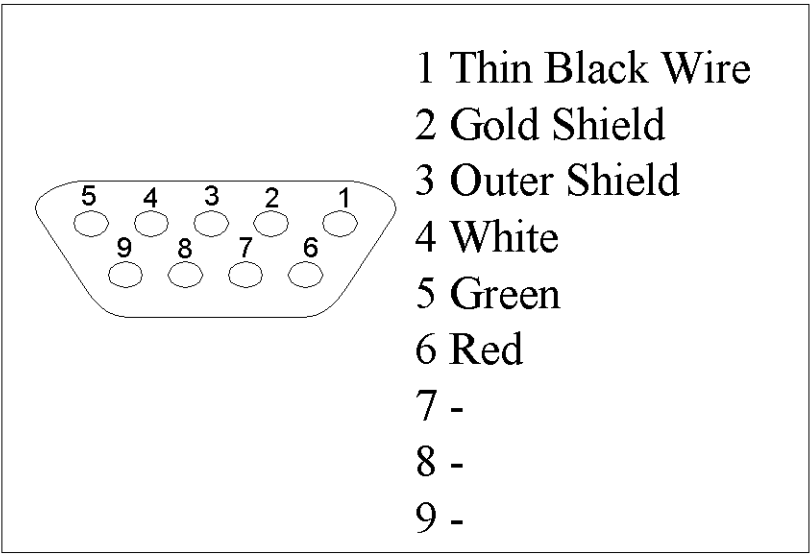
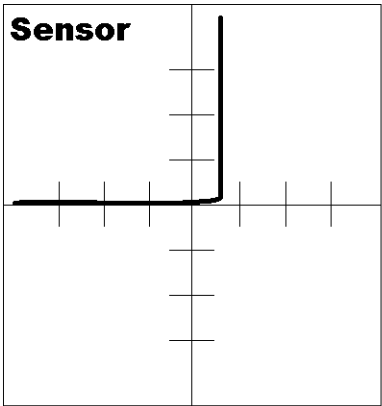
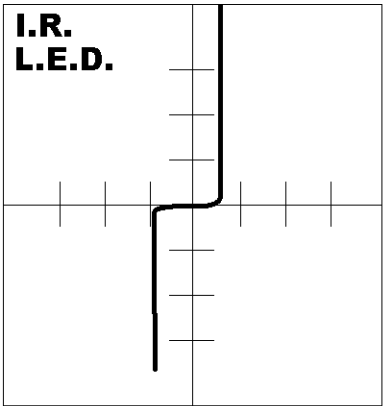


Date	24/03/97	Type	Critikon
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crit.cmx



Clip
 Green + White - Led / Ir
 Red + Black - Sensor



Drawn By:	D.Lamb	Signed	
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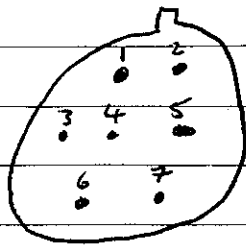
317100

P891 CONNECTOR.

LEMO CONNECTOR.

(CRITICON)

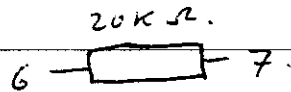
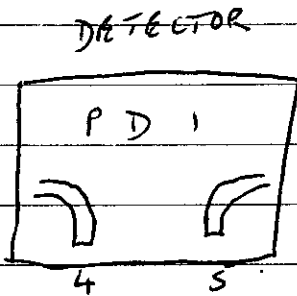
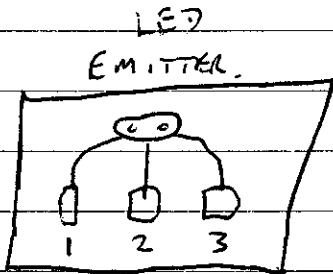
(LENGTH 12 1/2 FT.)



(TOP VIEW)

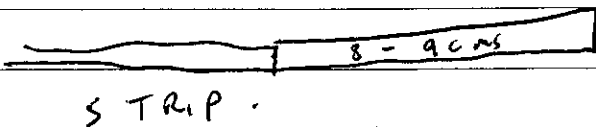
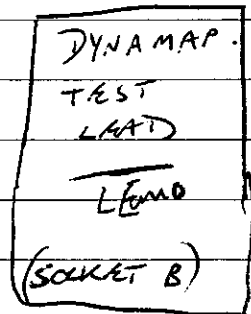
Shields together.

- | | |
|-----------------|------------|
| 1/ WHITE | 5/ ORANGE. |
| 2/ OUTER SHIELD | 6/ RED. |
| 3/ BLACK | 7/ YELL. |
| 4/ BLUE | |



- 1) YELLOW
- 2) RED.
- 3) ORANGE.
- 4) WHITE.

- 5) BLK.
- 6) BLU
- 7) OUTER SHIELD.



STRIP.

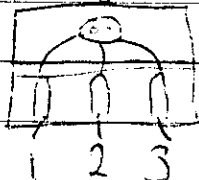
WHITE BUTTONS ON SHELLS

P 891 2A

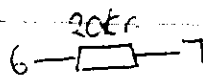
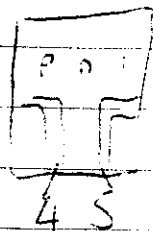
17/5/00. (Criticon)

Fasten both shields together

Emitter



Detector



clip end

1/ yellow

2/ red

3/ orange

4/ white

5/ Black

6/ Blue

7/ outer shield

1/ white

2/ outer shield

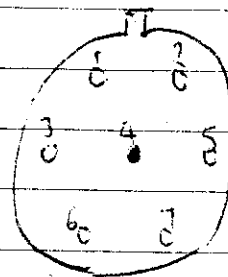
3/ Black

4/ Blue

5/ orange

6/ red

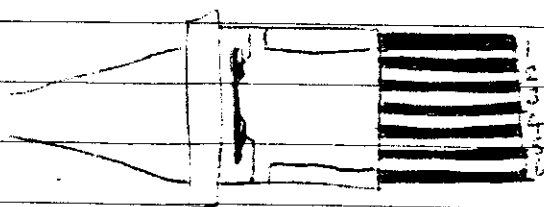
7/ yellow



connector end.

P 991 E10 Extension Cable Criticon.

Connector, strain relief, cut top + Bottom, cable grip.



