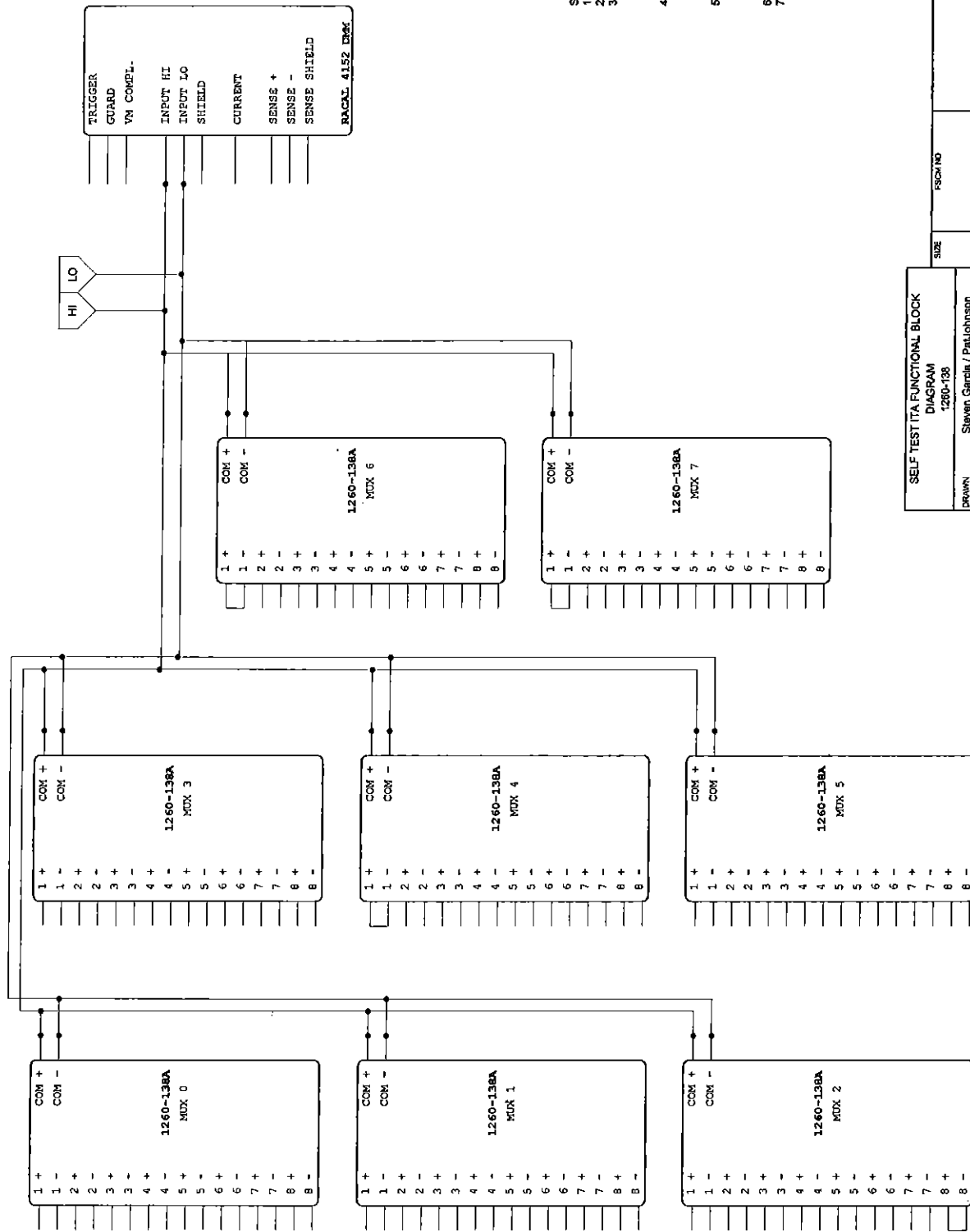
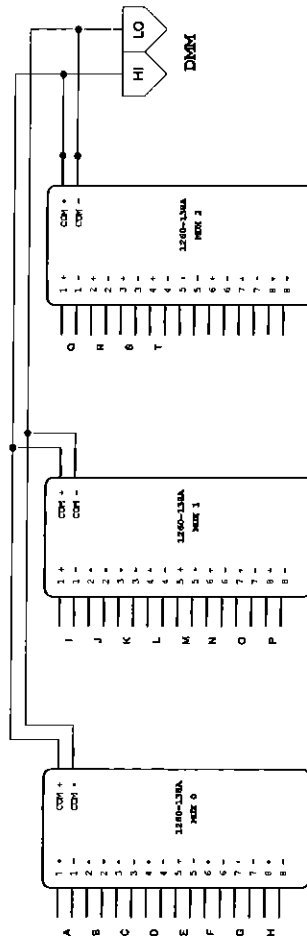
