

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	0010602	12 pin cable plug kit, grey (includes connector/cable clamp/strain relief)
1	0032110	Resistor - 47K5, metal film
3m	0030513	SpO2 cable - version D (production)
30mm	0032331	Heatshrink tubing - clear, 6.0mm, 7m reel

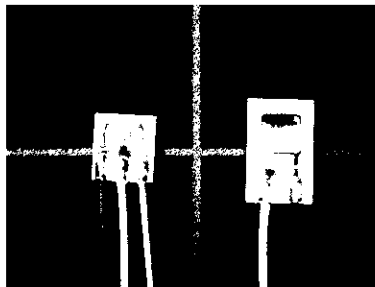
Assembly Clip

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 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.

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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 backnut (grey), 1 x collet (grey), 1 x 9 pin hole insert (grey), 1 x barrel (grey), 7 pins,
1 x cable clamp (0030500), 1 x strain relief (from multipack 0010618).
- b/ Add a 30mm length of heatshrink (0032331) to the cable.
- c/ Add the backnut to the cable.
- d/ Add the collet to the cable.
- e/ Push the strain relief (from multipack 0010618) on to the cable, using isopropyl alcohol as a lubricant.
- f/ Strip the outer cable cover back by 30mm, using the cable stripper (0060031).
- g/ 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 the unused wires, using the flush cutter, flush to the end of the cable cover.
- h/ Strip the inner cable cover back, using the cable stripper, as close to the end of the outer cable cover as possible. Unwind, but do not remove, the inner shield.
- i/ Twist together the outer and inner shields, and tin this between 9-15mm from the cable cover.
- j/ Cut both of these twisted shields at 12mm from the outer cable cover using the flush cutter. Trim off

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any loose strands of shield flush to the cable cover.

- k/ Cut the emitter and detector wires to 15mm from the outer cable cover. Strip and tin the last 2mm of each wire. Add the cable clamp (0030500) to the cable.
- l/ Solder pins to both detector wires, and all emitter wires.
- m/ Cut one of the legs of the 47K5 resistor (0032134) to 4mm from the resistor body. Cut the other leg to 15mm 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.
- n/ Solder pins to both legs of the 47K5 resistor.
- o/ Solder the twisted shields to the longer leg of the 47K5 resistor, between the body of the resistor and the pin, 3mm above the point where the leg of the resistor enters the pin.
- p/ Referring to the wiring diagram, fit the pins into the insert as follows:
 - i/ Fit the short leg of the 47K5 resistor into pin hole 7, and the long leg of the resistor, with the twisted shield attached, into pin hole 3, ensuring that they click into place.
 - ii/ Fit the other pins into the relevant pin holes as per the wiring diagram, ensuring they click into place.
- q/ Clamp the cable clamp onto the cable, using the cable crimp tool (0010501), 2mm from the end of the outer cable cover. Slide the strain relief up so that it is flush to the cable clamp.
- r/ Slide the collet up so that it is flush to the insert, then slide this into the barrel. Fasten the backnut to the barrel, and screw on until it is finger tight.

Connector Rear view:

1. White
2. Black
3. R1
4. No pin
5. No pin
6. No pin
7. R1
8. No pin

9. **Test using component tester and test box:**

Red

Orange

No pin

Yellow

10.

11.

12.

