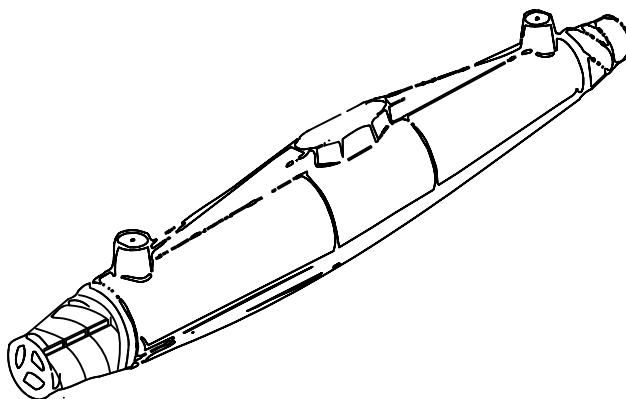




# SCOTCHCAST (TM) INLINE JOINT

## LVI-3/x-IC

FOR 0.5mm<sup>2</sup> / 1.5mm<sup>2</sup> PAIRED CABLE PVC COPPER WIRE BRAID  
PVC OVERALL SCREEN WITH DRAIN WIRE AND CLEAN EARTH



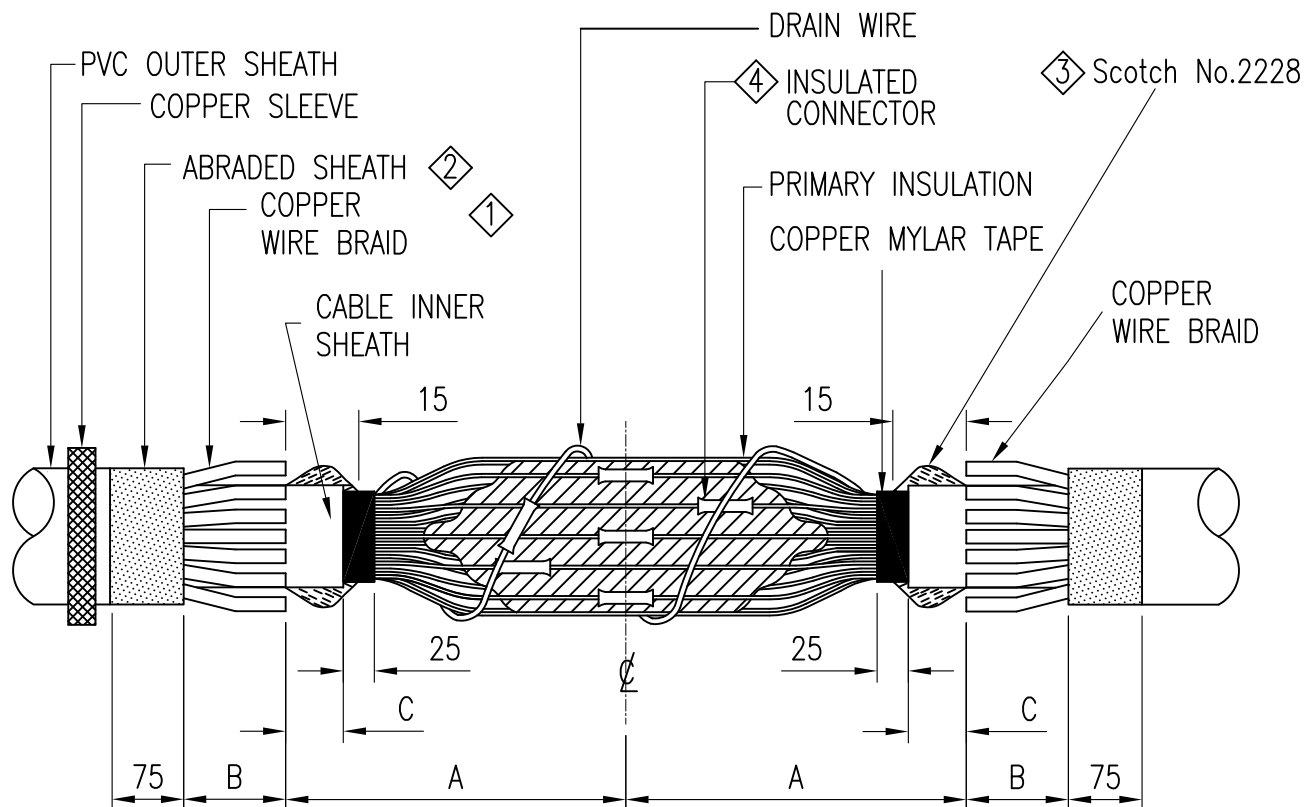
			PREPARATION DIMENSIONS					
KIT	No.PAIRS	CABLE O.D (mm)	PVC 'A'	ARMOUR 'B'	INNER SHEATH 'C'	TOTAL JOINT IN MOULD	MOULD SIZE	SHEATH IN EACH END OF MOULD
LVI-3/2-IC	1-4	14-30	64	20	10	168	198	15
LVI-3/3-IC	5	25-35	92	30	10	244	288	22
LVI-3/4-IC	10	28-47	113	30	10	286	330	22
LVI-3/5-IC	15-20	35-60	140	30	10	340	450	55
LVI-3/6-IC	50	45-70	228	30	10	516	616	50