1/ RED

2/ yellow

3/ orange

4/ Blue

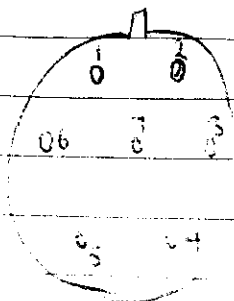
5/ Black

6/ white

7/ Both shields.

solder side

7 pin lemo



1/ white

2/ shields

3/ yellow

4/ RED

5/ orange

6/ Black

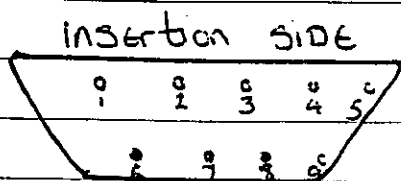
7/ Blue

P877 RA

CRITIKON

(3 foot)

12/9/00



1/ Red

6/ N/C

2/ Yellow

7/ N/C

3/ outershield

8/ N/C

4/ innershield

9/ WHITE

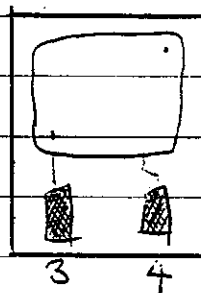
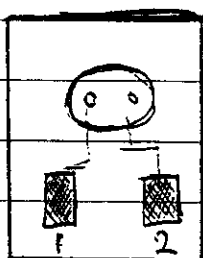
5/ Black

CONNECTOR END

CLIP END

L.E.D

SENSOR



1/ RED

2/ YELLOW

3/ WHITE

4/ Black.

Connector End

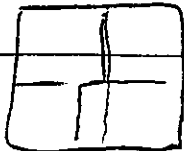
- 1/ Put shroud on cable, clear + black heatshrink
- 2/ strip cable about 1 1/2 inch. Cut blue + orange
- 3/ heatshrink inner + outershields. Tin ends of yellow, red, black + white wires. Solder pins to all 6 wires. Fasten cable grip and insert all wires into amp insert as in above diagram for connector end.

Clip End

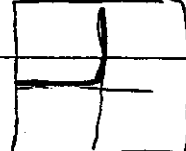
- 1/ put strain relief about 8 cm down cable.
- 2/ Strip cable down to shield. Take off shield, blue and orange. remove innershield, about 1cm leave black + white. Tin red + yellow + attach L.E. Tin black + white and attach Sensor. See above

TEST PROCEDURE.

L.E.D



4



SENSOR

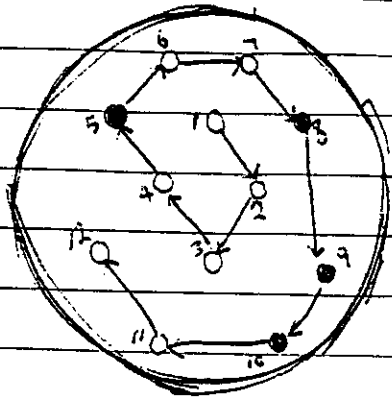
Q.H

P890 RA

CRITIKON (THORCOM Connector) 10 foot 12/9/1

INSERTION SIDE

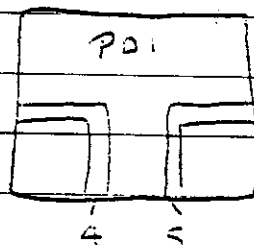
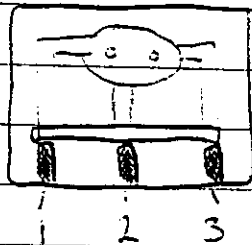
connector End



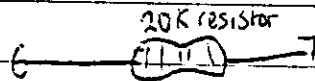
- | | |
|-----------|-----------------|
| 1/ Black | 7/ outershield |
| 2/ White | 8/ N/C |
| 3/ Red | 9/ N/C |
| 4/ Yellow | 10/ N/C |
| 5/ N/C | 11/ ORANGE |
| 6/ Blue | 12/ innershield |

CLIP End

- 1/ RED
2/ ORANGE
3/ Yellow



- 4/ WHITE
5/ Black
6/ Blue
7/ outershield

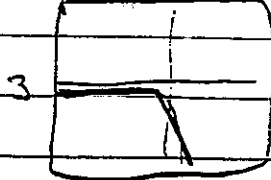


Connector End.

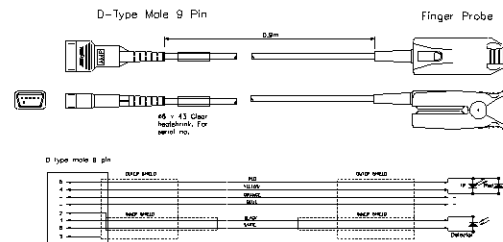
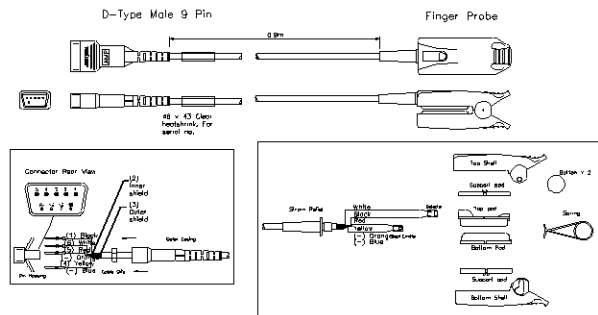
Strip cable 1 1/2 inch. Split outershield in half. Strip inner cable and split innershield in half. Fasten both shields together. Cut all 6 wires + shields to 1cm. Tin ends and fasten pins. Insert into connector, as in diagram above.

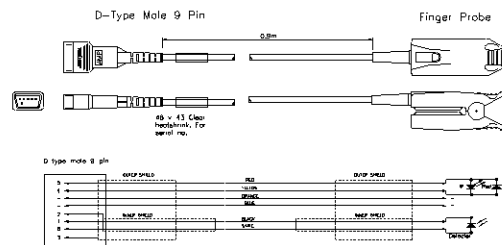
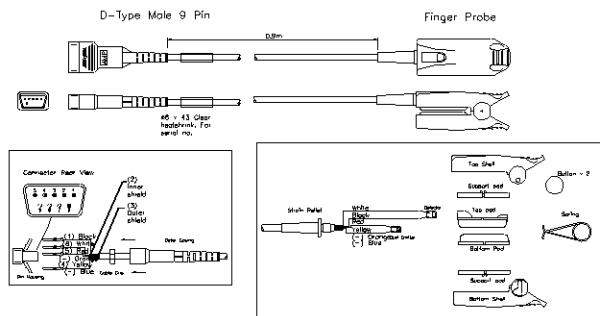
CLIP End.