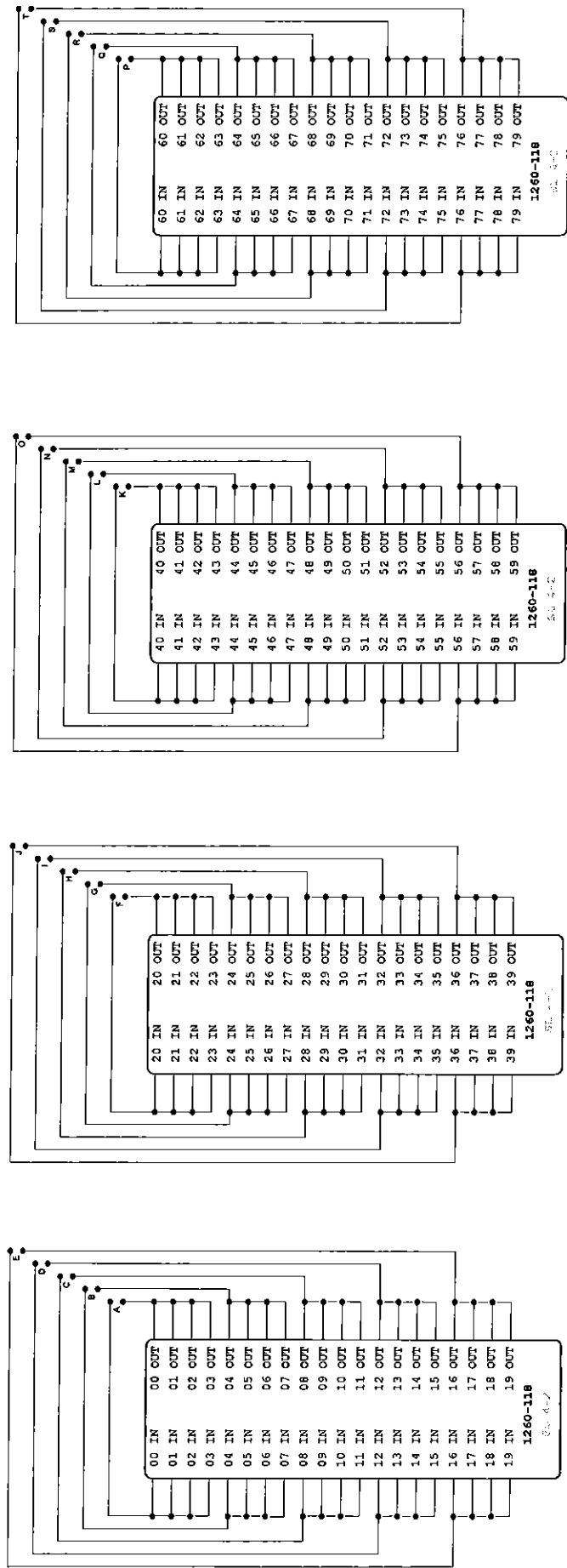