NOTE: TO BE USED IN CONJUNCTION WITH P-3F SPACER TAPE, SUPPLIED SEPERATELY.

FOR CABLES THAT ARE BELOW THE MINIMUM CABLE DIAMETER, USE SCOTCH 23 TAPE,  
SUPPLIED IN THE KIT TO BUILD UP THE CABLE TO THE MINIMUM DIAMETER.

<b>3M</b> UNITED KINGDOM PLC © 2015 3M CENTRE, CAIN ROAD, BRACKNELL BERKS. RG12 8HT, ENGLAND		2	UPDATED	MJE	09.12.15
		1	FOR RELEASE.	MJE	24.06.15
		ISSUE	DESCRIPTION / ECO	BY	DATE
ALL STATEMENTS, TECHNICAL INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED ON TESTS WE BELIEVE TO BE RELIABLE. HOWEVER, SINCE THE CONDITIONS OF USE AND THE APPLICATION ARE BEYOND OUR CONTROL, THE PURCHASER IS RESPONSIBLE FOR THE PERFORMANCE OF THE JOINTS AND TERMINATIONS MADE IN CONNECTION WITH THE USE OF DATA OR SUGGESTIONS STATED HEREIN.		<b>3M SCOTCHCAST INLINE JOINT</b> <b>LVI-3/x-IC FOR 0.5mm<sup>2</sup> / 1.5mm<sup>2</sup></b> <b>PAIRED CABLE PVC COPPER WIRE BRAID OVERALL</b> <b>OVERALL SCREEN WITH DRAIN WIRE AND</b> <b>CLEAN EARTH – INSTALLATION INSTRUCTIONS</b>			
Drawn : M.J.EDE		Des.Eng: J.D.ADDY			
Cad File: XE-0091-3979-3		Checked:			
<b>3M</b> ELECTRICAL PRODUCTS		AA-BBDD-3149-1	XE-0091-3979-3	SHEET 1 of 4	A4

FIG.1



- 1.1 STRAIGHTEN & SET UP THE CABLES AT THE JOINT POSITION. ALLOW THE CABLES TO OVERLAP PRIOR TO JOINTING  
SLIDE THE COPPER SLEEVE OVER ONE OF THE CABLES AND PARK TO ONE SIDE.