Clear heatshrink strain relief 8cm down. ~~Strip~~ Strip cable. leave 2cm length on blue. Orange red, yellow 1cm tin ends, fasten to L.E.D. Solder 1 leg of 20K resistor to outershield. Solder blue to other leg and heatshrink. Strip inner cable to 1cm. expose shield and fasten black + white to sensor.

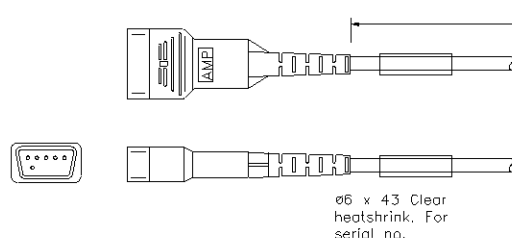


PM

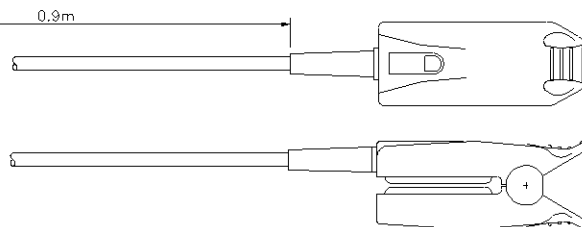




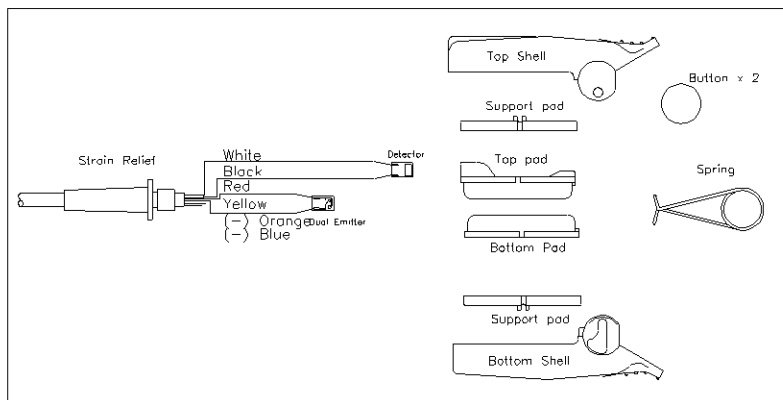
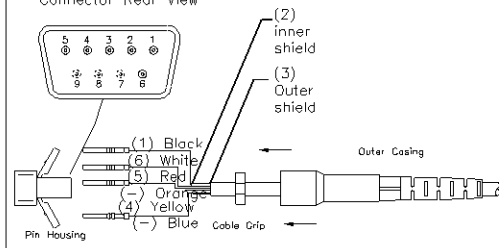
D-Type Male 9 Pin



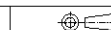
Finger Probe



Connector Rear View



Title P877RA
Critikon



Dim in mm

Tol ± 0.2

Drawn J.Nirwan

Scale

Not To Scale

Date

30/01/02

Dwg No.

SPF-877

VIAMED

Ltd.

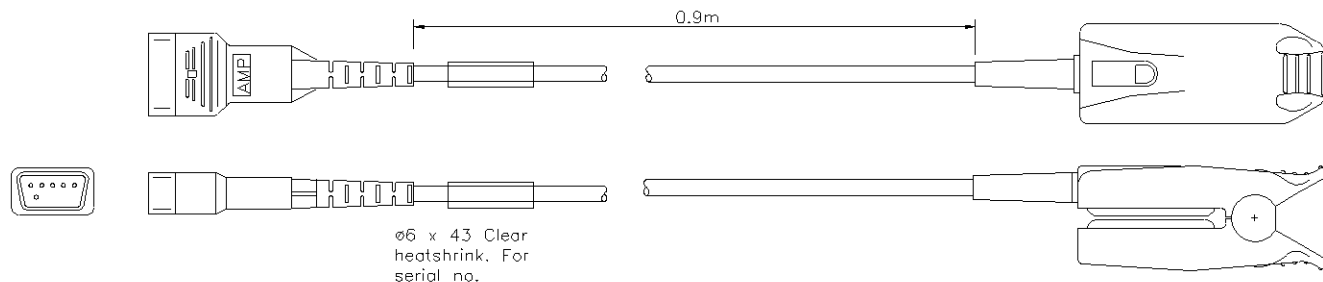
15 Station Rd
Cross Hills, Keighley
West Yorkshire
BD20 7DT

Material :

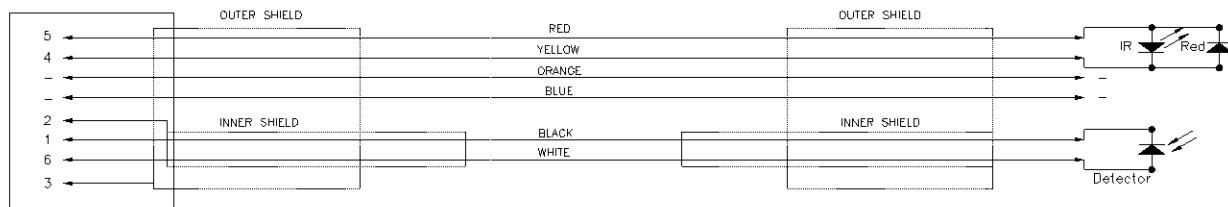
REV Date N° Drawn Approv Part No. 0018770

D-Type Male 9 Pin

Finger Probe



D type male 9 pin



Title P877RA Critikon				VIAMED Ltd. 15 Station Rd Cross Hills, Keighley West Yorkshire BD20 7DT	
		Dim in	mm		
Scale		Tol	± 0.2		
Not To Scale		Drawn	J.Nirwan		
Date	18/02/03	Dwg No.	SPF-877.1		

Material :				
REV	Date	N°	Drawn	Approv
Part No. 0018770				

CRITICOM P890 RA.