TE82743-3 SELFTEST FIXTURE WIRING



SELF TEST TTA FUNCTIONAL BLOCK		
DIAGRAM		
1260-138		
DRAWN	Steven Garcia / Pat Johnson	
PROJECT	Waters Corporation	

SIZE	FIG. NO.	DWG. NO.	REV.
1:1		12640005	F
SCALE	1:1	RACAL INSTRUMENTS	SHEET 1 OF 11



Self-Test Programming

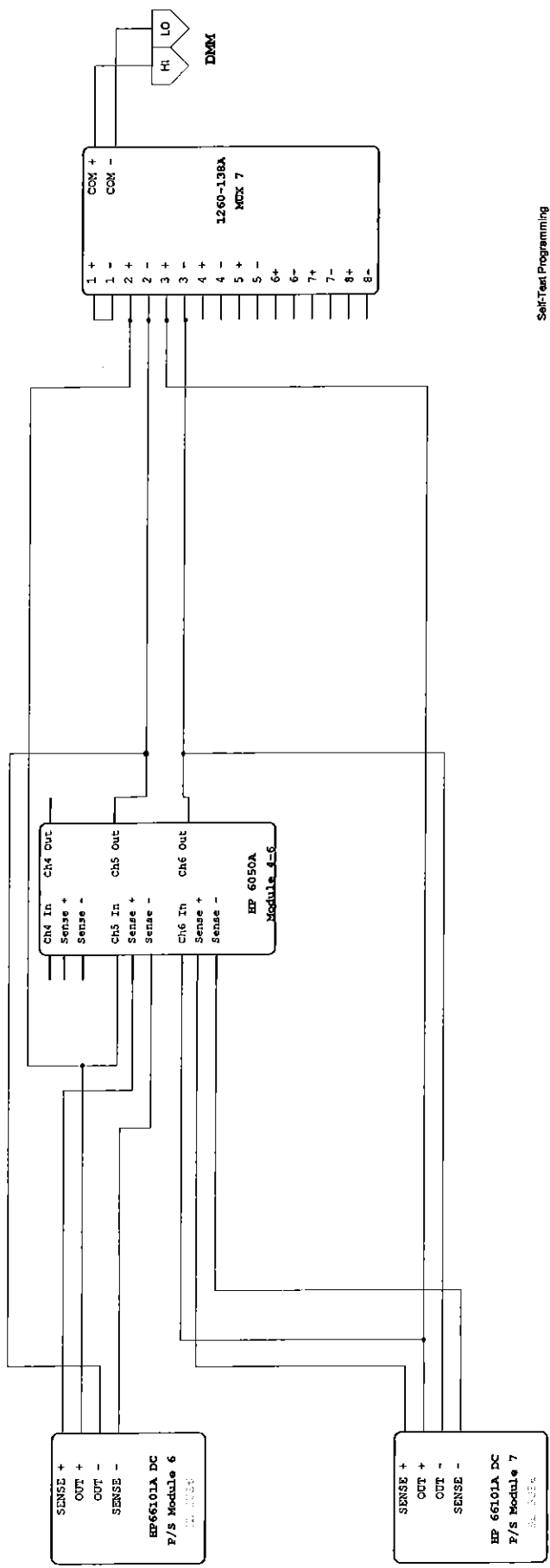
SHORTED RELAY

1. Initialize & Setup 4152
2. Close proper 1260-138A relay to DMM
3. Initialize 1260-118
4. Open All Relays on 1260-118
- * 5. For I = 0 to 80
 - Open Relay I
 - Take Measurement (for relay I)
 - End For Loop
6. For I = 0 to 80
 - Close Relay I
 - Take Measurement (for relay I)
 - End For Loop
- * 7. For I = 0 to 80
 - Open Relay I
 - Take Measurement (for relay I)
 - End For Loop
8. Open relays on 1260-118
9. Open 1260-138A relay to DMM
10. Reset 4152