Position 1:Red emitter



Position 2:IR emitter



Position 3:Photo-diode



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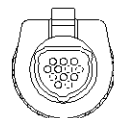
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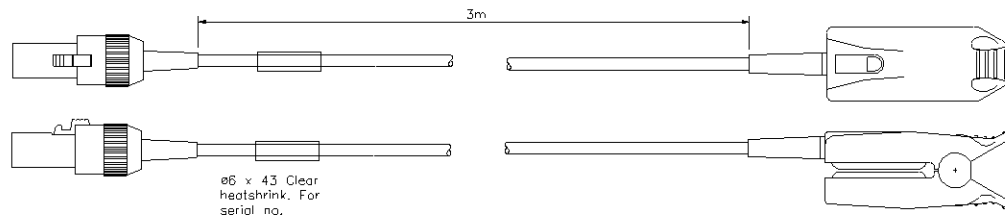
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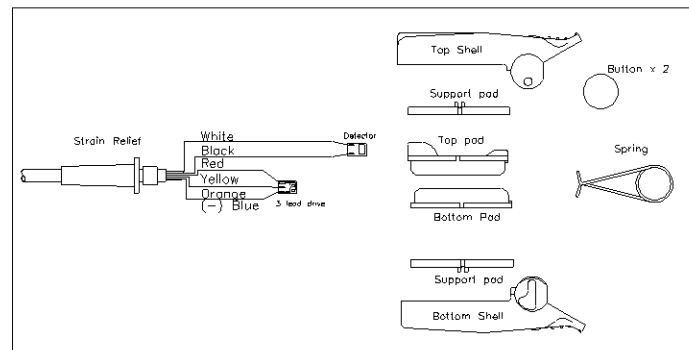
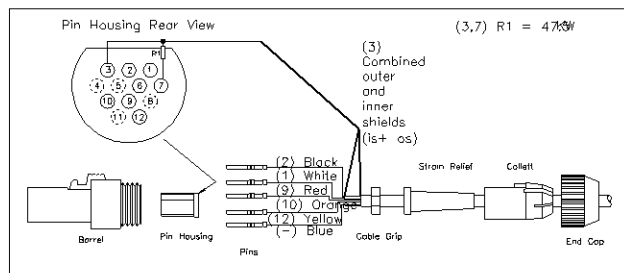
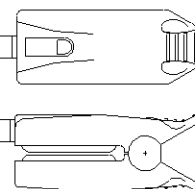
Hypertronics Male 12 Pin



Enlarged front view

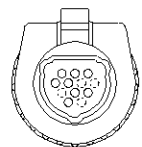


Finger Probe

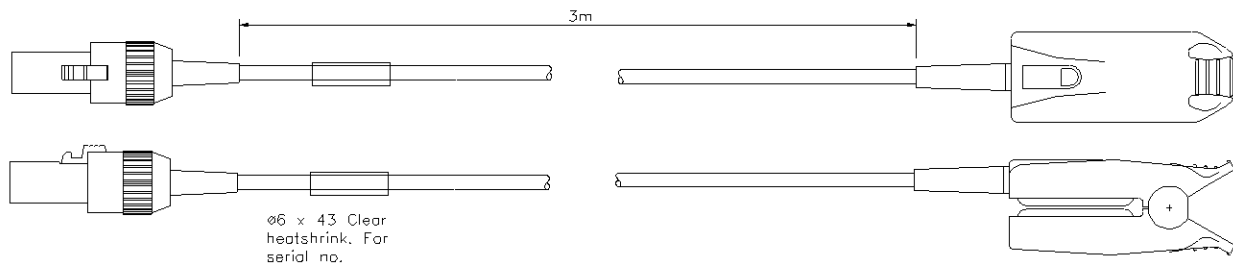


Title P887RA Spacelabs						VIAMED Ltd. 15 Station Rd Cross Hills, Keighley West Yorkshire BD20 7DT	
				Dim in	mm		
				Tol	± 0.2		
Scale	Not To Scale			Drawn	J.Nirwan		
REV	Date	N°	Drawn	Approv	Part No. 0018870	Date	30/01/02
Material :				Dwg No.	SPF-887		

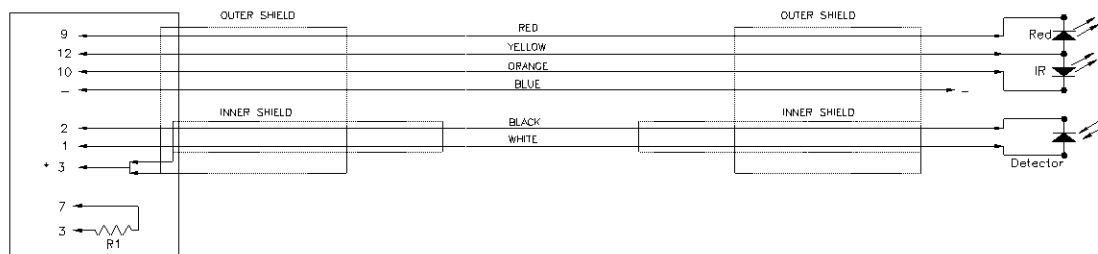
Hypertronics Male 12 Pin



Enlarged front view



Hypertronics male 12 pin



R1 - 47.5 K OHM 1%, 1/8W RESISTOR

* INNER SHIELD AND OUTER SHIELD TO BE TWISTED TOGETHER.

