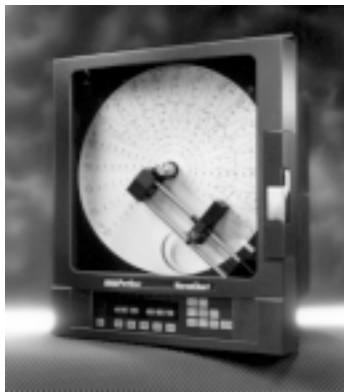


CONSOLIDATED SPARE PARTS LIST

*CIRCULAR CHART
RECORDERS AND
CONTROLLERS*

 ***Partlow*** brand

VersaChart



DESCRIPTION

PART NUMBER

1. COVER ASSEMBLY

All cover assemblies include latch hook assembly, standard N3 rating, unless otherwise noted, hinge pins and VersaChart label or No. label.

Glass Windows with VersaChart label	644 275 01
Glass Windows/Door Lock with VersaChart label	644 275 02
Plastic Windows with VersaChart label	644 275 03
Plastic Windows/Door Lock with VersaChart label	644 275 04
Plastic Windows/NEMA 4 w/VersaChart label	644 275 09
Glass Windows with no label	644 275 05
Glass Windows/Door Lock with no label	644 275 06
Plastic Windows with no label	644 275 07
Plastic Windows/Door Lock with no label	644 275 08
Plastic Windows/NEMA 4 w/no label	644 275 10

COVER ASSEMBLY PARTS

1a Chart Window - Glass	400 457 02
1b Display Window - Glass	400 456 02
1a Chart Window - Plastic	400 457 01
1b Display Window - Plastic	400 456 01
1c Chart Window Gasket NEMA3	400 459 01
1d Display Window Gasket NEMA3	400 460 01
1e Latch Hook Assembly	644 298 01
1f Chart Window Retention Clips/Screws (Qty 15) NEMA3 ONLY	644 299 01
1g Display Window Retention Strip/Screws (Qty 6) NEMA3 only	644 300 01
1h Change Chart Label	625 210 01

DESCRIPTION *PART NUMBER*

2. *PRINTER ASSEMBLY*

All printer assemblies include print mechanism, chart nut and ring; does not include motor block cover, pen cartridge, mylar guide or spring.

One Trend Pen	644 284 01
Two Trend Pends	644 284 02
Three Trend Pens	644 284 03
Four Trend Pens	644 284 04

PRINTER ASSEMBLY PARTS

2b Printer Motor Block Cover	644 287 01
2c Mylar Guide and Spring	644 302 01
2d Chart Nut and Ring	644 301 01

3. *PLATEN ASSEMBLY PARTS*

3a Keypad	644 290 01
3b Chart Holddown Clips (Qty 3)	644 289 01
3c Platen including Captive Screws (Qty 2)	644 297 01
3d Platen Hinge Kit	644 286 01
3e VFD Display	644 282 01
3f Chart Drive Assembly	644 283 01
3g Motor Driver Board	644 281 01
3h Insulator - Display	101 230 01
3i Cable - Display to Motor Driver Board	644 285 01
3j Cable - Motor Driver Board to Pwr Supply Bd	644 285 02
3k Cable - Motor Driver Board to Motherboard	644 285 03
3l Wire Holddown Clips	644 288 01

4. *CASE*

All case assemblies include latch bracket, ground shield, gasket and rating label.

Case Assy. w/4 Conduit Openings	644 304 01
Case Assy. w/6 Conduit Openings	644 304 02

5. *MOUNTING BRACKETS*

Mounting Brackets (Qty 2) w/screws	644 296 01
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DESCRIPTION

PART NUMBER

ACCESSORIES

PRINTER ASSEMBLY PARTS

Pen Cartridge - Red & Green	605 008 02
Pen Cartridge - Red, Green, & Blue	605 008 03
Pen Cartridge - Red, Green, Blue, & Black	605 008 04

PRINTED CIRCUIT BOARDS

4a Power Supply Board	644 280 01
4b Cable - Power Supply Board to Motherboard	644 285 04
4c Motherboard - Recorder	644 279 01
4d Universal Input Board - One Input - Controller	644 272 04
Universal Input Board - Two Input - Controller	644 272 06
4d Universal Input Board - One Input - Recorder	644 272 03
Universal Input Board - Two Input - Recorder	644 272 05
Input Board(s) Hardware Installation Kits:	
Input Board One - includes cable assembly and mounting hardware	644 277 01
Input Board Two, - includes mounting hardware, Three, OR, Four no cable req'd	644 277 02
4e Relay/SSR Driver Board - 0 Relay 2 SSRD	644 266 01
Relay/SSR Driver Board - 0 Relay 4 SSRD	644 266 02
Relay/SSR Driver Board - 2 Relay 0 SSRD	644 266 03
Relay/SSR Driver Board - 2 Relay 2 SSRD	644 266 04
Relay/SSR Driver Board - 4 Relay 0 SSRD	644 266 05
Relay/SSRD Board(s) Hardware Installation Kits:	
Relay Board One - includes cable assembly and mounting hardware	644 276 01
Relay Board Two - includes mounting hardware, no cable req'd	644 276 02
Relay Add-On Kit	644 267 01
SSR Driver Add-On Kit	644 268 01
4f Non-isolated mA Output Board - One 4/20mA	644 294 01
Isolated mA Output Board - One 4/20mA	644 309 01
Isolated mA Output Board - Two 4/20mA	644 309 02
mA Output Board Hardware Installation Kits:	
mA Output One - includes cable assembly and mounting hardware	644 293 01
mA Output Two - includes mounting hardware no cable req'd	644 293 02
4g Transmitter Power Supply - One Transmitter	644 292 01
Transmitter Power Supply - Two Transmitters	644 292 02
Transmitter Power Supply - Three Transmitters	644 292 03

<i>DESCRIPTION</i>	<i>PART NUMBER</i>
Transmitter Power Supply - Four Transmitters	644 292 04
Transmitter Power Supply Hardware Installation Kit:	644 291 01
4h Communications Board RS-485/232	644 307 01
Communications Installation Kit	644 308 01
<i>CHARTS</i>	
10 inch - 120 Divisions	002 152 01
10 inch - 100 Divisions	002 152 02
10 inch - 70 Divisions	002 152 03
11 inch - 100 Divisions	002 152 04
12 inch - 70 Divisions	002 152 05
12 inch - 100 Divisions	002 152 06
12 inch - 120 Divisions	002 152 07
<i>PIPE MOUNTING</i>	
Pipe Mounting Kit	644 306 01
<i>BATTERY</i>	72801401

MRC 8000



PART DESCRIPTION *PART NUMBER* *LIST PRICE*

1. CONTROLLER BOARD – PROM ordered separately

<u>Pen 1</u>	<u>Pen 2</u>	<u>Line Voltage</u>	<u>"OLD"</u> <u>Before 8/97</u>	<u>"NEW"</u> <u>after 8/97</u>
RCDR	NONE	115VAC	SP0461470500	SP04614705CN00
CONT	NONE	115VAC	SP0461470500	SP04614705CN00
RCDR	RCDR	115VAC	SP0461470600	SP04614706CN00
CONT	CONT	115VAC	SP0461470600	SP04614706CN00
CONT	RCDR	115VAC	SP0461470600	SP04614706CN00

2. PROMS

Recorder	SP10115210
Controller	SP10115211
Recorder/Recorder	SP10115212
Controller/Controller	SP10115214
Controller/Recorder	SP10115213
Recorder w/Communications	SP10115215
Controller w/Communications	SP10115216
Recorder/Recorder/Comms	SP10115217
Controller/Controller/Comms	SP10115219
Controller/Recorder/Comms	SP10115218

3. CONTROLLER BOARD - PROM included

Key: XPS – Transmitter Power Supply (OP1)
COM – Communications (OP2)

<u>Pen 1</u>	<u>Pen 2</u>	<u>OP1</u>	<u>OP2</u>	<u>Line Voltage</u>	<u>"OLD"</u> <u>Before 8/97</u>	<u>"NEW"</u> <u>after 8/97</u>
RCDR	NONE	---	---	115VAC	64434701	64434701CN
CONT	NONE	---	---	115VAC	64434702	64434702CN
RCDR	RCDR	---	---	115VAC	64434704	64434704CN
CONT	CONT	---	---	115VAC	64434705	64434705CN
CONT	RCDR	---	---	115VAC	64434706	64434706CN
RCDR	NONE	XPS	---	115VAC	64434709	64434709CN
CONT	NONE	XPS	---	115VAC	64434710	64434710CN
RCDR	RCDR	XPS	---	115VAC	64434712	64434712CN
CONT	CONT	XPS	---	115VAC	64434713	64434713CN
CONT	RCDR	XPS	---	115VAC	64434714	64434714CN

