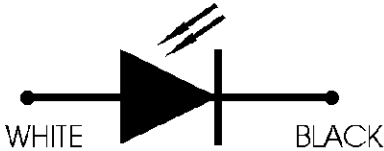
up with small amounts of silicone from a screwdriver tip - however these steps should be taken within 2 minutes of the pad being placed on the component, before the silicone has had time to become tacky, so that it is still flowing enough to ensure that the window will return to a smooth flat surface

- d. Leave pads to set for 24 hours.
- 4. Assemble the clip as follows
 - a. Glue white inner cable into channel in detector pad
 - b. Fill around component with silicone
 - c. Glue pad support onto back of detector pad.
 - d. Glue pad support onto back of emitter pad.
 - e. Glue white inner cable into channel in emitter pad.
 - f. Fill around component with silicone
 - g. Refit replacement springs "0010140," around pads.



h. Push pads into position within clip, making sure that the pad support rim is securely underneath the pad retaining lugs - there are four retaining lugs for each pad. If any lugs are not holding the pad support securely, then add a drop of superglue to the relevant lug.

- i. Glue strain relief into position in clip body.
- j. Add labels as required.



Assembly Connector

- 5. a/ Check that all the relevant parts are in the connector kit - the kit should contain:
1 x shroud, 1 x pin housing, 1 x cable grip.
- b/ Add a 30mm length of heatshrink (0032331) to the cable.

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- c/ Add the shroud to the cable.
- d/ Add the cable grip to the cable.
- e/ Strip the outer cable cover back by 30mm, using the cable stripper (0060031).
- f/ Unwind, but do not remove, the outer shield. Remove the paper layer, and the Kevlar strands, using flush cutter (0060020), cutting them flush to the end of the cable cover. Also remove any unused wires, cutting them flush to the end of the cable cover, keeping one of the removed wires to be used as a link wire.
- g/ Strip the inner cable cover back, using the cable stripper, to 3mm from the end of the outer cable cover as possible. Unwind, but do not remove, the inner shield.
- h/ Strip the last 2mm of each of the wires. Tin the white and yellow wires.
 - i/ Twist the outer shield with the exposed core of the red wire, tinning this together to form one core. Cover this with 12mm length of heatshrink (0032310), and shrink on using a heatgun - this will help to isolate the shields from the resistor and capacitor.
 - j/ Twist the inner shield with the exposed core of the black wire, tinning this together to form one core. Cover this with 9mm length of heatshrink (0032310), and shrink on using a heatgun - this will help to isolate the shields from the resistor and capacitor.
- k/ Add a 5mm length of heatshrink (0032312) over the lower part of inner shield and the black and white wires. This should cover the inner cable cover, and project over the lower 2mm of the heatshrink (0032310) that has already been shrunk into place. Shrink this on using a heatgun - this will help to isolate the shields from the resistor and capacitor.
- l/ Cut one of the legs of the 33K2 resistor (0032087) to 3mm from the resistor body. Cut the other leg of the resistor to 12mm from the resistor body. Bend the longer leg of the resistor to form a hairpin, ensuring that the ends of both legs are now level.
- m/ Cut both legs of the 150pF capacitor (0032250) to 10mm from the capacitor body, ensuring that the ends of both legs are level - there should be no need to bend the legs to form a 'U' shape, as the capacitor will normally be this shape anyway.
- n/ Solder the shorter leg of the resistor into pin 4. Solder the longer leg into pin 5. Solder also the white wire into the pin 5. Solder the capacitor legs to the outside part of pins 4 and 5.
- o/ Take the length of wire that was retained (from step f), and strip and tin the last 2mm of each end of that wire. Solder this wire between pins 1 and 6.
- p/ Solder the remaining wires into the remaining pins.
 - q/ Clamp the cable clamp onto the cable, using the cable crimp tool (0010501), 2mm from the end of the outer cable cover.
 - r/ Push the shroud up over the contact housing, ensuring that the housing fits securely and neatly into the shroud.