CONNECTOR

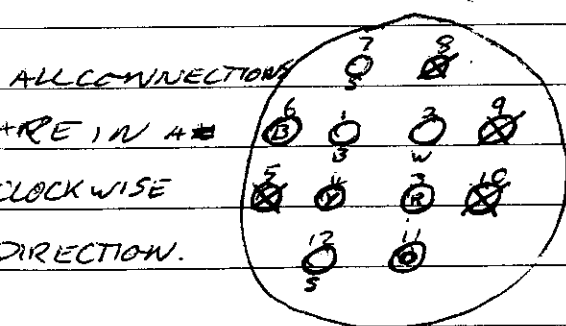
CUT 10' CABLE

STEP 1 PLACE CLEAR HEAT SHRINK OVER CABLE, THEN COLLAR, JAWS & STRAIN RELIEF NOT FORGETTING THE CABLE GRIP.

STEP 2 - STRIP OUTER & INNER CABLE BACK TO 2", PULL SHIELD'S OUT TO SIDE THEN SPLIT EACH ONE IN $\frac{1}{2}$ THEN PLACE $\frac{1}{2}$ OF INNER & $\frac{1}{2}$ OF OUTER SHIELD TOGETHER.

STEP 3 - CUT ALL WIRES BACK TO $1\frac{1}{2}$ CM THEN STRIP & TIN ENDS. THEN SOLDER INTO PINS. THEN CLAMP CABLE WITH FROM END.

STEP 4 - PLACE PINS INTO MAIN BODY OF CONNECTOR AS FOLLOWS:-

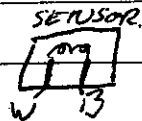
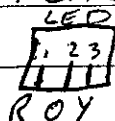


1 = BLACK	7 = SHIELD/OUTER
2 = WHITE	8 = N/C
3 = RED	9 = N/C
4 = YELLOW	10 = N/C
5 = N/C	11 = ORANGE
6 = BLUE	12 = SHIELD/INNER.

STEP 5 - SLIDE JAWS OVER STRAIN RELIEF TO FIT GROOVES & PINS TOGETHER THEN PUT COLLAR OVER AND SCREW TIGHT.

NOTE THE SHIELDS ON THIS LEAD ARE INTERCHANGABLE SO IT IS OK TO PUT OPPOSITE ONES TOGETHER AS IN STEP 2.

STEP 6 - PLACE LED & SENSOR IN THE SAME METHOD AS P865 RA



20K RESISTOR GOES IN THIS END (PROBE).

NOTES FOR CRITICOM P890 RATEST PATTERN. IN SOCKET ~~4~~ JSENSOR
POSITION 4

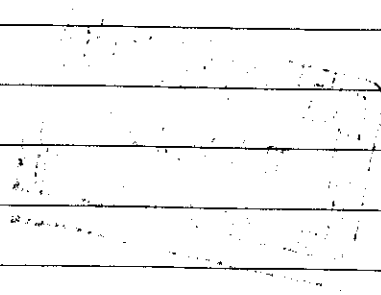
LED

POSITION 2 & 3



2 LIGHTS UP

3 DOES NOT LIGHT UP.







SpO2 Assembly Instructions				
1/29/995/3/01		P877RA	Issue 1	ver 1
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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	0010726	Sub miniature D connector plug kit
1	0030500	Cable clamp. Stainless steel, 2-ear
0.9m	0030513	SpO2 cable - version D (production)
30mm	0032331	Heatshrink tubing - clear, 6.0mm, 7m reel
35mm	0032321	Heatshrink tubing - black, 6.0mm, 7m reel
5mm	0032312	Heatshrink tubing - black, 3.2mm, 25m reel
20mm	0032310	Heatshrink tubing - black, 1.6mm, 25m reel

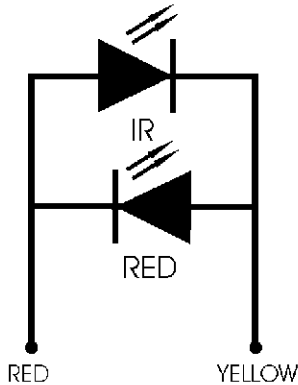
Assembly Clip

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 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

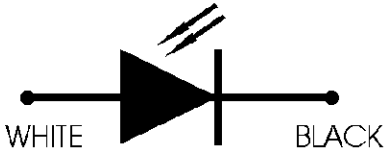
Drawn By	MFG&DB
Date	26/04/01
Checked By	
Date	
Revised By	

SpO2 Assembly Instructions				
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- 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 9 hole pin housing, 1 x shroud, 6 x pins.
- b/ Add a 30mm length of heatshrink (0032331) to the cable.
- c/ Add the shroud to the cable.
- d/ Add a 35mm length of heatshrink (0032321) to the cable.
- e/ Add the cable grip (0030140)
- 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

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Date	
Revised By	

SpO2 Assembly Instructions

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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.

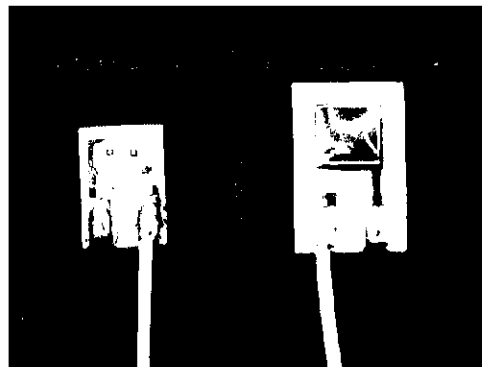
h/ Strip the inner cable cover back, using the cable stripper, as flush to the end of the outer cable cover as possible. Unwind, but do not remove, the inner shield.

i/ Twist the outer shield, and tin this between 12-18mm from the outer cover. Next twist the inner shield, and tin this between 12-18mm from the outer cable cover.

j/ Cut the both of these shields at 15mm from the outer cable cover using the flush cutter. Trim off any loose strands of shield flush to the cable cover. Cover the outer shield with a 12mm length of heatshrink (0032310), and shrink on using a heatgun. Also cover the inner shield with an 8mm length of heatshrink (0032310). Next cover the inner cable cover with a 5mm length of heatshrink (0032312) - this should project over onto the lower part of the inner shield, and black and white wires - this will help to isolate the shields from each other. PHOTO

k/ Cut the wires to 15mm from the outer cable cover. Strip and tin the last 2mm of each wire.

l/ Solder the wires and the shields into the remaining pins.



m/ Clamp the cable grip on to the cable using the clamp crimp tool (0010501), at a distance of 5mm from the end of the outer cable cover.

n/ Slide the heatshrink (0032321) back up the cable, so that it projects approximately 2mm beyond the end of the outer cable cover, and thus covers the lower part of the coloured wires and outer shield, and shrink into place using a heatgun. This should also ensure that when the connector is fitted together, the

heatshrink terminates at the same point on the cable as the shroud terminates.

o/ Referring to the wiring diagram, insert the pins into the relevant pin holes in the pin housing.

p/ Holding the sides of the pin housing together, to prevent the pins from moving out of position, slide the connector shroud up over the pin housing, ensuring that it clicks into place.