3. CONTROLLER BOARD - PROM included (continued)

RCDR	NONE	—	COM	115VAC	64434717	64434717CN
CONT	NONE	—	COM	115VAC	64434718	64434718CN
RCDR	RCDR	—	COM	115VAC	64434720	64434720CN
CONT	CONT	—	COM	115VAC	64434721	64434721CN
CONT	RCDR	—	COM	115VAC	64434722	64434722CN
RCDR	NONE	XPS	COM	115VAC	64434725	64434725CN
CONT	NONE	XPS	COM	115VAC	64434726	64434726CN
RCDR	RCDR	XPS	COM	115VAC	64434728	64434728CN
CONT	CONT	XPS	COM	115VAC	64434729	64434729CN
CONT	RCDR	XPS	COM	115VAC	64434730	64434730CN
RCDR	NONE	—	—	230VAC	64434733	64434733CN
CONT	NONE	—	—	230VAC	64434734	64434734CN
RCDR	RCDR	—	—	230VAC	64434736	64434736CN
CONT	CONT	—	—	230VAC	64434737	64434737CN
CONT	RCDR	—	—	230VAC	64434738	64434738CN
RCDR	NONE	XPS	—	230VAC	64434741	64434741CN
CONT	NONE	XPS	—	230VAC	64434742	64434742CN
RCDR	RCDR	XPS	—	230VAC	64434744	64434744CN
CONT	CONT	XPS	—	230VAC	64434745	64434745CN
CONT	RCDR	XPS	—	230VAC	64434746	64434746CN
RCDR	NONE	—	COM	230VAC	64434749	64434749CN
CONT	NONE	—	COM	230VAC	64434750	64434750CN
RCDR	RCDR	—	COM	230VAC	64434752	64434752CN
CONT	CONT	—	COM	230VAC	64434753	64434753CN
CONT	RCDR	—	COM	230VAC	64434754	64434754CN
RCDR	NONE	XPS	COM	230VAC	64434757	64434757CN
CONT	NONE	XPS	COM	230VAC	64434758	64434758CN
RCDR	RCDR	XPS	COM	230VAC	64434760	64434760CN
CONT	CONT	XPS	COM	230VAC	64434761	64434761CN
CONT	RCDR	XPS	COM	230VAC	64434762	64434762CN

4. STEPPER DRIVER BOARD

	<u>"OLD"</u> Before 8/97	<u>"NEW"</u> after 8/97
1 PEN	64434601	SP04624905
2 PEN	64434602	SP04624906

MRC 8000

<i>PART DESCRIPTION</i>	<i>PART NUMBER</i>
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5. RELAY BOARD

1 RELAY 0 SSRD	SP04623705
2 RELAYS 0 SSRD	SP04623706
4 RELAYS 0 SSRD	SP04623707
0 RELAYS 1 SSRD	SP04623709
0 RELAYS 2 SSRD	SP04623710
0 RELAYS 4 SSRD	SP04623711
1 RELAY 1 SSRD	SP04623712
2 RELAYS 2 SSRD	SP04623713
1 RELAY 2 SSRD	SP04623714
2 RELAYS 1 SSRD	SP04623715

6. 4-20mA board

SINGLE 4-20mA	SP04623905
DUAL 4-20mA	SP04623906

7. DISPLAY BOARD

RECORDER	SP04624606
CONTROLLER	SP04624607
RECORDER/RECORDER	SP04624608
CONTROLLER/CONTROLLER	SP04624605
CONTROLLER/RECORDER	SP04624609

7. CASE ASSEMBLY

STANDARD	SP10129501
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8. COVER ASSEMBLY

RECORDER/GLASS/NEMA3	SP10133801
CONTROLLER/GLASS/NEMA3	SP10133802
RECORDER/RECORDER/GLASS/NEMA3	SP10133803
CONTROLLER/CONTROLLER/GLASS/NEMA3	SP10133804
CONTROLLER/RECORDER/GLASS/NEMA	SP10133805
RECORDER/PLASTIC/NEMA3	SP10133806
CONTROLLER/PLASTIC/NEMA3	SP10133807
RECORDER/RECORDER/PLASTIC/NEMA3	SP10133808
CONTROLLER/CONTROLLER/PLASTIC/NEMA3	SP10133809
CONTROLLER/RECORDER/PLASTIC/NEMA3	SP10133810
RECORDER/GLASS/NEMA3/DOOR LOCK	SP10133811
CONTROLLER/GLASS/NEMA3/DOOR LOCK	SP10133812
RECORDER/RECORDER/GLASS/NEMA3/ DOOR LOCK	SP10133813

<i>PART DESCRIPTION</i>	<i>PART NUMBER</i>
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8. COVER ASSEMBLY (continued)

CONTROLLER/CONTROLLER/GLASS/NEMA3/ DOOR LOCK	SP10133814
CONTROLLER/RECORDER/GLASS/NEMA3/ DOOR LOCK	SP10133815
RECORDER/PLASTIC/NEMA3/DOOR LOCK	SP10133816
CONTROLLER/PLASTIC/NEMA3/DOOR LOCK	SP10133817
RECORDER/RECORDER/PLASTIC/NEMA3/ DOOR LOCK	SP10133818
CONTROLLER/CONTROLLER/PLASTIC/NEMA3/ DOOR LOCK	SP10133819
CONTROLLER/RECORDER/PLASTIC/NEMA3/ DOOR LOCK	SP10133820
RECORDER/GLASS/NEMA4	SP10133821
CONTROLLER/GLASS/NEMA4	SP10133822
RECORDER/RECORDER/GLASS/NEMA4	SP10133823
CONTROLLER/CONTROLLER/GLASS/NEMA4	SP10133824
CONTROLLER/RECORDER/GLASS/NEMA4	SP10133825
RECORDER/PLASTIC/NEMA4	SP10133826
CONTROLLER/PLASTIC/NEMA4	SP10133827
RECORDER/RECORDER/PLASTIC/NEMA4	SP10133828
CONTROLLER/CONTROLLER/PLASTIC/NEMA4	SP10133829
CONTROLLER/RECORDER/PLASTIC/NEMA4	SP10133830

9. PLATEN ASSEMBLY

1 PEN	SP10129401
2 PEN	SP10129402

MRC 8000

PART DESCRIPTION	PART NUMBER
10. MISC.	
CHART MOTOR W/CABLE	SP10128102
PEN MOTOR W/CABLE	SP10128402
COMPLETE PEN MECHANISMS	
1 PEN	SP10129101
2 PEN	SP10129201
PEN ARM AND SCREWS (ANY PEN)	64433301
Contains:	
PEN ARM.....50031901	
2 EA SCREWS....61802008	
CASE COVER LATCH BRACKET	64430301
COVER LATCH/HOOK ASSEMBLY	64429801
Contains:	
"O" RING..... 60800401	
WASHER..... RSS207	
HOOK ASSY..... 0124802	
LATCH HANDLE ASSY..... 40046401	
PEN ARM LIFTER	SP40048402
PEN LIFTER BUSHING ASSEMBLY	64433401
Contains:	
BUSHING.....50032401	
INT. TOOTH FASTNER...61203502	
BATTERY KIT	64414502 (DISC) 64414501 (RECTANGLE)
CABLES:	
DISPLAY BOARD TO STEPPER DRIVER BOARD	SP10127801
12 CONDUCTOR FLATFLEX CABLE 6.75" – CONNECTS TO "J2" ON CONTROLLER BOARD	SP73604018
12 CONDUCTOR FLATFLEX CABLE 3" – CONNECTS TO "J3" ON CONTROLLER BOARD	SP73604017
8 CONDUCTOR FLATFLEX CABLE 3.5" – CONNECTS TO "J8" ON CONTROLLER BOARD (before 8/97)	SP73606001
8 CONDUCTOR CABLE 3.5" – CONNECTS TO "J8" ON CONTROLLER BOARD (after 8/97)	SP10134101

PART DESCRIPTION

PART NUMBER

ACCESSORIES

PEN CARTRIDGE

PEN 1 (RED)

60500402

(Sold on pkg of 5)

PEN 2 (GREEN)

60500401

(Sold in pkg of 5)