`Connector rear view:

- 1. Link
- 2. Not connected
- 3. Yellow

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Test using component tester and test box:

Position 1: Red & IR emitters

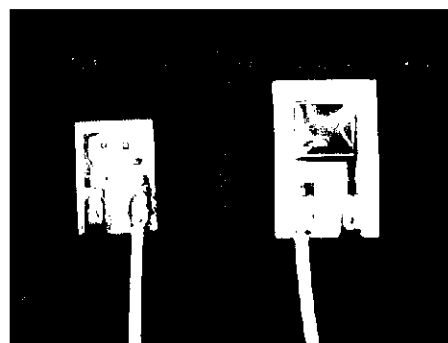


Position 3: Photo-diode



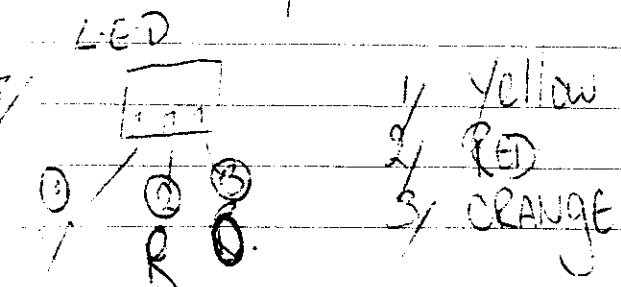
shield

- 4. R1 + C1
- 5. R1 + C1 + White
- 6. Link
- 7. Red + main shield
- 8. Not connected
- 9. Black + inner



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Strain relief 7.5-8cm down
Strip wire + leave shield at about 1cm. in
end.
Blue 2.5cm. in end. red orange and yellow
same as p377. in ends.



put sensors on white left. Black right

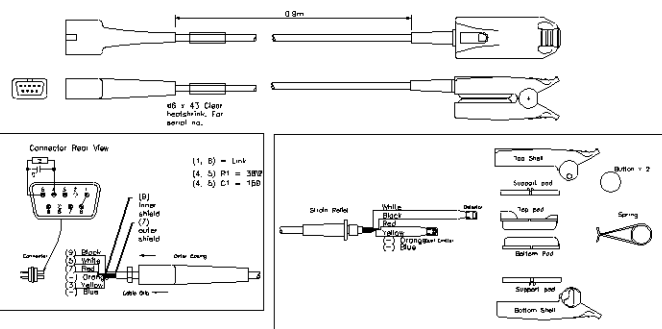
white - black.

solder 20K to blue + shield. heatshrink.



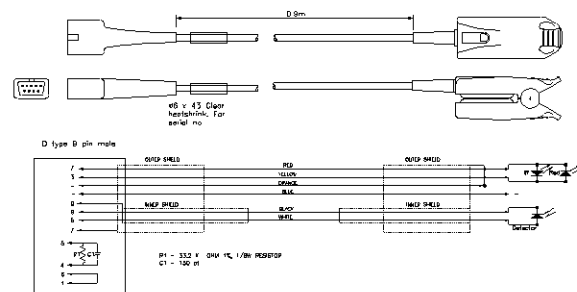
D-Type Male 9 Pin

Finger Probe



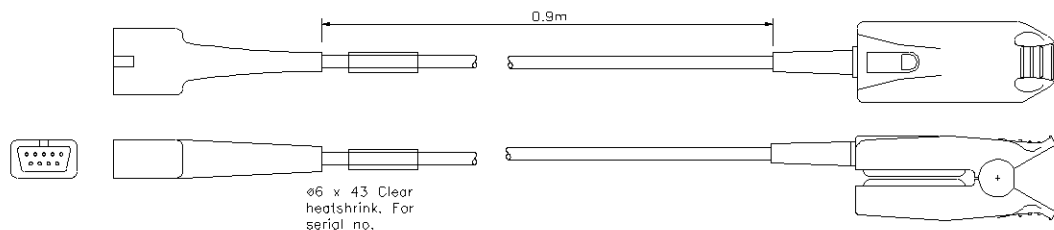
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Finger Probe

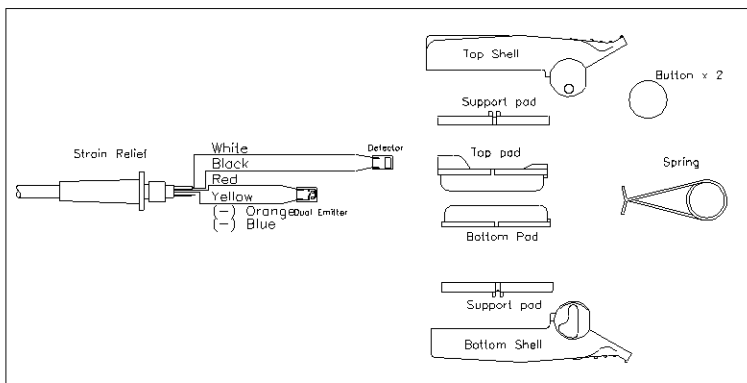
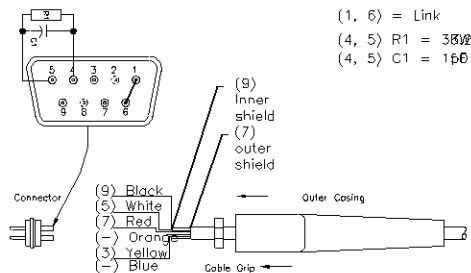