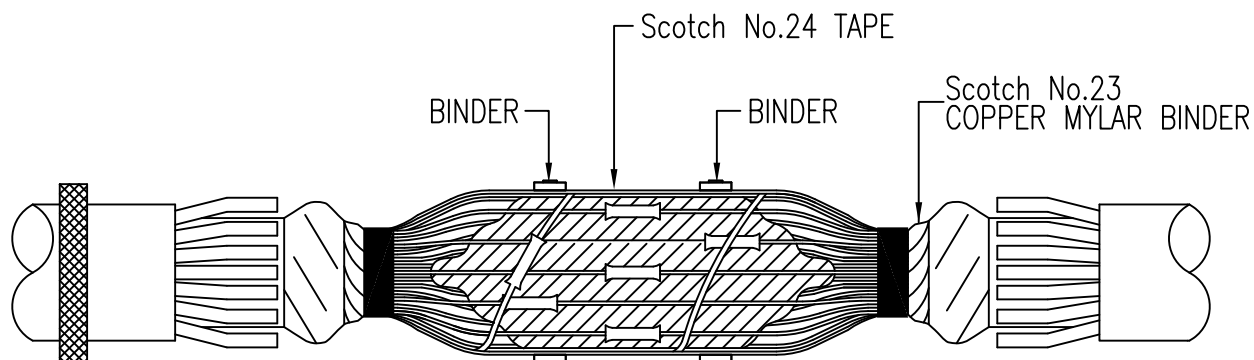
#### CABLE 1 PREPARATION

- 1.2 REMOVE THE OUTER SHEATH & ARMOUR WIRES OF THE CABLE FOR A DISTANCE OF  $2 \times [A]$
- 1.3 REMOVE A FURTHER LENGTH OF CABLE SHEATH ACCORDING TO DISTANCE  $[B]$
- 1.4 THOROUGHLY ABRADE THE SHEATH OF THE CABLE FOR A DISTANCE OF 75mm BEYOND DIMENSION  $[B]$
- 1.5 REMOVE THE INNER SHEATH FROM THE CONDUCTOR LEAVING DISTANCE 'C' BEYOND THE COPPER WIRE BRAID.  
STARTING 5mm ONTO THE OVERALL SCREEN APPLY ONE HALF-LAPPED LAYER OF SCOTCH 2228 OVER THE  
INNER SHEATH. TAPE SHOULD BE 15mm WIDE AND FREE OF ANY LOOSE WIRE STRANDS, WHICH MAY PROVIDE  
A CONDUCTIVE PATH.
- 1.6 WHERE APPLICABLE UNWIND THE COPPER MYLAR AROUND THE LAID UP CORES, ENSURE CONDUCTIVE SIDE  
OF TAPE IS OUTERMOST, BY FOLDING BACK IF NECESSARY .CUT BACK TO LEAVE 25mm IN FRONT OF  
INNER SHEATH. WHERE APPLICABLE UNWIND THE INDIVIDUAL SCREEN TAPES & LAY BACK READY TO REWIND  
OVER THE CORE AFTER CONNECTIONS.

#### CABLE 2 PREPARATION

- 1.7 REMOVE THE OUTER SHEATH & ARMOUR WIRES OF THE CABLE FOR A TOTAL DISTANCE OF  $2 \times [A]$  FROM THE CL  
THEN REMOVE A FURTHER LENGTH OF CABLE SHEATH ACCORDING TO DISTANCE  $[B]$
- 1.8 THOROUGHLY ABRADE THE SHEATH OF THE CABLE FOR A DISTANCE OF 75mm BEYOND DIMENSION  $[B]$
- 1.9 REMOVE THE INNER SHEATH FROM THE CONDUCTOR LEAVING DISTANCE 'C' BEYOND THE COPPER WIRE BRAID  
STARTING 5mm ONTO THE OVERALL SCREEN APPLY ONE HALF LAPPED LAYER OF SCOTCH 2228 OVER THE  
INNER SHEATH. TAPE SHOULD BE 15mm WIDE AND FREE OF ANY LOOSE WIRE STRANDS, WHICH MAY PROVIDE  
A CONDUCTIVE PATH.
- 2.0 WHERE APPLICABLE UNWIND THE COPPER MYLAR AROUND THE LAID UP CORES, ENSURE CONDUCTIVE SIDE  
OF TAPE IS OUTERMOST, BY FOLDING BACK IF NECESSARY .CUT BACK TO LEAVE 25mm IN FRONT OF  
INNER SHEATH. WHERE APPLICABLE UNWIND THE INDIVIDUAL SCREEN TAPES & LAY BACK READY TO REWIND  
OVER THE CORE AFTER CONNECTIONS.