SHUNT RESISTORS

2.5 OHM

64411702

250 OHM

64411701

24 VOLT TRANSMITTER POWER SUPPLY KIT

115 VAC

64421101

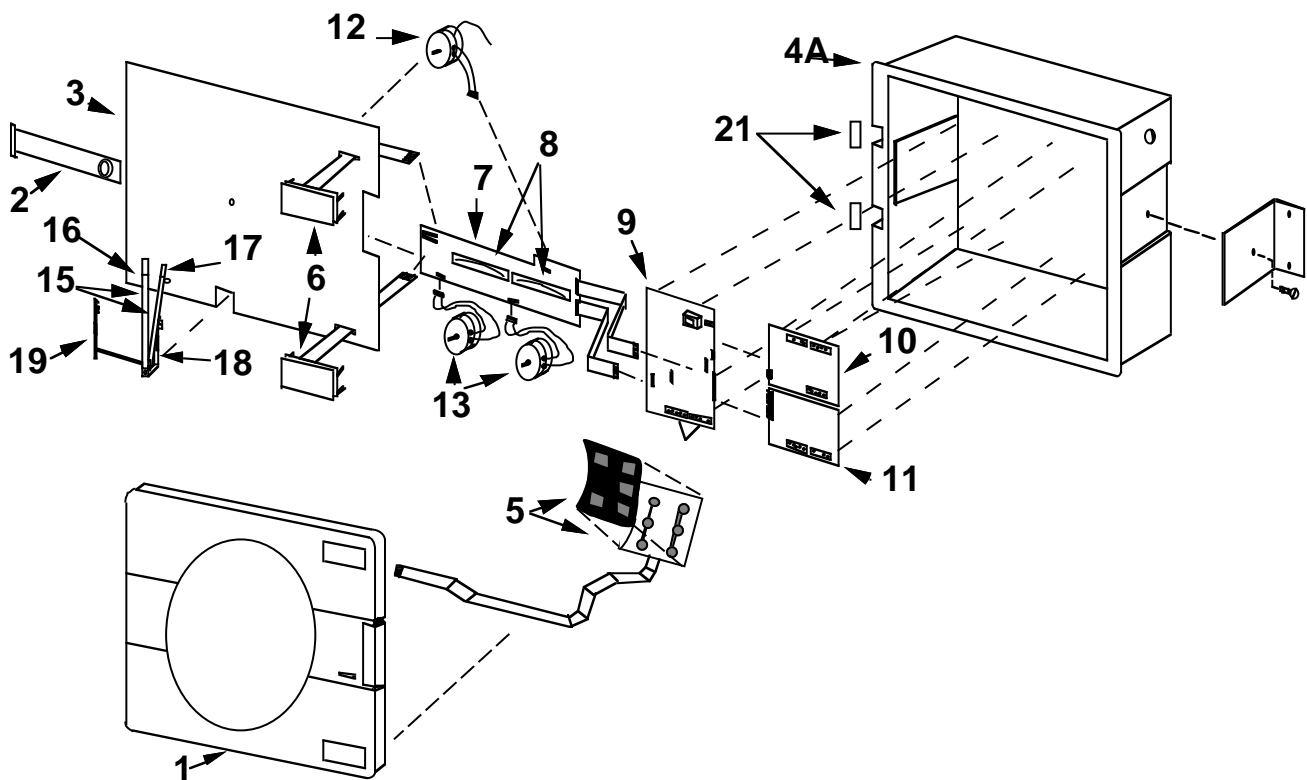
220 VAC

64421102

MOUNTING BRACKETS

64429601

MRC 7000 SERIES RECORDERS



ASSEMBLY

NOTE: The MRC Series Instruments identified by a black platen, require a different part number than those identified by a silver platen. Therefore, before selecting a spare part, *check the platen color of your instrument!*

MRC 7000 SERIES RECORDERS

ASSEMBLY 1.

COVER ASSEMBLY

All cover assemblies include gasket, latch handle with shaft assembly, trim, and N3 rating. KEYPAD NOT INCLUDED.

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
One Pen, without Door Lock	SP10102401
Two Pen, without Door Lock	SP10102402
One Pen, with Door Lock	SP10102403
Two Pen, with Door Lock	SP10102404

ASSEMBLY 1A.

COVER PARTS

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
Plastic Chart Window	RFTJ5322
Window Retainer	RFS3
<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
Plastic Display Window	10087201
Cover Hinges (includes 2 pins 2 plates & 4 screws)	64417701
Cover Latch Kit	64422501
Latch	RFS23P
Washer	RFS31
Screw	61807201
Cam Assembly	SPRFSS5
Cover Lock (replacement only)	60101601

ASSEMBLY 2.

CHART HUB STRIP

<u>PART DESCRIPTION</u>	<u>PART NUMBER SILVER PLATEN</u>	<u>PART NUMBER BLACK PLATEN</u>
7000	64414402	NOT REQUIRED
7700	64414403	NOT REQUIRED
7800	64414404	NOT REQUIRED

MRC 7000 SERIES RECORDERS

ASSEMBLY 3.

PLATEN ASSEMBLY

All platen assemblies include platen, display support assembly, chart drive motor assembly, stepper driver board including potentiometer segment(s) (if required), pen motor(s) assembly and cable assembly.

<u>PART DESCRIPTION</u>	<u>PART NUMBER SILVER PLATEN</u>	<u>PART NUMBER BLACK PLATEN</u>
One Pen		
7000	SP10089201	SP10128601
7700	SP10089204	SP10128601
7800	SP10089202	SP10128601
Two Pen		
7000	SP10089101	SP10128701
7700	SP10089104	SP10128701
7800	SP10089102	SP10128701

ASSEMBLY 3A.

PLATEN PARTS

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
Platen (Silver Platen)	50019202
Platen (Black Platen)	SP50031101
Display Support (Silver Platen)	10087103
Captive Screw	63302501
Captive Screw Retainer	63302502
Label Wiring	62512401
Label Model/Serial/Rating	62512201

MRC 7000 SERIES RECORDERS

ASSEMBLY 4.

CASE ASSEMBLY (not shown)

<u>PART DESCRIPTION</u>	<u>PART NUMBER SILVER PLATEN BELOW 96L24726</u>	<u>PART NUMBER BLACK PLATEN ABOVE 96L24727</u>
Includes hinges, ground shield and all hardware		
For use with less than 4 relays/ssrd	SP50007515	SP50032601
For use with 4 or more relays/ssrd	SP50007516	SP50032602
For use with less than 4 relays/ssrd and N3 rating	SP50007526	SP50032605
For use with 4 or more relays/ssrd and N3 rating	SP50007527	SP50032606

ASSEMBLY 4A.

CASE ONLY

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
For use with less than 4 relay/ssrd	SP50005002
For use with 4 or more relay/ssrd	SP50005003
For use with less than 4 relays/ssrd and N3 rating	SP50005004
For use with 4 or more relays/ssrd and N3 rating	SP50005005

MRC 7000 SERIES RECORDERS

ASSEMBLY 5.

KEYPAD

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>		
	<u>7000</u>	<u>7700</u>	<u>7800</u>
One Pen Recorder Only	64414701	64414701	64414708
Two Pen Recorder Only	64414701	64414701	64414708
One Pen Limit	64414709	Not Available	Not Available
One Pen Controller	64414702	64414702	Not Available
Two Pen Cont/Record	64414702	64414702	Not Available
Two Pen Cont/Cont	64414703	64414703	Not Available
One Pen Profiler	64414704	64414704	Not Available
Two Pen Prof/Record	64414704	64414704	Not Available
Two Pen Profiler	64414705	64414705	Not Available
One Pen Total	Not Available	Not Available	64414708
Two Pen Total	Not Available	Not Available	64414708

Above kits include switch panel with tape, overlay and installation instructions.

OVERLAY ONLY

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>		
	<u>7000</u>	<u>7700</u>	<u>7800</u>
One Pen Recorder	40031501	40031501	40031513
Two Pen Recorder	40031501	40031501	40031513
One Pen Limit	40031515	Not Available	Not Available
One Pen Control	40031502	40031502	Not Available
Two Pen Cont/Recorder	40031502	40031502	Not Available
Two Pen Contr/Contr.	40031503	40031503	Not Available
One Pen Profiler	40031504	40031504	Not Available
Two Pen Prof/Recorder	40031504	40031504	Not Available
Two Pen Profiler	40031505	40031505	Not Available
One Pen Total	Not Available	Not Available	40031513
Two Pen Total	Not Available	Not Available	40031513

MRC 7000 SERIES RECORDERS

SWITCH PANEL

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
With tape (NO OVERLAY)	SP40032103

ASSEMBLY 6.

DISPLAY CIRCUIT BOARD

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
7000, 7700	
Recorder	SP04614305
Limit (7000 only)	SP04614305
Controller	SP04614306
Profiler	SP04614307
7800	
All Models	SP04615405

FILTER

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
7000, 7700	
Recorder	40031601
Limit (7000 only)	40031601
Controller	40031602
Profiler	40031603
7800	
All Models	40031607
Aluminum Support	10087103

MRC 7000 SERIES RECORDERS

ASSEMBLY 7.

STEPPER DRIVER CIRCUIT BOARD

<u>PART DESCRIPTION</u>	<u>PART NUMBER SILVER PLATEN</u>	<u>PART NUMBER BLACK PLATEN</u>
One Pen		
7000	SP04614905	SP04623805
7700	SP04614909	SP04623805
7800	SP04614907	SP04623805
Two Pen		
7000	SP04614906	SP04623806
7700	SP04614910	SP04623806
7800	SP04614908	SP04623806
Ribbon Cables		
Short		40050201
Long		40050301

ASSEMBLY 8.

POTENTIOMETER SEGMENT

PART NUMBER

Silver Platen SP40014602
Black Platen Not Required

ASSEMBLY 9.

CONTROLLER CIRCUIT BOARD - 7000

Controller circuit board - PROM ordered separately

<u>PART DESCRIPTION</u>			<u>PART NUMBER</u>
<u>Pen 1</u>	<u>Pen 2</u>	<u>Line Voltage</u>	
RCDR	NONE	115VAC	SP0461470500
CONT	NONE	115VAC	SP0461470500
RCDR	RCDR	115VAC	SP0461470600
CONT	CONT	115VAC	SP0461470600
CONT	RCDR	115VAC	SP0461470600
PROF	NONE	115VAC	SP0461470700
PROF	RCDR	115VAC	SP0461470800
PROF	CONT	115VAC	SP0461470800

MRC 7000 SERIES RECORDERS

Controller circuit board - PROM included 7000 Series

KEY: XPS - Transmitter Power Supply (OP 1)
COM - Communications (OP 2)