* these tests will fail for individually shorted relays

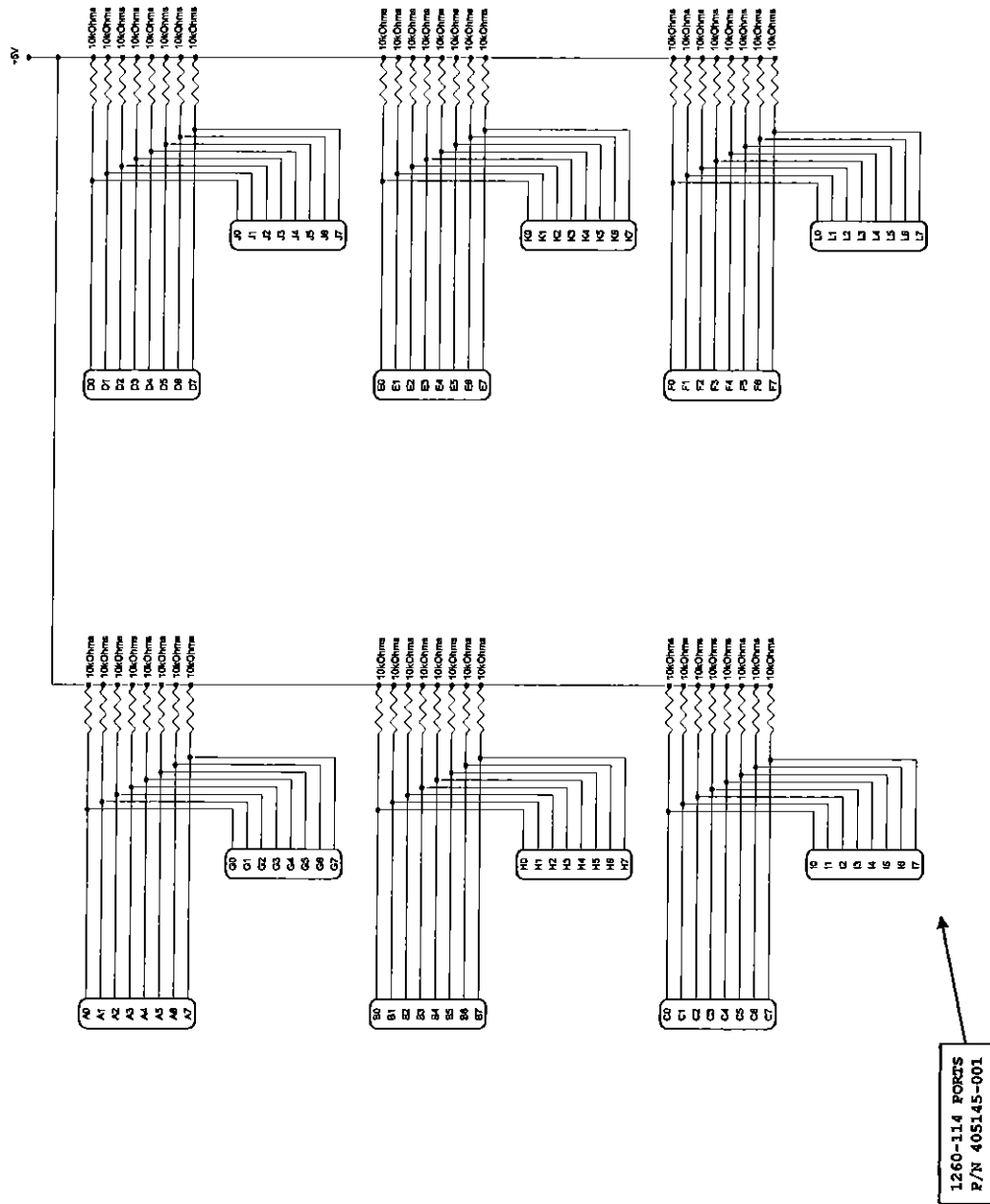
SELF TEST ITA FUNCTIONAL BLOCK		
DIAGRAM		
1260-118		
DESIGN	Steven Garcia / PalJohnson	
PROJECT	Waters Corporation	

SIZE	FIGURE NO	DWG NO	REV
	1.1	1260-0005	F
RACAL INSTRUMENTS			
SCALE	1:1	SHEET	2 OF 11



- Self-Test Programming
1. Setup 4152
 2. Setup 8050A
 3. Initialize 1260-138
 4. Setup 88101 P/S
 5. Close 1260-138, Channel 2,3
 6. Take measurement
 7. Open all relays
 8. Reset 88101 P/S
 9. Reset 8050A
 10. Repeat 4152

SELF TEST ITA FUNCTIONAL BLOCK DIAGRAM				RACAL INSTRUMENTS		SHEET 2 OF 2
DRAWN Steven Garcia / Pat Johnson		PCB NO	DWG NO	REV F		
PROJECT Waters Corporation		SCALE 1 : 1	11640005			
		SIZE				