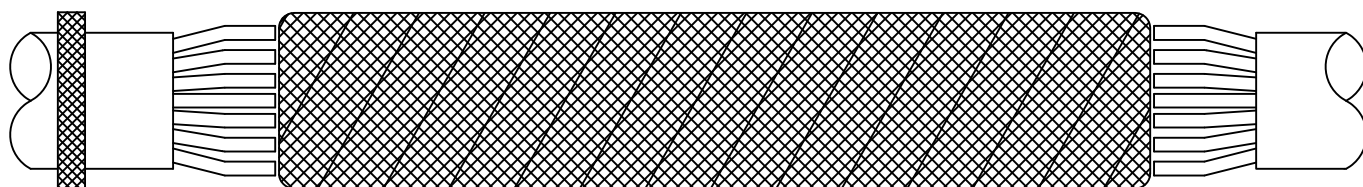
FIG.2



### CABLES 1 AND 2

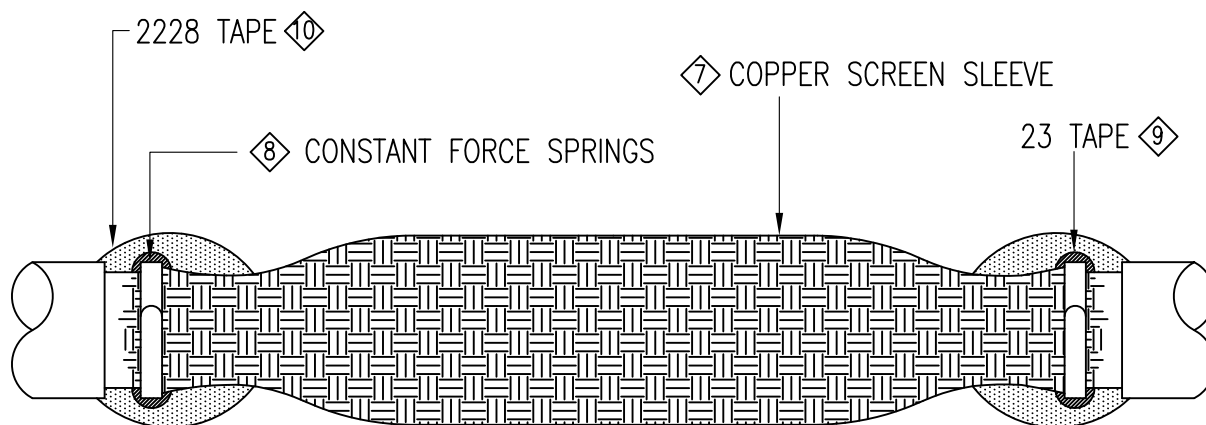
- 3 2.3 JOIN THE CONDUCTORS AND DRAIN WIRES OF THE CABLES TOGETHER IN THE CORRECT SEQUENCE, USING THE RECOMMENDED SCOTCHLOK CONNECTORS. STAGGER THE CONNECTORS ACROSS THE JOINT AS SHOWN.  
NOTE: WRAP THE DRAIN WIRE AROUND THE JOINT IN A SPIRAL, AS SHOWN ON FIG 1.
- 2.4 CONDUCTOR CONTINUITY CHECKS, ETC. MUST BE CARRIED OUT WHEN ALL CONDUCTOR JOINTS HAVE BEEN MADE.
- 2.5 WHERE APPLICABLE THE LAYED BACK SCREENS ON CABLE 1 SHOULD NOW BE REWOUND OVER EACH INDIVIDUAL CORE AND BOUND DOWN TO THE SCREENS ON CABLE 2 WITH HIGHLY STRETCHED No. 23 TAPE.
- 4 2.6 LAY THE CONDUCTORS AND CONNECTORS NEATLY IN POSITION AND OVERTAPE ONE HALF-LAPPED LAYER OF SCOTCH No. 24 TAPE AND BIND DOWN ONTO OVERALL SCREEN WITH STRETCHED No. 23 TAPE.  
BIND THE CONDUCTORS AND CONNECTORS TOGETHER USING THE CABLE TIES PROVIDED.
- 5 2.7 CLEAN THE ARMOUR WIRES TO ENSURE A GOOD CONTACT.
- 6 LAY THE ARMOUR CONTINUITY CONDUCTOR ALONG THE WIRE ARMOUR AND TEMPORARILY FIX IN POSITION.  
CONNECT THE ARMOUR CONTINUITY BRAID TO THE ARMOURING ACCORDING TO FIG.4