<u>PART DESCRIPTION</u>					<u>PART NUMBER</u> <u>SILVER PLATEN</u>	<u>PART NUMBER</u> <u>BLACK PLATEN</u>
<u>Pen 1</u>	<u>Pen 2</u>	<u>OP 1</u>	<u>OP 2</u>	<u>Line Voltage</u>		
RCDR	NONE	—	—	115VAC	SP0461470551	64431601
CONT	NONE	—	—	115VAC	SP0461470552	64431602
PROF	NONE	—	—	115VAC	SP0461470754	64431603
RCDR	RCDR	—	—	115VAC	SP0461470656	64431604
CONT	CONT	—	—	115VAC	SP0461470653	64431605
CONT	RCDR	—	—	115VAC	SP0461470657	64431606
PROF	RCDR	—	—	115VAC	SP0461470858	64431607
PROF	CONT	—	—	115VAC	SP0461470855	64431608
RCDR	NONE	XPS	—	115VAC	SP0461471251	64431609
CONT	NONE	XPS	—	115VAC	SP0461471252	64431610
PROF	NONE	XPS	—	115VAC	SP0461472654	64431611
RCDR	RCDR	XPS	—	115VAC	SP0461471956	64431612
CONT	CONT	XPS	—	115VAC	SP0461471953	64431613
CONT	RCDR	XPS	—	115VAC	SP0461471957	64431614
PROF	RCDR	XPS	—	115VAC	SP0461473358	64431615
PROF	CONT	XPS	—	115VAC	SP0461473355	64431616
RCDR	NONE	—	COM	115VAC	SP0461471059	64431617
CONT	NONE	—	COM	115VAC	SP0461471060	64431618
PROF	NONE	—	COM	115VAC	SP0461472462	64431619
RCDR	RCDR	—	COM	115VAC	SP0461471764	64431620
CONT	CONT	—	COM	115VAC	SP0461471761	64431621
CONT	RCDR	—	COM	115VAC	SP0461471765	64431622
PROF	RCDR	—	COM	115VAC	SP0461473166	64431623
PROF	CONT	—	COM	115VAC	SP0461473163	64431624
RCDR	NONE	XPS	COM	115VAC	SP0461471459	64431625
CONT	NONE	XPS	COM	115VAC	SP0461471460	64431626
PROF	NONE	XPS	COM	115VAC	SP0461472862	64431627
RCDR	RCDR	XPS	COM	115VAC	SP0461472164	64431628
CONT	CONT	XPS	COM	115VAC	SP0461472161	64431629
CONT	RCDR	XPS	COM	115VAC	SP0461472165	64431630
PROF	RCDR	XPS	COM	115VAC	SP0461473566	64431631
PROF	CONT	XPS	COM	115VAC	SP0461473563	64431632
RCDR	NONE	—	—	230VAC	SP0461470951	64431633
CONT	NONE	—	—	230VAC	SP0461470952	64431634
PROF	NONE	—	—	230VAC	SP0461472354	64431635
RCDR	RCDR	—	—	230VAC	SP0461471656	64431636
CONT	CONT	—	—	230VAC	SP0461471653	64431637
CONT	RCDR	—	—	230VAC	SP0461471657	64431638
PROF	RCDR	—	—	230VAC	SP0461473058	64431639
PROF	CONT	—	—	230VAC	SP0461473055	64431640

MRC 7000 SERIES RECORDERS

<u>PART DESCRIPTION</u>					<u>PART NUMBER</u> <u>SILVER PLATEN</u>	<u>PART NUMBER</u> <u>BLACK PLATEN</u>
<u>Pen 1</u>	<u>Pen 2</u>	<u>OP 1</u>	<u>OP 2</u>	<u>Line Voltage</u>		
RCDR	NONE	XPS	—	230VAC	SP0461471351	64431641
CONT	NONE	XPS	—	230VAC	SP0461471352	64431642
PROF	NONE	XPS	—	230VAC	SP0461472754	64431643
RCDR	RCDR	XPS	—	230VAC	SP0461472056	64431644
CONT	CONT	XPS	—	230VAC	SP0461472053	64431645
CONT	RCDR	XPS	—	230VAC	SP0461472057	64431646
PROF	RCDR	XPS	—	230VAC	SP0461473458	64431647
PROF	CONT	XPS	—	230VAC	SP0461473455	64431648
RCDR	NONE	—	COM	230VAC	SP0461471159	64431649
CONT	NONE	—	COM	230VAC	SP0461471160	64431650
PROF	NONE	—	COM	230VAC	SP0461472562	64431651
RCDR	RCDR	—	COM	230VAC	SP0461471864	64431652
CONT	CONT	—	COM	230VAC	SP0461471861	64431653
CONT	RCDR	—	COM	230VAC	SP0461471865	64431654
PROF	RCDR	—	COM	230VAC	SP046173266	64431655
PROF	CONT	—	COM	230VAC	SP0461473263	64431656
RCDR	NONE	XPS	COM	230VAC	SP0461471559	64431657
CONT	NONE	XPS	COM	230VAC	SP0461471560	64431658
PROF	NONE	XPS	COM	230VAC	SP0461472962	64431659
RCDR	RCDR	XPS	COM	230VAC	SP0461472264	64431660
CONT	CONT	XPS	COM	230VAC	SP0461472261	64431661
CONT	RCDR	XPS	COM	230VAC	SP0461472265	64431662
PROF	RCDR	XPS	COM	230VAC	SP0461473666	64431663
PROF	CONT	XPS	COM	230VAC	SP0461473663	64431664
<i>The following are for "AW" Special only:</i>						
PROF	CONT	—	COM	115VAC AW	SP0461473963	64431665
CONT	CONT	—	—	115VAC AW	SP0461473753	64431666
RCDR	RCDR	—	—	115VAC AW	SP0461473756	64431667
PROF	CONT	—	—	115VAC AW	SP0461473855	64431668

MRC 7000 SERIES RECORDERS

CONTROLLER CIRCUIT BOARD - 7700

Controller circuit board - PROM ordered separately

<u>PART DESCRIPTION</u>			<u>PART NUMBER</u>
<u>Pen 1</u>	<u>Pen 2</u>	<u>Line Voltage</u>	
RCDR	NONE	115VAC	SP0461479000
CONT	NONE	115VAC	SP0461479000
RCDR	RCDR	115VAC	SP0461479000
CONT	CONT	115VAC	SP0461479000
PROF	NONE	115VAC	SP0461479000
PROF	CONT	115VAC	SP0461479000

Controller circuit board - PROM included

KEY: XPS - Transmitter Power Supply (OP1)
COM - Communications (OP2)

<u>PART DESCRIPTION</u>					<u>PART NUMBER</u> <u>SILVER PLATEN</u>	<u>PART NUMBER</u> <u>BLACK PLATEN</u>
<u>Pen 1</u>	<u>Pen 2</u>	<u>OP1</u>	<u>OP2</u>	<u>Line Voltage</u>		
RCDR	NONE	—	—	115VAC	SP0461479075	64432801
CONT	NONE	—	—	115VAC	SP0461479076	64432802
PROF	NONE	—	—	115VAC	SP0461479077	64432803
RCDR	RCDR	—	—	115VAC	SP0461479078	64432804
CONT	CONT	—	—	115VAC	SP0461479079	64432805
PROF	CONT	—	—	115VAC	SP0461479080	64432806
RCDR	NONE	XPS	—	115VAC	SP0461479475	64432807
CONT	NONE	XPS	—	115VAC	SP0461479476	64432808
PROF	NONE	XPS	—	115VAC	SP0461479477	64432809
RCDR	RCDR	XPS	—	115VAC	SP0461479478	64432810
CONT	CONT	XPS	—	115VAC	SP0461479479	64432811
PROF	CONT	XPS	—	115VAC	SP0461479480	64432812
RCDR	NONE	—	COM	115VAC	SP0461479281	64432813
CONT	NONE	—	COM	115VAC	SP0461479282	64432814
PROF	NONE	—	COM	115VAC	SP0461479283	64432815
RCDR	RCDR	—	COM	115VAC	SP0461479284	64432816
CONT	CONT	—	COM	115VAC	SP0461479285	64432817
PROF	CONT	—	COM	115VAC	SP0461479286	64432818
RCDR	NONE	XPS	COM	115VAC	SP0461479681	64432819
CONT	NONE	XPS	COM	115VAC	SP0461479682	64432820
PROF	NONE	XPS	COM	115VAC	SP0461479683	64432821
RDCR	RCDR	XPS	COM	115VAC	SP0461479684	64432822
CONT	CONT	XPS	COM	115VAC	SP0461479685	64432823
PROF	CONT	XPS	COM	115VAC	SP0461479686	64432824
RCDR	NONE	—	—	230VAC	SP0461479175	64432825
CONT	NONE	—	—	230VAC	SP0461479176	64432826
PROF	NONE	—	—	230VAC	SP0461479177	64432827

MRC 7000 SERIES RECORDERS

<u>PART DESCRIPTION</u>					<u>PART NUMBER</u> <u>SILVER PLATEN</u>	<u>PART NUMBER</u> <u>BLACK PLATEN</u>
RCDR	RCDR	—	—	230VAC	SP0461479178	64432828
CONT	CONT	—	—	230VAC	SP0461479179	64432829
PROF	CONT	—	—	230VAC	SP0461479180	64432830
RCDR	NONE	XPS	—	230VAC	SP0461479575	64432831
CONT	NONE	XPS	—	230VAC	SP0461479576	64432832
PROF	NONE	XPS	—	230VAC	SP0461479577	64432833
RCDR	NONE	XPS	—	230VAC	SP0461479578	64432834
CONT	CONT	XPS	—	230VAC	SP0461479579	64432835
PROF	CONT	XPS	—	230VAC	SP0461479580	64432836
RCDR	NONE	—	COM	230VAC	SP0461479381	64432837
CONT	NONE	—	COM	230VAC	SP0461479382	64432838
PROF	NONE	—	COM	230VAC	SP0461479383	64432839
RCDR	RCDR	—	COM	230VAC	SP0461479384	64432840
CONT	CONT	—	COM	230VAC	SP0461479385	64432841
PROF	CONT	—	COM	230VAC	SP0461479386	64432842
RCDR	NONE	XPS	COM	230VAC	SP0461479781	64432843
CONT	NONE	XPS	COM	230VAC	SP0461479782	64432844
PROF	NONE	XPS	COM	230VAC	SP0461479783	64432845
RCDR	RCDR	XPS	COM	230VAC	SP0461479784	64432846
CONT	CONT	XPS	COM	230VAC	SP0461479785	64432847
PROF	CONT	XPS	COM	230VAC	SP0461479786	64432848