D-Type Male 9 Pin

Finger Probe



Connector Rear View



Title P873RA
Dalex



Dim in mm

Tol ± 0.2

Drawn J.Nirwan

Scale Not To Scale

Date 30/01/02

Dwg No. SPF-873

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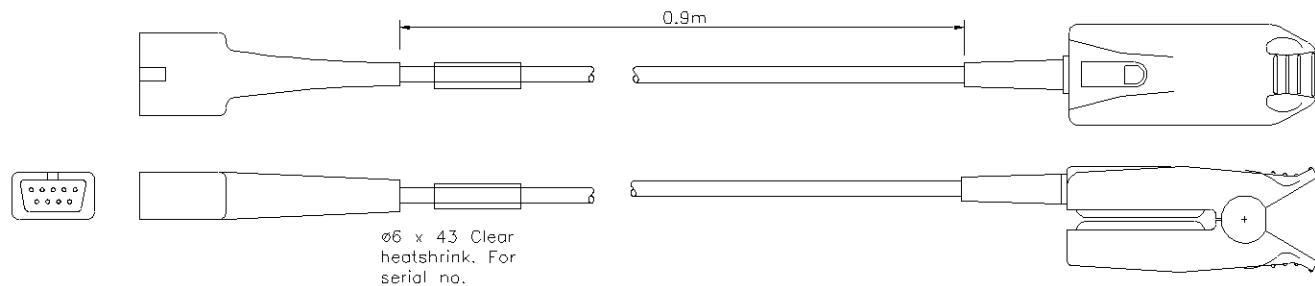
Ltd.

15 Station Rd
Cross Hills, Keighley
West Yorkshire
BD20 7DT

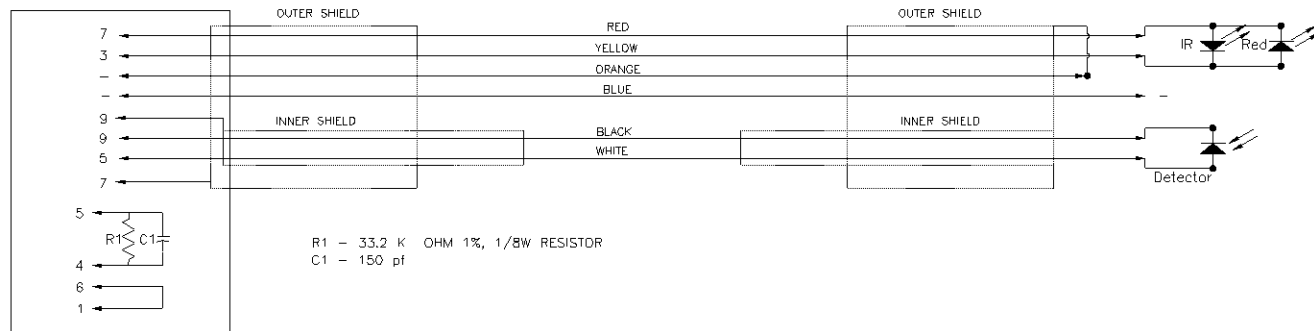
					Material :
REV	Date	N°	Drawn	Approv	Part No. 0018730

D-Type Male 9 Pin

Finger Probe



D type 9 pin male



Title P873RA
Datex



Dim in mm

Tol ± 0.2

Drawn J.Nirwan

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Ltd.