Connector rear view:

Test using component tester and test box:

Position 1: Red & IR emitters



Position 3: Photo-diode



1. Black
2. Inner shield
3. Main shield
4. Yellow
5. Red
6. No pin
7. No pin
8. No pin
9. No pin

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Date	26/04/01
Checked By	
Date	
Revised By	



SpO2 Assembly Instructions

1/29/995/3/01

P877RA

Issue 1

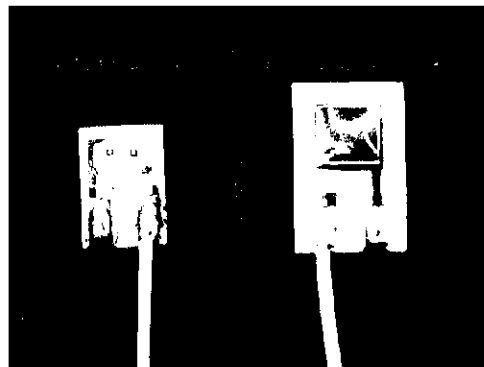
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Test using component tester and test box:

Position 1: Red & IR emitters



Position 3: Photo-diode



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Date	
Revised By	

CRITICOM P877 RA

CONNECTER

1* CUT 7' LENGTH OF CABLE.

STEP 2- TRIM EACH END 4" TO REVEAL OUTER SHEILD. THEN GATHER, ROLL & TIN 2 CY AND CUT TO THE SAME LENGTH. THEN PLACE HEAT SHRINK INSULATION OVER, ENOUGH TO LEAVE A MIN. OF TINED WIRE AT THE END. THEN REMOVE NYLON & PAPER STRIPS.

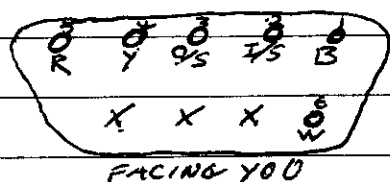
STEP 2- REMOVE ORANGE AND BLUE WIRE AS FAR BACK TO OUTER SHEILD AS POSSIBLE.

STEP 3- CUT RED & YELLOW WIRE BACK TO SAME LENGTH AS OUTER SHEILD, STRIP ENDS TO 1.75" AND TIN BOTH.

STEP 4- REMOVE SHEILD OFF INNER CABLE, ~~LEAVE~~ TO LEAVE A COUPLE OF MINS THEN GATHER & ROLL SHEILD, TIN AND CUT TO SAME LENGTH AS OTHER WIRES, PULL BLACK & WHITE WIRE BACK AND PLACE HEAT SHRINK OVER THE 3 WIRES TO LEAVE THE BLACK & WHITE WIRES FACING THE OPPOSITE WAY.

STEP 5- PLACE HEAT SHRINK INITIALLY PLACED ON CABLE 2MM FROM THE STRIPED END AND SHRINK, THEN PLACE TENSION CLAMP 4-5 MM FROM STRIPED END.*

STEP 6- SOLDER ALL TINED WIRES INTO PINS, THEN PLACE IN CONNECTER AS FOLLOWS



B = BLACK

I/S = INNER SHEILD

O/S = OUTER SHEILD

Y = YELLOW

R = RED

W = WHITE.

STEP 7- ONCE ALL THE ABOVE HAS BEEN DONE PUSH CONNECTER HOUSING OVER THE INNER SECTION UNTIL IT LOCKS IN PLACE THEN PULL CABLE TO TAKE UP THE SLACK. THEN TEST.

CRITICOM P877RA

* SENSOR END

STEP 1 - CUT THE 7' LENGTH IN $\frac{1}{2}$.

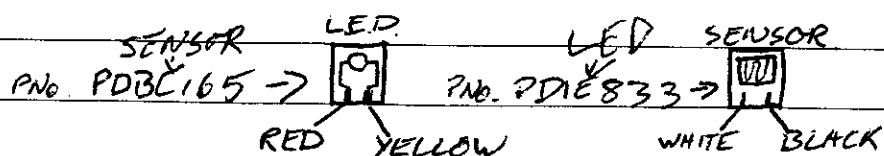
STEP 2 - MEASURE 3' AND MARK CABLE WITH A PEN, THEN FROM THE 3' MARK MEASURE 8-9 CM THEN CUT CABLE.

STEP 3 - PLACE CLEAR HEAT SHRINK OVER MAIN CABLE, PLACE A SMALL AMOUNT OF SILICONE ON THE END OF CABLE THEN SLIDE WHITE TENSION SECTION DOWN TO 3' MARK.

STEP 4 - STRIP OUTER SHIELD, ^{REMOVE} ~~THE~~ ~~SHEILD~~, ~~AND~~ BLUE AND ORANGE WIRES.

STEP 5 - STRIP INNER CABLE 1 CM FROM END. THEN STRIP & TIN END OF ALL WIRES.

STEP 6 - SOLDER AS FOLLOWS -

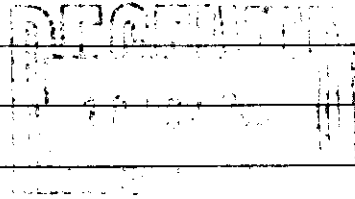
THEN TEST

STEP 7 - PLACE CABLE INTO JIG & BEND ~~THE~~ COMPONENTS TO A 90° ANGLE, THEN PUT A COVERING OF SILICONE ON THE COMPONENTS THEN PLACE FINGER PADS ON TOP MAKING SURE THE COMPONENTS HAVE FULL EXPOSURE IN WINDOW AND SILICONE IS FLUSH TO SHAPE OF PAD. ^{TOP} ^{BOTTOM} = SENSOR PAD. THEN LEAVE FOR 24 HRS. TO DRY

CRITICOM P877 RA

CONTINUED FROM PREVIOUS PAGEFINGER CLIP ASSEMBLY.