MRC 7000 SERIES RECORDERS

CONTROLLER CIRCUIT BOARD - 7800

Controller circuit board - PROM ordered separately

<u>PART DESCRIPTION</u>			<u>PART NUMBER</u>
<u>Pen 1</u>	<u>Pen 2</u>	<u>Line Voltage</u>	
RCDR	NONE	115VAC	SP0461475500
RCDR/TOT	NONE	115VAC	SP0461475500
RCDR/TOT/LOG	NONE	115VAC	SP0461477100
RCDR	RCDR	115VAC	SP0461475600
RCDR/TOT	RCDR/TOT	115VAC	SP0461475600
RCDR/TOT/LOG	RCDR/TOT/LOG	115VAC	SP0461477200

Controller circuit board - PROM included

KEY: XPS - Transmitter Power Supply (OP1)
COM - Communications (OP2)

<u>PART DESCRIPTION</u>					<u>PART NUMBER</u>	<u>PART NUMBER</u>
<u>Pen 1</u>	<u>Pen 2</u>	<u>OP1</u>	<u>OP2</u>	<u>Line Voltage</u>	<u>SILVER PLATEN</u>	<u>BLACK PLATEN</u>
RCDR	NONE	—	—	115VAC	SP0461475574	64433701
RCDR/TOT	NONE	—	—	115VAC	SP0461475572	64433702
RCDR/TOT/LOG	NONE	—	—	115VAC	SP0461477172	64433703
RCDR	RCDR	—	—	115VAC	SP0461475670	64433704
RCDR/TOT	RCDR/TOT	—	—	115VAC	SP0461475673	64433705
RCDR/TOT/LOG	RCDR/TOT/LOG	—	—	115VAC	SP0461477273	64433706
RCDR	NONE	XPS	—	115VAC	SP0461476274	64433707
RCDR/TOT	NONE	XPS	—	115VAC	SP0461476272	64433708
RCDR/TOT/LOG	NONE	XPS	—	115VAC	SP0461477572	64433709
RCDR	RCDR	XPS	—	115VAC	SP0461476970	64433710
RCDR/TOT	RCDR/TOT	XPS	—	115VAC	SP0461476973	64433711
RCDR/TOT/LOG	RCDR/TOT/LOG	XPS	—	115VAC	SP0461477673	64433712
RCDR	NONE	—	—	230VAC	SP0461475974	64433713
RCDR/TOT	NONE	—	—	230VAC	SP0461475972	64433714
RCDR/TOT/LOG	NONE	—	—	230VAC	SP0461477372	64433715
RCDR	RCDR	—	—	230VAC	SP0461476670	64433716
RCDR/TOT	RCDR/TOT	—	—	230VAC	SP0461476673	64433717
RCDR/TOT/LOG	RCDR/TOT/LOG	—	—	230VAC	SP0461477473	64433718
RCDR	NONE	XPS	—	230VAC	SP0461476374	64433719
RCDR/TOT	NONE	XPS	—	230VAC	SP0461476372	64433720
RCDR/TOT/LOG	NONE	XPS	—	230VAC	SP0461477772	64433721
RCDR	RCDR	XPS	—	230VAC	SP0461477070	64433722
RCDR/TOT	RCDR/TOT	XPS	—	230VAC	SP0461477073	64433723
RCDR/TOT/LOG	RCDR/TOT/LOG	XPS	—	230VAC	SP0461477873	64433724

MRC 7000 SERIES RECORDERS

ASSEMBLY 10.

RELAY/SSR DRIVER CIRCUIT BOARD - 7000, 7700, 7800

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
1 Relay	04614609
2 Relays	04614605
4 Relays	04614606
6 Relays	SP04614607
1 SSR Driver	SP04614610
2 SSR Drivers	SP04614611
4 SSR Drivers	SP04614612
6 SSR Drivers	SP04614613
8 SSR Drivers	SP04614614
1 Relay / 1 SSR Driver	SP04614615
1 Relay / 2 SSR Drivers	SP04614616
1 Relay / 4 SSR Drivers	SP04614617
1 Relay / 6 SSR Drivers	SP04614618
2 Relays / 1 SSR Driver	SP04614619
2 Relays / 2 SSR Drivers	SP04614620
2 Relays / 4 SSR Drivers	SP04614621
2 Relays / 6 SSR Drivers	SP04614622
4 Relays / 4 SSR Drivers	SP04614625
6 Relays / 2 SSR Drivers	SP04614608
4 Relays / 1 SSR Driver	SP04614623
4 Relays / 2 SSR Drivers	SP04614624
6 Relays / 1 SSR Driver	SP04614626
1 Relay SPDT	SP04617009
2 Relays SPDT	SP04617005
2 Relays SPDT / 2 Relays SPST	SP04617022
1 Relay SPDT/1 SSR Driver	SP04617010
1 Relay SPDT/2 SSR Drivers	SP04617011
1 Relay SPDT/4 SSR Drivers	SP04617012
2 Relay SPDT/1 SSR Driver	SP04617013
2 Relay SPDT/2 SSR Drivers	SP04617014
2 Relays SPDT / 4 SSR Drivers	SP04617021
2 Relay SPDT/2 Relay SPST, 1 SSR Driver	SP04617023

Note: If ordering as an add-on, order kit 64422001
(assorted screws to mount board)

MRC 7000 SERIES RECORDERS

ASSEMBLY 11.

CURRENT OUTPUT CIRCUIT BOARD

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
One 4/20MA Output	04614805
Two 4/20MA Output	04614806
Three 4/20MA Output	SP04614807
Four 4/20MA Output	SP04614808

Note: If ordering as an add-on, order kit 64422001
(Assorted screws to mount board)

ASSEMBLY 12.

CHART DRIVE MOTOR ASSEMBLY

<u>PART DESCRIPTION</u>	<u>PART NUMBER SILVER PLATEN</u>	<u>PART NUMBER BLACK PLATEN</u>
Chart Drive Motor Assembly	SP10088701	SP10128101
Flange Assembly	SP10040302	SP10128001
Chart Drive Motor	72700802	72702001

ASSEMBLY 13.

PEN DRIVE MOTOR ASSEMBLY

<u>PART DESCRIPTION</u>	<u>PART NUMBER SILVER PLATEN</u>	<u>PART NUMBER BLACK PLATEN</u>
Pen Drive Motor Assembly	SP10088801	SP10128401

ASSEMBLY 15.

PEN BLADE (includes Screws)

<u>PART DESCRIPTION</u>	<u>PART NUMBER SILVER PLATEN</u>	<u>PART NUMBER BLACK PLATEN</u>
Pen Blade (Includes Screws)	64430501	64431701

MRC 7000 SERIES RECORDERS

ASSEMBLY 18.

PEN 1 WIPER ASSEMBLY

<u>PART DESCRIPTION</u>	<u>PART NUMBER SILVER PLATEN</u>	<u>PART NUMBER BLACK PLATEN</u>
Pen 1 Wiper Assembly	SP10039501	NOT REQUIRED

ASSEMBLY 19.

PEN 2 WIPER ASSEMBLY

<u>PART DESCRIPTION</u>	<u>PART NUMBER SILVER PLATEN</u>	<u>PART NUMBER BLACK PLATEN</u>
Pen 2 Wiper Assembly	SP10039601	NOT REQUIRED

ASSEMBLY 20.

COVER HINGE (not shown)

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
Includes 2 pins, 2 plates, 4 screws	64417701

ASSEMBLY 21.