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Spacelabs



Dim in mm

Tol ± 0.2

Drawn J.Nirwan

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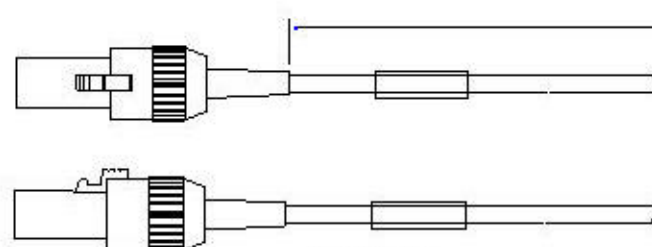
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Scale	Not To Scale	Date	18/02/03	Dwg No.	SPF-887.1
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Hypertronics Male 12 Pin



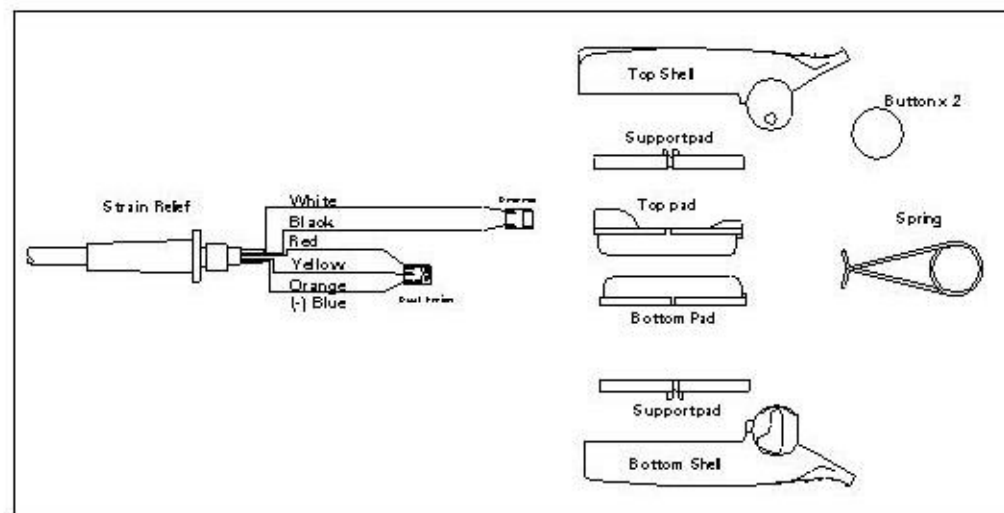
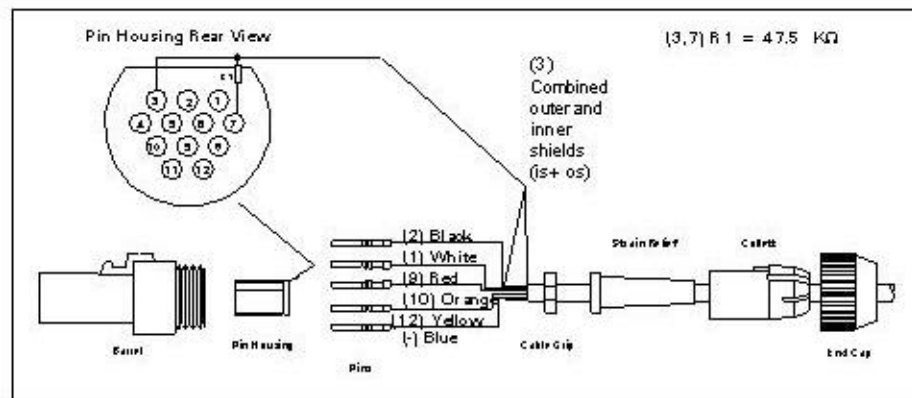
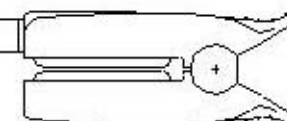
Enlarged front view



Ø 6 x 43 Clear
heatshrink for serial
no.

3m

Finger Probe



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