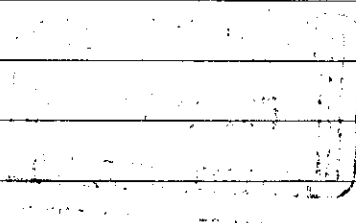
- STEP 1 - WHEN SILICONE HAS DRIED PULL STRAIN RELIEF UP FLUSH TO BACK OF TOP FINGURE PAD (MAKING SURE SQUARE SECTION IS AT THE INSIDE POSITION. THEN GLUE THE INNER CABLE INSIDE THE MOULDED GROOVE, AND REPEAT THE SAME ON THE BOTTOM PAD (GLUEING INNER CABLE).
- STEP 2 - PLACE AS MINIMAL AMOUNT OF GLUE ON BACK OF TOP PAD AND PLACE PAD MOUNTING ON (MAKING SURE ~~GREEN~~ RAIL IS SITTING INSIDE PAD & NO GLUE HAS GOT ONTO THE PAD) REPEAT THE SAME FOR BOTTOM PAD EXCEPT FOR SHORTER ENDS OF PAD MOUNTING ARE FACING EACH OTHER
- STEP 3 - ONCE THE ABOVE IS DONE YOU CAN NOW PLACE THE SPRING OVER THE 2 PADS 
- STEP 4 - PLACE A SMALL AMOUNT OF GLUE ON THE BACK OF THE SHELL TO BE PLACED ON THE TOP (PUT GLUE AROUND STRAIN RELIEF AREA) THEN PUSH OVER STRAIN RELIEF UNTIL IT CLICKS INTO PLACE MAKING SURE SHELL AND STRAIN RELIEF IS FLUSH AND SOLID.
- STEP 5 - TO PUT THE BOTTOM SHELL ON JUST PUSH UNTIL CLICKS, SAME AGAIN CHECK THAT EVERYTHING IS FLUSH AND IN PLACE. THEN PLACE A SMALL AMOUNT OF GLUE ~~ON THE~~ NEXT TO THE INSET HOLES ON ~~EACH~~ EITHER SIDE THEN PUT SECURING PINS IN & CHECK IT OPENS & CLOSES PROPERLY. THEN CLEAN UP.
- THEN TAKE TO Q.A.



~~RE~~ NOTES FOR P877RA CRITICOM.

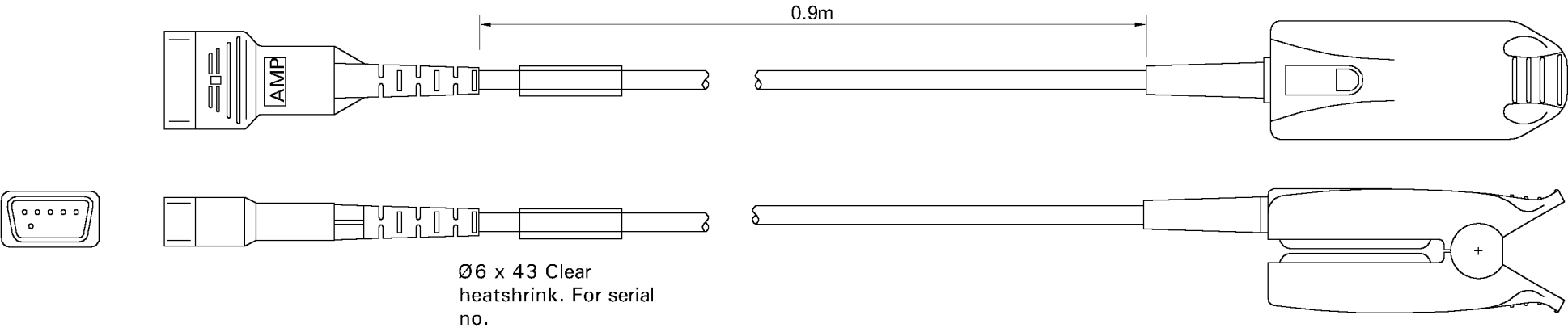
TEST PATTERN.

SOCKET K

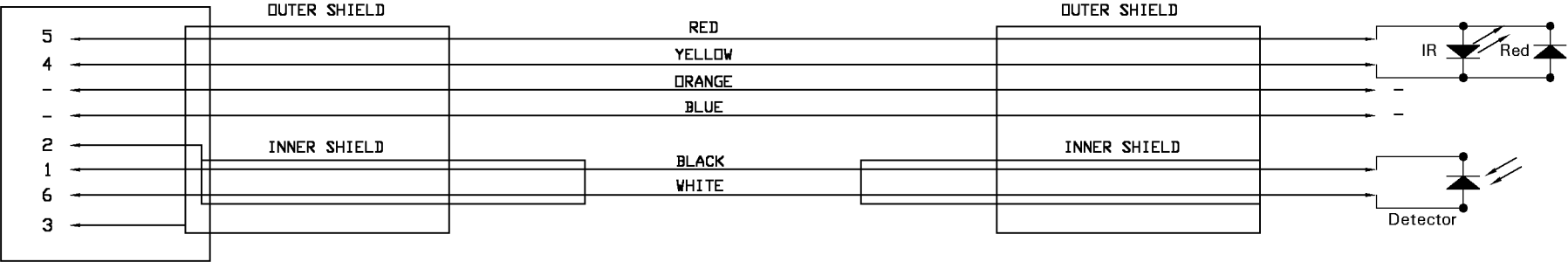
SENSOR
POSITION 4
└─┘LED
POSITION 1
DOUBLE KICK ┌─┐ ┌─┐
 └─┘ └─┘

D-Type Male 9 Pin

Finger Probe



D type male 9 pin



Title P877RA
Critikon



Dim in mm

Tol ± 0.2

Drawn J.Nirwan

Scale Not To Scale

Date 18/02/03

Dwg No. SPF-877.1

Material :