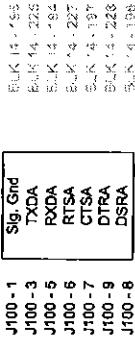


- Self-Test Programming**
1. Initialize & Setup 1260-114OC (Ports A-F = Outputs, Ports G-L = Inputs)
 2. Write an 8-bit byte to Port A
 3. Read Port G
 4. Verify data/set boolean
 5. Write an 8-bit byte to Port B
 6. Read Port H
 7. Verify data/set boolean
 8. Write an 8-bit byte to Port C
 9. Read Port I
 10. Verify data/set boolean
 11. Write an 8-bit byte to Port D
 12. Read Port J
 13. Verify data/set boolean
 14. Write an 8-bit byte to Port E
 15. Read Port K
 16. Verify data/set boolean
 17. Write an 8-bit byte to Port F
 18. Read Port L
 19. Verify data/set boolean
 20. Setup 1260-114OC (Ports A-F = Inputs, Ports G-L = Outputs)
 21. Write an 8-bit byte to Port G
 22. Read Port A
 23. Verify data/set boolean
 24. Write an 8-bit byte to Port H
 25. Read Port B
 26. Verify data/set boolean
 27. Write an 8-bit byte to Port I
 28. Read Port C
 29. Verify data/set boolean
 30. Write an 8-bit byte to Port J
 31. Read Port D
 32. Verify data/set boolean
 33. Read Port E
 34. Verify data/set boolean
 35. Write an 8-bit byte to Port L
 36. Read Port F
 37. Verify data/set boolean
 38. Output results to file
 40. Reset 1260-114OC

SELF TEST ITA FUNCTIONAL BLOCK		SIZE	FIG. NO.	REV.
DIAGRAM				
1260-114OC				
DRAWN Steven Garcia / PalJohnson				
PROJECT Waters Corporation		SCALE 1 : 1	RACAL INSTRUMENTS	SHEET 5 OF 11

Configured as Data Terminal Equipment (DTE) <-> Data Terminal Equipment (DTE)

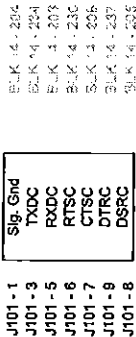
DTE Channel A



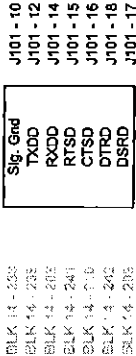
DTE Channel B



DTE Channel C



DTE Channel D



- Self-Test Programming**
1. Initialize & Setup 6065-8
(A & C = Outputs, B & D = Inputs)
2. Send data on Channel A
3. Receive data on Channel B
4. Verify data/set boolean
5. Send data on Channel C
6. Receive data on Channel D
7. Verify data/set boolean

8. Setup 6065-8
(A & C = Inputs, B & D = Outputs)
9. Send data on Channel B
10. Receive data on Channel A
11. Verify data/set boolean
12. Send data on Channel D
13. Receive data on Channel C
14. Verify data/set boolean
15. Output results to file
16. Reset 6065-8

SELF TEST TIA FUNCTIONAL BLOCK DIAGRAM				REV
DRAWN	Steven Garcia / Paljohnson	SIZE	8 1/2 X 11	F
PROJECT	Waters Corporation	SCALE	1:1	
		RACAL INSTRUMENTS		SHEET
		12840005		6 OF 11

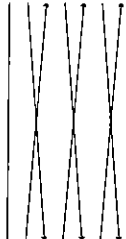
Configured as Data Terminal Equipment (DTE) <-> Data Terminal Equipment (DTE)