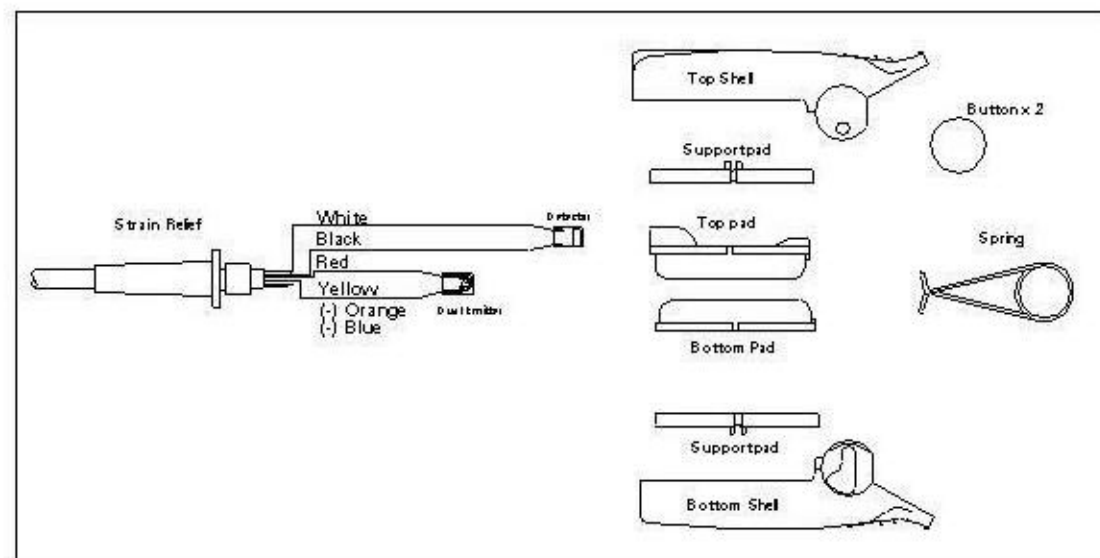
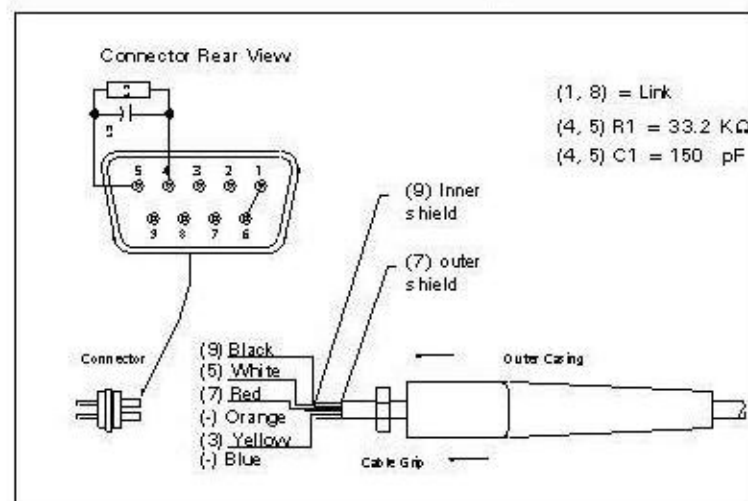
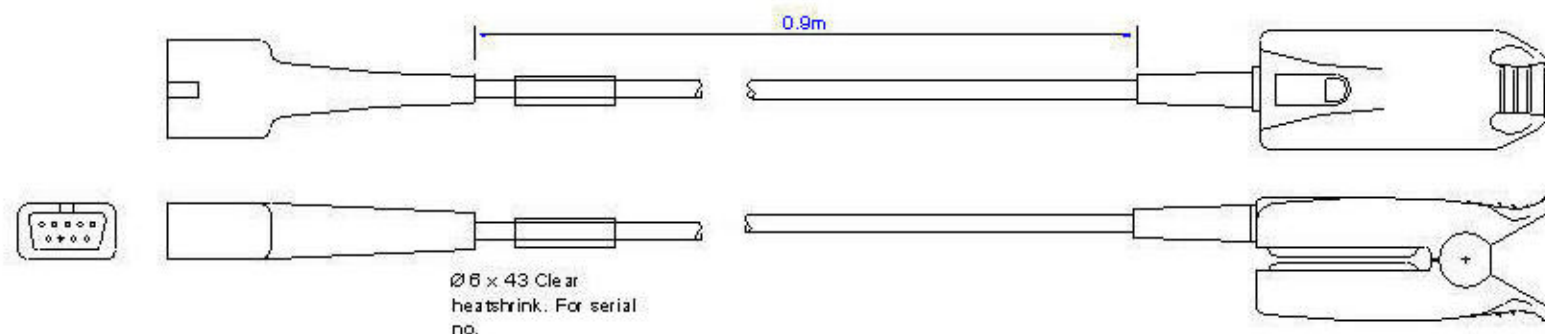
15 Station Rd
Cross Hills, Keighley
West Yorkshire
BD20 7DT

REV	Date	N°	Drawn	Approv	Part No. 0018730
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Scale	Not To Scale	Date	18/02/03	Dwg No.	SPF-873.1
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D-Type Male 9 Pin

Finger Probe



Title: P873RA
Dated



Dim in mm

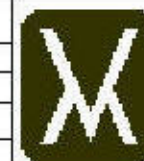
Tol ± 0.2

Drawn J.Nirwan

Scale Not To Scale

Date 30/01/02

Dwg No. SPF-873



VIAMED Ltd.

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Cross Hills, Keighley
West Yorkshire
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Material:

Part No. 0018730

REV Date N° Drawn Approv