Part No. 0018770

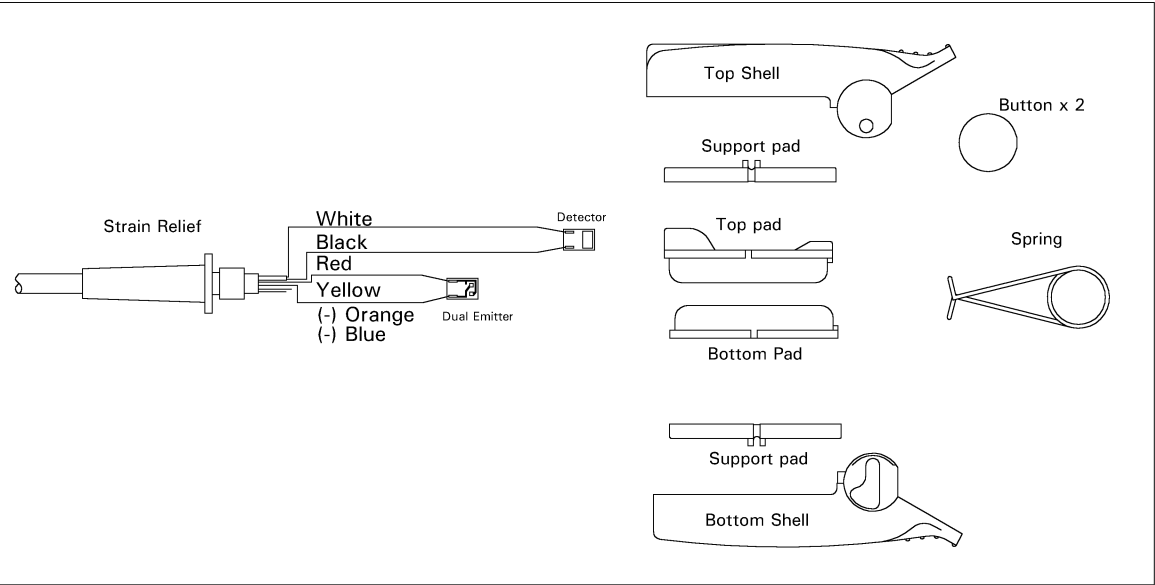
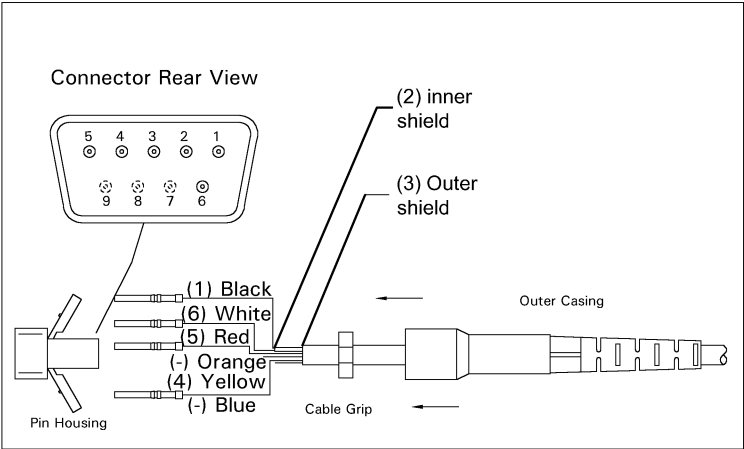
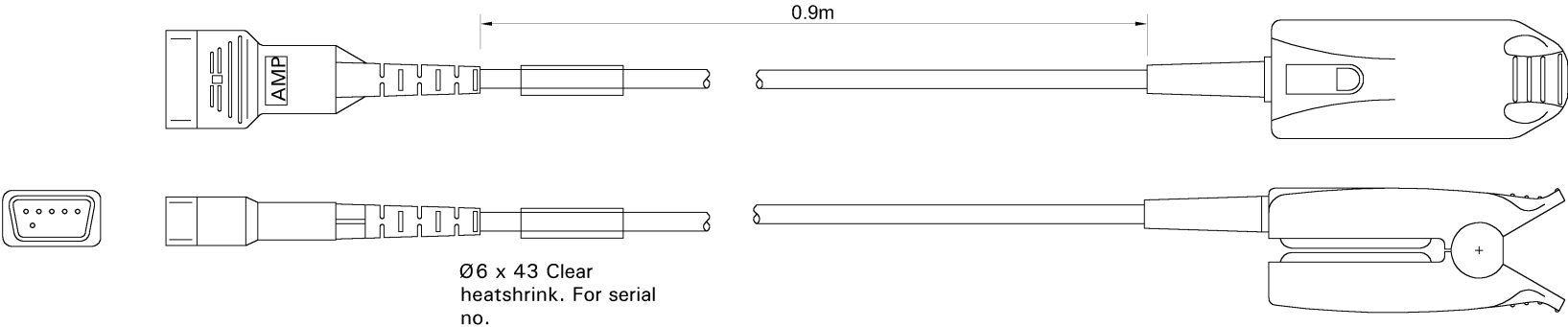
VIAMED Ltd.

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

REV	Date	Nº	Drawn	Approv

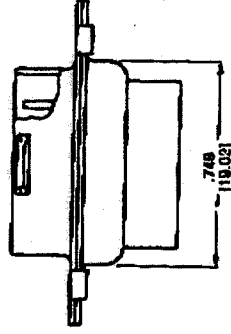
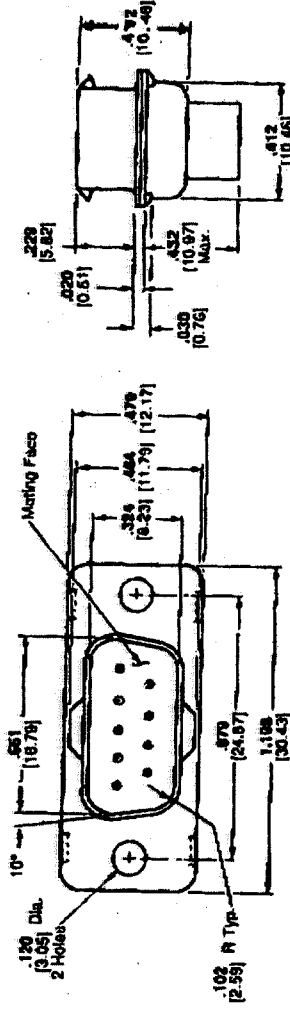
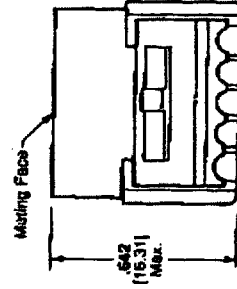
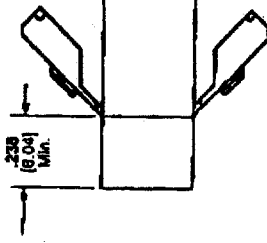
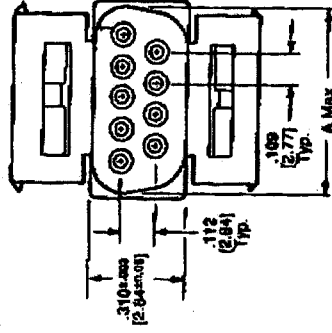
D-Type Male 9 Pin