MISCELLANEOUS (not shown)

<u>PART DESCRIPTION</u>		<u>PART NUMBER</u>
TRANSFORMER	Standard 115VAC	73402401
TRANSFORMER	24V Power Supply (115VAC Line Voltage)	73402501
TRANSFORMER	230VAC	73402402
TRANSFORMER	24V Power Supply (230VAC Line Voltage)	73402502
MICROCOMPUTER	8032	70909101
RELAY (REPLACEMENT)	SPST or SPDT	71802902
BATTERY KIT	Disc	64414502
	Rectangle	64414501
CHART DRIVE NUT	Silver Platen	SPRFTS6755

MRC 7000 SERIES RECORDERS

PROMS

<u>PART DESCRIPTION</u>	<u>PART NUMBER SILVER PLATEN</u>	<u>PART NUMBER BLACK PLATEN</u>
7000		
Recorder	SP10060151	SP10115251
Limit	SP10060151	SP10115251
Controller	SP10060152	SP10115252
Controller/Controller	SP10060153	SP10115253
Profiler	SP10060154	SP10115254
Profiler/Controller	SP10060155	SP10115255
Recorder/Recorder	SP10060156	SP10115256
Controller/Recorder	SP10060157	SP10115257
Profiler/Recorder	SP10060158	SP10115258
Recorder/Communication	SP10060159	SP10115259
Controller/Communication	SP10060160	SP10115260
Cont/Cont/Communication	SP10060161	SP10115261
Profiler/Communication	SP10060162	SP10115262
Prof/Cont/Communication	SP10060163	SP10115263
Rcdr/Rcdr/Communication	SP10060164	SP10115264
Cont/Rcdr/Communication	SP10060165	SP10115265
Prof/Rcdr/Communication	SP10060166	SP10115266

<u>PART DESCRIPTION</u>	<u>PART NUMBER SILVER PLATEN</u>	<u>PART NUMBER BLACK PLATEN</u>
7700		
Recorder	SP10060175	SP10115275
Controller	SP10060176	SP10115276
Controller/Controller	SP10060179	SP10115279
Profiler	SP10060177	SP10115277
Profiler/Controller	SP10060180	SP10115280
Recorder/Recorder	SP10060178	SP10115278
Recorder/Communications	SP10060181	SP10115281
Controller/Communications	SP10060182	SP10115282
Cont/Cont/Communications	SP10060185	SP10115285
Profiler/Communications	SP10060183	SP10115283
Prof/Cont/Communications	SP10060186	SP10115286
Rcdr/Rcdr/Communications	SP10060184	SP10115284
7800		
1 Pen Recorder	SP10060170	SP10115270
1 Pen Rcdr with Total	SP10060172	SP10115272
2 Pen Rcdr with Total	SP10060173	SP10115273
2 Pen Recorder	SP10060174	SP10115274
1 Pen Rcdr/Total/DataLog	SP10060172	SP10115272
2 Pen Rcdr/Total/DataLog	SP10060173	SP10115273

MRC 7000 SERIES RECORDERS

ACCESSORIES

ASSEMBLY 14.

MOUNTING BRACKET

PART DESCRIPTION

PART NUMBER

Mounting Bracket

64402001

ASSEMBLY 16.

PEN 1 CARTRIDGE

PART DESCRIPTION

PART NUMBER

Red replacement cartridges
(Sold in pkg of 5)

60500402

ASSEMBLY 17.

PEN 2 CARTRIDGE

PART DESCRIPTION

PART NUMBER

Green replacement cartridges
(Sold in pkg of 5)

60500401

MRC 7000 SERIES RECORDERS

<u>PART DESCRIPTION</u>	<u>PART NUMBER</u>
RELAY KIT SPST (FIELD ADD-ON)	64420701
RELAY KIT SPDT (FIELD ADD-ON) (SPDT Relay Circuit Board MUST be present)	64421601
SSR DRIVER KIT (FIELD ADD-ON)	64421401
SHUNT RESISTOR 2.5 OHM	64411702
250 OHM	64411701
24 VOLT TRANSMITTER POWER SUPPLY 115VAC	64421101
230VAC	64421102

COMMUNICATIONS KIT (FIELD ADD-ON)

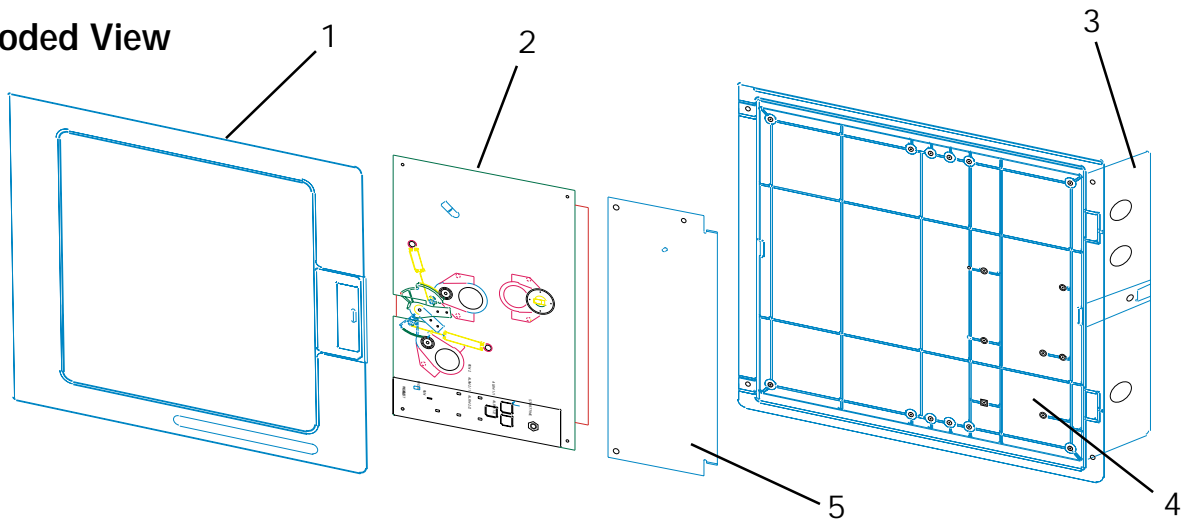
<u>PART DESCRIPTION</u>	<u>PART NUMBER SILVER PLATEN</u>	<u>PART NUMBER BLACK PLATEN</u>
7000		
Model 7100	64420801	64432201
Model 7110	64420802	64432202
Model 7200	64420803	64432203
Model 7210	64420806	64432206
Model 7220	64420804	64432204
Model 7300	64420805	64432205
Model 7310	64420807	64432207
Model 7320	64420808	64432208
7700		
Model 771	64420809	64432209
Model 772	64420810	64432210
Model 773	64420813	64432213
Model 774	64420811	64432211
Model 775	64420812	64432212
Model 776	64420814	64432214

MRC 5000



ASSEMBLY

Exploded View



ASSEMBLY 1

COVER ASSEMBLY

All cover assemblies include cover, gasket, latch and pins used to attach cover to case.

<u>Parts Description</u>	<u>Part Number</u>
Std. MRC 5000	64432301
Std. MRC 5000 w/ Door Lock	64432302
NEMA 4X MRC 5000	64432303
Std. No Label	64432304
Std. No Label w/ Door Lock	64432305
NEMA 4X No Label	64432306
Window & Fasteners	64433001

ASSEMBLY 2

PLATEN ASSEMBLY

All platen assemblies include platen, display circuit board with key pad, processor circuit board, pen motor assembly, chart motor assembly, pen blade(s) and pen(s).

Recorder

<u>Parts Description</u>	<u>Part Number</u>
One Pen Std. Voltage	64432401
Two Pen Std. Voltage	64432402

One Pen w/Limit Std. Volt.	64432403
Two Pen w/Limit Std. Volt.	64432404

<u>Parts Description</u>	<u>Part Number</u>
One Pen w/Limit & Alarm & Comms Std. Volt.	64432413
Two Pen w/Limit & Alarm & Comms Std. Volt.	64432414

One Pen w/Alarm Std. Volt.	64432417
Two Pen w/Alarm Std. Volt.	64432418

One Pen w/Alarm & Comms Std. Volt.	64432421
Two Pen w/Alarm & Comms Std. Volt.	64432422

One Pen Low Voltage	64432425
Two Pen Low Voltage	64432426

One Pen w/Limit & Alarm Low Volt.	64432427
Two Pen w/Limit & Alarm Low Volt.	64432428

One Pen w/Limit & Alarm & Comms Low Volt.	64432437
Two Pen w/Limit & Alarm & Comms Low Volt.	64432438

One Pen w/Alarm Low Volt.	64432441
Two Pen w/Alarm Low Volt.	64432442

One Pen w/Alarm & Comms Low Volt.	64432445
Two Pen w/Alarm & Comms Low Volt.	64432446

Controller

One Pen w/Alarm & Configurator Std. Volt.	64432451
One Pen w/Alarm, Comms & Configurator Std. Volt.	64432452
Two Pen w/Limit, Alarm & Configurator Std. Volt.	64432453
Two Pen w/Limit, Alarm, Comms & Config. Std. Volt.	64432454
Two Pen w/Alarm & Configurator Std. Volt.	64432455
Two Pen w/Alarm, Comms & Config. Std. Volt.	64432456
One Pen w/Alarm & Config. Low Volt.	64432459
One Pen w/Alarm, Comms & Config. Low Volt.	64432460
Two Pen w/Limit, Alarm & Config. Low Volt.	64432461
Two Pen w/Limit, Alarm, Comms & Config. Low Volt.	64432462
Two Pen w/Alarm & Config. Low Volt.	64432463
Two Pen w/Alarm, Comms & Config. Std. Volt.	64432464

MRC 5000

ASSEMBLY 3

CASE ASSEMBLY

Includes pins for mounting door, brackets for platen, access door hardware.

<u>Parts Description</u>	<u>Part Number</u>
Case Assembly	64432501

ASSEMBLY 4

RELAY CIRCUIT BOARD

<u>Parts Description</u>	<u>Part Number</u>
Relay Position 1 2 3 4	64432601
Relay Position 1	64432602
Relay Position 3	64432603
Relay Position 1 2	64432604
Relay Position 3 4	64432605
Relay Position 1 3	64432606
Relay Position 1 2 3	64432607
Relay Position 1 3 4	64432608
Relay Mounting Screws	64433201
Relay Field Replacement Kit	64434801

ASSEMBLY 5

ACCESS DOOR

Includes Access Door, Mounting Brackets(top and bottom), Captive Screws, Labels and Vinyl Pocket.