DTE Channel E

Sig. Gnd
TXDE
RXDE
RTSE
CTSE
DTRE
DSRE

J102 - 1
J102 - 3
J102 - 5
J102 - 6
J102 - 7
J102 - 9
J102 - 8

BLK 14 - 238
BLK 14 - 239
BLK 14 - 240
BLK 14 - 241
BLK 14 - 242
BLK 14 - 243
BLK 14 - 244

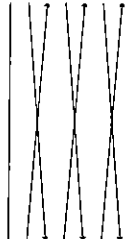


DTE Channel F

Sig. Gnd
TXDF
RXDF
RTSF
CTSF
DTRF
DSRF

J102 - 10
J102 - 12
J102 - 14
J102 - 15
J102 - 16
J102 - 18
J102 - 17

BLK 14 - 239
BLK 14 - 240
BLK 14 - 241
BLK 14 - 242
BLK 14 - 243
BLK 14 - 244
BLK 14 - 245

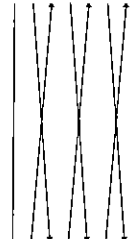


DTE Channel G

Sig. Gnd
TXDG
RXDG
RTSG
CTSG
DTRG
DSRG

J103 - 1
J103 - 3
J103 - 5
J103 - 6
J103 - 7
J103 - 9
J103 - 8

BLK 14 - 234
BLK 14 - 235
BLK 14 - 236
BLK 14 - 237
BLK 14 - 238
BLK 14 - 239
BLK 14 - 240

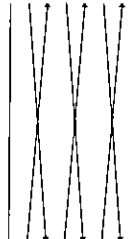


DTE Channel H

Sig. Gnd
TXDH
RXDH
RTSH
CTSH
DTRH
DSRH

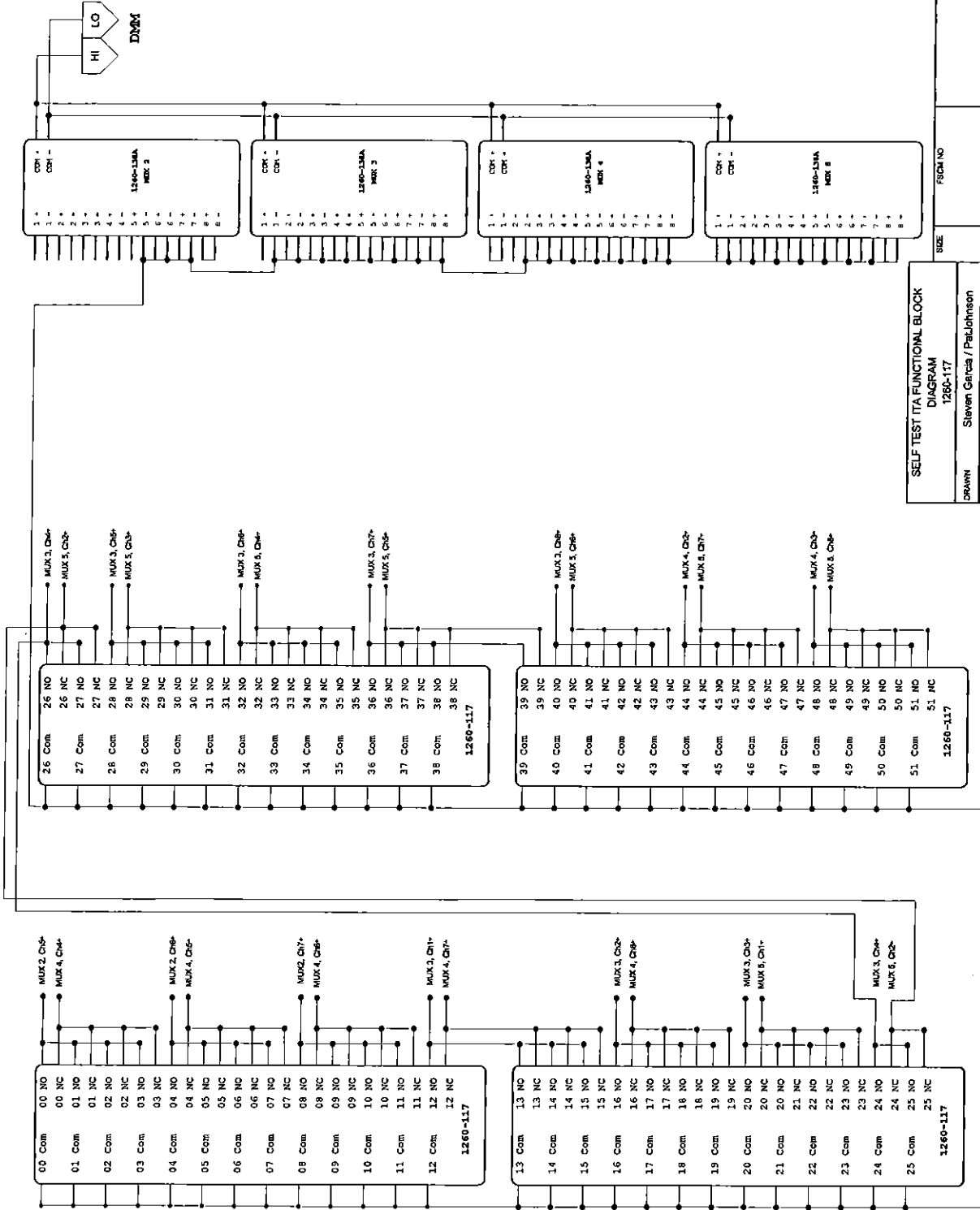
J103 - 10
J103 - 12
J103 - 14
J103 - 15
J103 - 16
J103 - 18
J103 - 17