Finger Probe



					Title P877RA Critikon			
							Dim in	mm
							Tol	± 0.2
					Scale	Not To Scale	Drawn	J.Nirwan
					Date	30/01/02	Dwg No.	SPF-877
REV	Date	N°	Drawn	Approv	Part No. 0018770			

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

AMPAMPLIMITE
Subminiature D ConnectorsCatalog 8205B
Revised 8-86**HDJ-20 All-Plastic Jacketed Cable Connector
(for Crimp Snap-In Contacts)****Plug Housing
HDP-20****9-Position****Part No. 745018-1**(Used with HDJ-20 Receptacle
Part No. 207752-1)**Receptacle Housings****Material**—94V-0 rated thermoplastic,
black**Related Product Data:****Contacts 20 DF (Precision
Formed)**—pages 50 & 51**Mateable Connectors:****HDJ-20 PCB Plugs**—page 142**9 Position****Strain Relief****Material**—Steel**Part No. 81831-1**

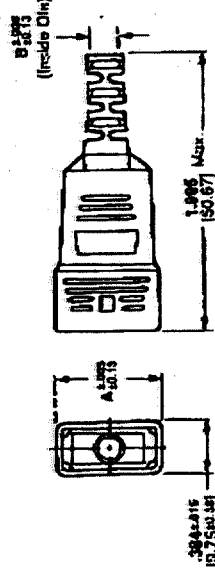
(for 150 (3.81) Max. Ins. Dia.)

No. of Contact Positions (Shell Size)	Dimension A	Receptacle Part No.
9 (1)	.842 16.31	207752-3

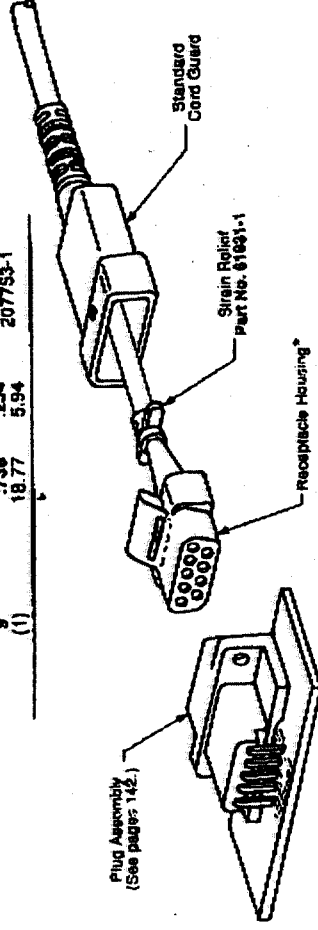
Note: These receptacle housings accept size 20 DF pin contacts (tin plated). Part No. 1-86505-4 for 28-24 AWG (0.08-0.2 mm) wire sizes and Part No. 1-86504-4 for 24-20 AWG (0.2-0.6 mm) wire sizes. For computer applications, AMP recommends the use of gold plated socket contacts. (See pages 50 and 51.)

AMPAMPLIMITE
Subminiature D ConnectorsCatalog 82068
Revised 9-96**HDJ-20 All-Plastic Jacketed Cable Connectors
(for Crimp Snap-In Contacts) (Continued)****Standard Cord Guards**

Material—Black thermoplastic

9 Position

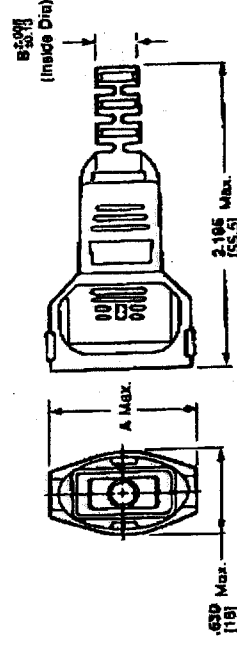
No. of Contact Positions (Shell Size)	Dimensions		Cord Guard Part No.
	A	B	
9	.730	.234	207753-1
(1)	18.77	5.94	



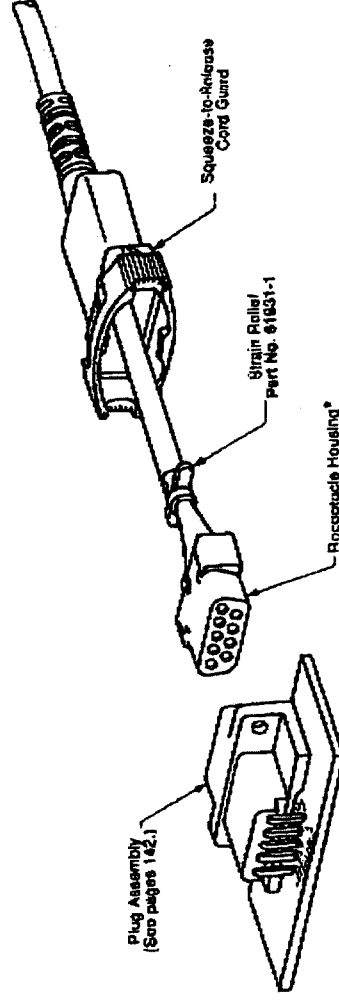
*Standard Cord Guards also can be used on plug housings (page 99).

Typical Application of HDJ-20 Jacketed Cable Connector using Standard Cord Guard**9 Position****Squeeze-to-Release
Cord Guards**

Material—Black thermoplastic



No. of Contact Positions (Shell Size)	Dimensions		Cord Guard Part No.
	A	B	
9	1.065	6.08	745002-1
(1)	26.8	265	745002-2
		6.73	



*Squeeze-to-Release Cord Guards also can be used on plug housings (page 99).

Typical Application of HDJ-20 Jacketed Cable Connector using Squeeze-to-Release Cord Guard