<u>Parts Description</u>	<u>Part Number</u>
Access Door	64432701

ASSEMBLY 6 Misc. Parts

TRANSMITTER POWER SUPPLY

<u>Parts Description</u>	<u>Part Number</u>
24V DC Transmitter Power Supply	64433801

PEN BLADE

Includes Mounting Bracket

<u>Parts Description</u>	<u>Part Number</u>
Pen Blade	64431701

PROGRAMMING CARD

<u>Parts Description</u>	<u>Part Number</u>
Programming Card	FORM3763

CHART FLANGE ASSEMBLY

<u>Parts Description</u>	<u>Part Number</u>
Chart Flange Assembly	64432901

MOUNTING BRACKET

<u>Parts Description</u>	<u>Part Number</u>
Mounting Bracket	64402006

REPLACEMENT MOTOR

	<u>Part Number</u>
Chart Motor	SP10128103
Pen Motor	SP10128407

MRC 5000

MRC 5000 RECORDER & RECORDER/CONTROLLER ACCESSORIES

PEN CARTRIDGE(S)

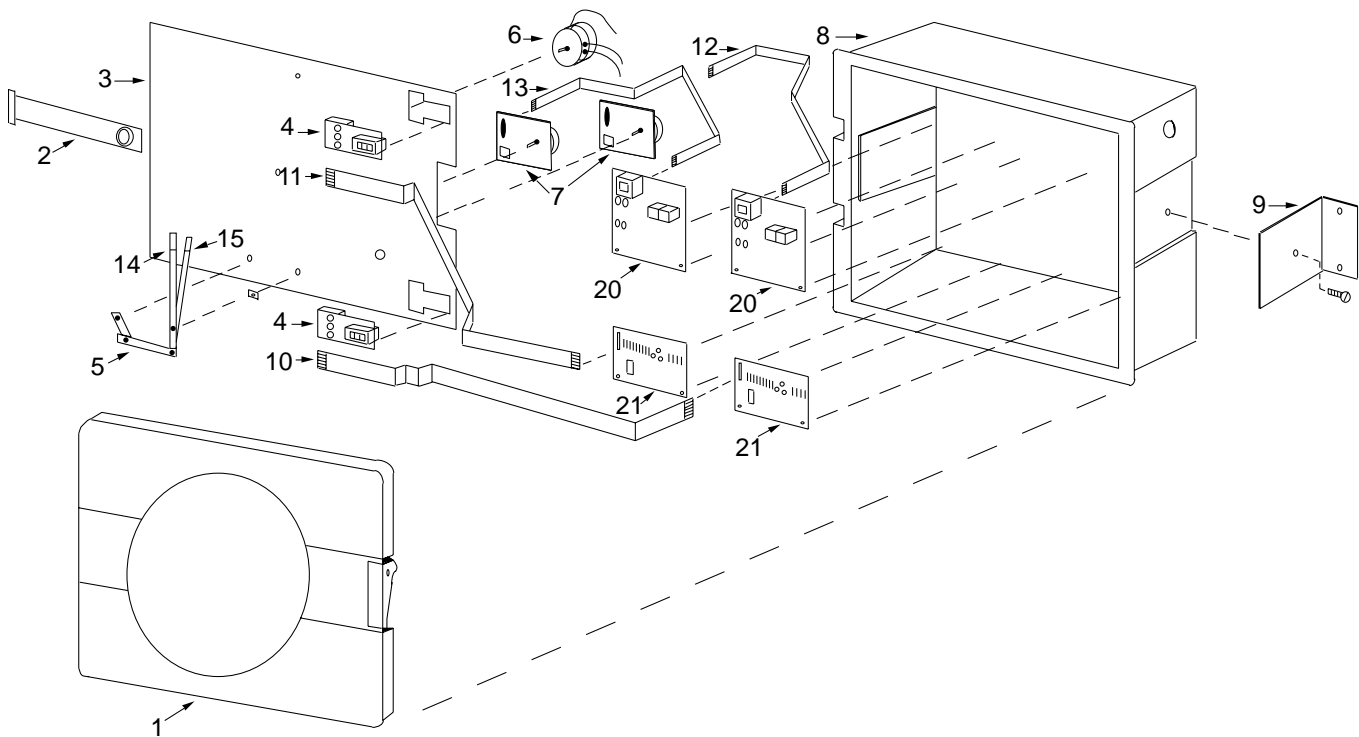
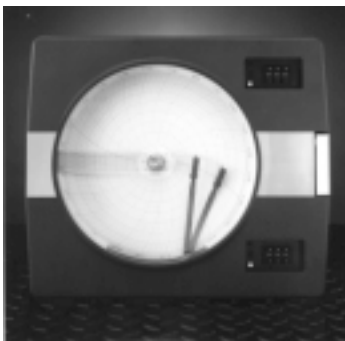
<u>Parts Description</u>	<u>Part Number</u>
Red Cartridge (Sold in pkg. of 5)	60500402
Green Cartridges (Sold in pkg of 5)	60500401

CALIBRATION LABEL

<u>Parts Description</u>	<u>Part Number</u>
Calibration Label (Quantity of 10)	64433101

ADAPTER PLATE

<u>Parts Description</u>	<u>Part Number</u>
Plate to Mount MRC 5000 in MRC 7000 cutout	50033301



ASSEMBLY

KIT NUMBER

1. COVER ASSEMBLY

All cover assemblies include gasket, latch handle with shaft assembly, hinges, pins, and trim

No Set Point Window, Plastic	64412916
One Set Point Window, Plastic	64412906
Two Set Point Windows, Plastic	64412907
One Set Point Window, Door Lock	64412914
Two Set Point Windows , Door Lock	64412915
One Set Point Window, Plastic Chart Window	64412906
Two Set Point Windows, Plastic Chart Window	64412907
One Set Point Window, Door Lock, Plastic Chart Window	64412914

4100 SERIES

<i>ASSEMBLY</i>	<i>KIT NUMBER</i>
Two Set Point Windows, Door Lock, Plastic Chart Window	64412915
One Set Point Window, Event Pen	64412906
Two Set Point Windows, Event Pen	64412907
One Set Point Window, Plastic Chart Window, Event Pen, NEMA 3	64412906
Two Set Point Windows, Plastic Chart Window, Event Pen, NEMA 3	64412907
One Set Point Window, Door Lock, Plastic Chart Window, Event Pen, NEMA 3	64412914
Two Set Point Windows, Door Lock, Plastic Chart Window, Event Pen, NEMA 3	64412915
No Set Point Window, Plastic Chart Window	64412916
No Set Point Window, Event Pen	64412916
No Set Point Window, Plastic Chart Window, Event Pen	64412916
One Set Point Window, Event Pen, NEMA 3	64412906
One Set Point Window, Plastic Chart Window, NEMA 3 or "F"	64412906
Two Set Point Windows, Plastic Chart Window, NEMA 3 or "F"	64412907
One Set Point Window, Door Lock, Plastic Chart Window, NEMA 3 or "F"	64412914
Two Set Point Windows, Door Lock Plastic Chart Window, NEMA 3 or "F"	64412915
No Set Point Window, Plastic Chart Window, NEMA 3 or "F"	64412916
No Set Point Window, Door Lock, Plastic Chart Window, NEMA 3 or "F"	64412925
No Set Point Window, Plastic Chart Window, Event Pen, NEMA 3 or "F"	64412916

ASSEMBLY	KIT NUMBER
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1A. COVER PARTS

Glass Chart Window	RFS6
Plastic Chart Window	RFTJ5322
Window Retainer Std.	RFS3
Window Retainer Event Pen	SP10058001
Set Point Window	10087201

2. CHART HUB STRIP	64414401
2A. Chart Drive Nut	RFTJ6755
2B. Chart Drive Flange	10033102

3. PLATEN ASSEMBLY (Does not include set station/s)
 All platen assemblies include platen and stud assembly,
 pen motor/board assembly and all required labels

No Set Point, One Pen	64413001
One Set Point, One Pen	64413002
No Set Points, Two Pens	64413003
One Set Point, Two Pens	64413004
Two Set Points, Two Pens	64413005
No Set Point, One Pen, Tamperproof platen	64413006
One Set Point, One Pen, Tamperproof platen	64413007
No Set Points, Two Pens, Tamperproof platen	64413008
One Set Point, Two Pens, Tamperproof platen	64413009
Two Set Points, Two Pens, Tamperproof platen	64413010
No Set Points, One Pen, Event Pen	64413011
One Set Point, One Pen, Event Pen	64413012
No Set Point, Two Pens, Event Pen	64413013
One Set Point, Two Pens, Event Pen	64413014
Two Set Points, Two Pens, Event Pen	64413015
No Set Points, One Pen, Tamperproof Platen, Event Pen	64413016

4100 SERIES

<i>ASSEMBLY</i>	<i>KIT NUMBER</i>
One Set Point, One Pen, Tamperproof Platen, Event Pen	64413017
No Set Points, Two Pens, Tamperproof Platen, Event Pen	64413018
One Set Point, Two Pens, Tamperproof Platen, Event Pen	64413019
Two Set Points, Two Pens, Tamperproof Platen, Event Pen	64413020

3A. PLATEN PARTS

Captive Screw	63302501
Captive Screw Retainer	63302502
Wire Clip	60400301

4. SET STATION ASSEMBLY

All assemblies include thumbwheel setpoint (when required), circuit board, mounting plate and screws.