BLK 14 - 235
BLK 14 - 236
BLK 14 - 237
BLK 14 - 238
BLK 14 - 239
BLK 14 - 240
BLK 14 - 241



- Self Test Programming**
1. Initia & Setup 6065-8
 2. IE & G = Outputs F & H = Inputs
 3. Send data on Channel E
 4. Receive data on Channel F
 5. Verify data/set boolean
 6. Send data on Channel G
 7. Receive data on Channel H
 8. Verify data/set boolean
 9. Setup 6065-8
 10. (F & H = Inputs, E & G = Outputs)
 11. Send data on Channel E
 12. Receive data on Channel F
 13. Verify data/set boolean
 14. Send data on Channel H
 15. Receive data on Channel G
 16. Verify data/set boolean
 17. Output result to file
 18. Reset 6065-8

SELF TEST ITA FUNCTIONAL BLOCK DIAGRAM 6065-8 DTE			
OWNER	Steven Garcia / PalJohnson	SIZE	12840005
PROJECT	Waters Corporation	SCALE	1 : 1
RACAL INSTRUMENTS		SHEET	7 OF 11



Self-Test Programming

1. Setup 4152
2. Initialize 1260-138
3. Close Channels 1 & 2 on-138
4. For I = 0 to 52
Close Relay I
Take Measurement (forelay I)
End For I on-52
5. For I = 0 to 52
Close Relay I
Take Measurement (forelay I)
End For I on-52
6. For I = 0 to 52
Close Relay I
Take Measurement (forelay I)
End For I on-52
7. Open all relays
8. Reset 4152