FIG.3



- 3.1 OVERTAPE ONE HALF LAPPED LAYER OF P-3F SPACER TAPE, EXTENDING FROM COPPER WIRE BRAID TO COPPER WIRE BRAID.

FIG.4



### EARTH & ARMOUR CONTINUITY

- 7 4.1 SLIDE THE COPPER SCREEN SLEEVE OVER THE ENTIRE JOINT.
- 8 4.2 FIX THE COPPER SCREEN SLEEVE TO THE COPPER WIRE BRAID USING THE CONSTANT FORCE SPRINGS AND REMOVE EXCESS SLEEVE.
- 9 4.3 OVERTAPE CONSTANT FORCE SPRING WITH 2 HIGHLY STRETCHED HALF-LAPPED LAYERS OF SCOTCH No 23 TAPE ENSURING THAT TAPING IS CARRIED OUT IN THE SAME DIRECTION AS TH SPRING IS APPLIED.
- 10 4.4 OVERTAPE CONSTANT FORCE SPRINGS AND ARMOURING ONTO CABLE SHEATH WITH SCOTCH No. 2228 TAPE.

### MOULD PREPARATION

- 4.5 TRIM EACH MOULD EXIT TO FIT THE CABLES. WRAP TWO OR THREE LAYERS OF SCOTCH No. 23 TAPE AROUND THE CABLE SHEATHS WHERE THE ENDS OF THE MOULD WILL BE LOCATED. THIS TAPE SHOULD BE HIGHLY STRETCHED IN ORDER TO EFFECT AMALGAMATION BETWEEN THE LAYERS OF TAPE. PLACE THE MOULD HALVES AROUND THE JOINT, WITH THE POURING HOLE UPPERMOST AND PRESS THE TWO HALVES TOGETHER. THE GROOVE AND TONGUE MUST SNAP TOGETHER AUDIBLY TO ENSURE A SOUND FIXING. CHECK THE CLEARANCE BETWEEN THE JOINT COMPONENTS AND THE INSIDE OF THE MOULD. SEAL THE TAPERED ENDS OF THE MOULD WITH SCOTCH No.23 TAPE. CAREFULLY SET THE JOINT LEVEL.
- 4.6 MIX AND POUR THE SCOTCHCAST RESIN INTO THE JOINT MOULD IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE KIT.
- 4.7 WHEN THE MOULD IS COMPLETELY FILLED WITH RESIN UP TO THE TOP OF THE FILLING DOME, PLACE THE TOP CAP INTO POSITION TO CLOSE THE FILLING OPENING OF THE MOULD.