SELF TEST ITA FUNCTIONAL BLOCK DIAGRAM

1260-117

DRAWN Steven Garcia / Pat Johnson

PROJECT Wetters Corporation

SCALE 1:1

RACAL INSTRUMENTS

SHEET 8 OF 11

SIZE

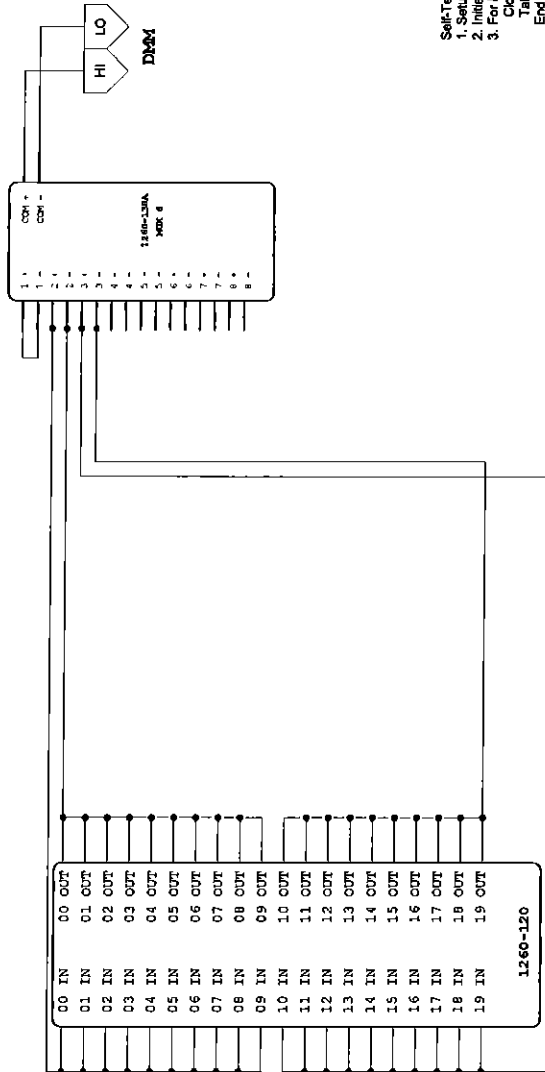
FRONT NO

DWG NO

REV

F

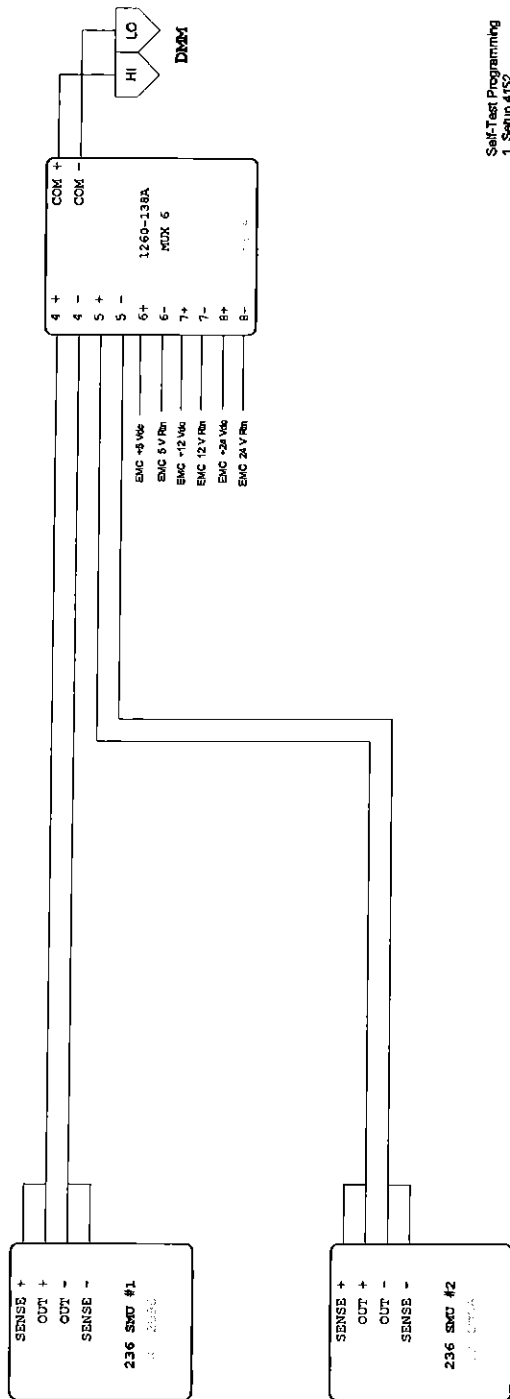
12840005



Self-Test Programming
1. Setup 4152
2. Initialize 1260-120
3. For i = 0 to 20
 Close Relay i
 Take Measurement (or relay i)
 End For Loop
4. For i = 0 to 20
 Open Relay i
 Take Measurement (or relay i)
 End For Loop
5. For i = 0 to 20
 Close Relay i
 Take Measurement (or relay i)
 End For Loop
6. Open all relays
7. Reset 4152

SELF TEST ITA FUNCTIONAL BLOCK DIAGRAM 1260-120			
DRAWN	Steven Gardia / PatJohnson		
PROJECT	Waters Corporation		

SIZE	FIG. NO.	DWG. NO.	REV.
		12640005	F
SCALE	1 : 1	RACAL INSTRUMENTS	SHEET
			10 OF 11



- Self-Test Programming
1. Setup 4152
 2. Initialize 1260-138
 3. Close Channel 4 on -138
 4. For $i = 0$ to n
 - Output voltage from SMU #1
 - Take measurement
 - Change voltage level
 - Repeat n times
 - End For Loop
 5. Open Channel 4 on -138
 6. Close Channel 5 on -138
 7. For $i = 0$ to n
 - Output voltage from SMU #2
 - Take measurement
 - Change voltage level
 - Repeat n times
 - End For Loop
 8. Open Channel 5 on -138
 7. Open all relays
 8. Reset 4152

SELF TEST ITA FUNCTIONAL BLOCK	
DIAGRAM	
236 SMU #1 & 236 SMU #2	
DESIGN	Steven Garde / Pallottson
PROJECT	Waters Corporation

SIZE	FIG. NO.	DRG. NO.	REV.
		1284/0005	F
SCALE	1 : 1	PACAL INSTRUMENTS	SHEET
			11 OF 11