3 Digit Positive Only Range	64413101
3 Digit Positive / Negative Range	64413102
3 Digit Positive Only Range, High Limit	64413103
3 Digit Positive / Negative Range, High Limit	64413104
4 Digit Positive Only Range	64413105
4 Digit Positive Only Range, High Limit	64413106
Recorder with Process Alarm, Positive Only Range	64413107
Remote Set Point, Positive Only Range	64413108
± Switch	73209901

4A. SET STATION PARTS

Circuit Board Positive Range	SP04615905
Circuit Board Negative Range	SP04615906
Circuit Board Positive Range, High Limit	SP04615907
Circuit Board Negative Range, High Limit	SP04615908
Circuit Board Remote Set Point	SP04615909

<i>ASSEMBLY</i>	<i>KIT NUMBER</i>
Circuit Board Process Alarm Only	SP04615910
Mounting Plate 3 Digit	SP10095703
Mounting Plate 4 Digit	SP10095803
Set Pot 3 Digit	70302001
Set Pot 4 Digit	70302002

5. PEN ASSEMBLY

Pen One (Includes pen arm and hub, no pen cartridge)	64413201
Pen Two (Includes pen arm, hub, link and link assembly, no pen cartridge)	64413301

6. CHART DRIVE ASSEMBLY

7 Day, 115V/60Hz, without chart pin	64413401
7 Day, 115V/50Hz, without chart pin	64413402
7 Day, 230V/60Hz, without chart pin	64413403
7 Day, 230V/50Hz, without chart pin	64413404
72 Hour, 115V/60Hz, without chart pin	64413405
72 Hour, 115V/50Hz, without chart pin	64413406
72 Hour, 230V/60Hz, without chart pin	64413407
72 Hour, 230V/50Hz, without chart pin	64413408
48 Hour, 115V/60Hz, without chart pin	64413409
48 Hour, 115V/50Hz, without chart pin	64413410
48 Hour, 230v/60Hz, without chart pin	64413411
48 Hour, 230V/50Hz, without chart pin	64413412
24 Hour, 115V/60Hz, without chart pin	64413413
24 Hour, 115V/50Hz, without chart pin	64413414
24 Hour, 230V/60Hz, without chart pin	64413415
24 Hour, 230V/50Hz, without chart pin	64413416
12 Hour, 115V/60Hz, without chart pin	64413417

4100 SERIES

<i>ASSEMBLY</i>	<i>KIT NUMBER</i>
12 Hour, 115V/50Hz, without chart pin	64413418
12 Hour, 230V/60Hz, without chart pin	64413419
12 Hour, 230V/50Hz, without chart pin	64413420
4 Hour, 115V/60Hz, without chart pin	64413421
4 Hour, 115V/50Hz, without chart pin	64413422
4 Hour, 230V/60Hz, without chart pin	64413423
4 Hour, 230V/50Hz, without chart pin	64413424
7 Day, 115V/60Hz, with chart pin	64413425
7 Day, 115V/50Hz, with chart pin	64413426
7 Day, 230V/60Hz, with chart pin	64413427
7 Day, 230V/50Hz, with chart pin	64413428
72 Hour, 115V/60Hz, with chart pin	64413429
72 Hour, 115V/ 50Hz, with chart pin	64413430
72 Hour, 230V/ 60Hz, with chart pin	64413431
72 Hour, 230V/50Hz, with chart pin	64413432
48 Hour, 115V/60Hz, with chart pin	64413433
48 Hour, 115V/50Hz, with chart pin	64413434
48 Hour, 230V/60Hz, with chart pin	64413435
48 Hour, 230V/50Hz, with chart pin	64413436
24 Hour, 115V/60Hz, with chart pin	64413437
24 Hour, 115V/50Hz, with chart pin	64413438
24 Hour, 230V/60Hz, with chart pin	64413439
24 Hour, 230V/50Hz, with chart pin	64413440
12 Hour, 115V/60Hz, with chart pin	64413441
12 Hour, 115V/50Hz, with chart pin	64413442
12 Hour, 230V/60Hz, with chart pin	64413443
12 Hour, 230V/50Hz, with chart pin	64413444
4 Hour, 115V/60Hz, with chart pin	64413445

<i>ASSEMBLY</i>	<i>KIT NUMBER</i>
4 Hour, 115V/50Hz, with chart pin	64413446
4 Hour, 230V/60Hz, with chart pin	64413447
4 Hour, 230V/50Hz, with chart pin	64413448
<hr/>	
7. PEN DRIVE ASSEMBLY	
Includes Pen Drive Motor and Circuit Board & Potentiometer	64413501
<hr/>	
7A. PEN DRIVE PARTS	
Motor and Connector	SP10094102
Potentiometer	70302801
<hr/>	
8. CASE	
Includes case and (2) plate hinges	64413901
With N3	64413902
<hr/>	
10. RIBBON CABLE	
From thumbwheel Pen #2 to Pen 2 Controller circuit board	64413804
<hr/>	
11. RIBBON CABLE	
From thumbwheel Pen #1 to Pen 1 Controller circuit board	64413803
<hr/>	
12. RIBBON CABLE	
From Pen 2 motor assembly to Pen 2 Recorder circuit board	64413802
<hr/>	
13. RIBBON CABLE	
From Pen 1 motor assembly to Pen 1 Recorder circuit board	64413801
<hr/>	
16. EVENT PEN	
Includes Event Pen arm and mounting hardware	64418601
<hr/>	
17. EVENT PEN SOLENOID	
Solenoid Assembly includes 100VDC coil, bracket, spring and hardware	SP10058101
<hr/>	
18. EVENT PEN CIRCUIT BOARD & WIRE ASSEMBLY	
Includes Circuit board recitifier and wire harness	04616305

4100 SERIES

ASSEMBLY

KIT NUMBER

20A. RECORDER CIRCUIT BOARD PARTS

Transformer 115 VAC	73401601
Transformer 230 VAC	73401802
Relay	71802901

20. RECORDER CIRCUIT BOARD - Does not include Range Module

To determine which circuit board is required, use the codes shown below to identify the type of output (if any) and the proper line voltage, then follow across to the correct kit number.

Codes: RL - Relay, SS - Solid State Relay Driver, MA - 4-20mA

<i>First Output</i>	<i>Alarm</i>	<i>Voltage</i>	<i>Kit Number</i>
xx	xx	115	64413605
MA	xx	115	64413605
RL	xx	115	64413606
xx	RL	115	64413607
MA	RL	115	64413607
xx	SS	115	64413608
MA	SS	115	64413608
RL	RL	115	64413609
RL	SS	115	64413610
SS	xx	115	64413611
SS	RL	115	64413612
SS	SS	115	64413613
xx	xx	230	64413614
MA	xx	230	64413614
xx	RL	230	64413615
MA	RL	230	64413615
xx	SS	230	64413616
MA	SS	230	64413616
RL	xx	230	64413617
RL	RL	230	64413618
RL	SS	230	64413619
SS	xx	230	64413620
SS	RL	230	64413621
SS	SS	230	64413622
xx	xx	115 CSA	64413623

4100 SERIES

<i>First Output</i>	<i>Alarm</i>	<i>Voltage</i>	<i>Kit Number</i>
RL	xx	115 CSA	64413624

21. CONTROLLER CIRCUIT BOARD - Does not include Resistor R23

To determine which circuit board is required, identify the output type (if any) with or without alarm, and setpoint in the columns below and follow across to the correct kit number.

<i>Output Type</i>	<i>Alarm</i>	<i>Setpoint</i>	<i>Kit Number</i>
On/Off	No	Local	64413711
On/Off	Yes	Local	64413705
On/Off	No	Remote	64413710
On/Off	Yes	Remote	64413708
None	Yes	N/R	64413705
Hi Limit	No	Local	64413707
Time Prop.	No	Local	64413706
Time Prop.	Yes	Local	64413706
Time Prop.	No	Remote	64413709
Time Prop.	Yes	Remote	64413709
4-20	No	Local	64413720
4-20	Yes	Local	64413720
4-20	No	Remote	64413721
4-20	Yes	Remote	64413721
On/Off	No	Remote AV	64413714
On/Off	Yes	Remote AV	64413712
Time Prop.	No	Remote AV	64413713
Time Prop.	Yes	Remote AV	64413713
4-20	No	Remote AV	64413722
4-20	Yes	Remote AV	64413722

RANGE	KIT #	DESCRIPTION
22. ARC 4100 RANGE MODULE REPLACEMENT KIT ASSEMBLIES		
-150 to 350	41902301	Thermocouple type T, °F
-100 to 100	41902001	RTD, °F
-50 to 50	41902041	RTD, °F
0 to 20	41902925	mA, 0/100
0 to 100	41902002	RTD, °F
0 to 200	41902003	RTD, °F
0 to 300	41902004	RTD, °F
0 to 300	41902111	Thermocouple type J, °F
0 to 300	41902927	mA, 4/20
0 to 400	41902023	RTD, °F
0 to 400	41902103	Thermocouple type J, °F
0 to 400	41902304	Thermocouple type T, °F
0 to 600	41902006	RTD, °F
0 to 600	41902104	Thermocouple type J, °F
0 to 800	41902024	RTD, °F
0 to 800	41902106	Thermocouple type J, °F
0 to 1000	41902107	Thermocouple type J, °F
0 to 1000	41902213	Thermocouple type K, °F
0 to 1200	41902112	Thermocouple type J, °F
0 to 1200	41902203	Thermocouple type K, °F
0 to 2000	41902205	Thermocouple type K, °F
0 to 2500	41902206	Thermocouple type K, °F
0 to 3000	41902501	Thermocouple type R, °F
4 to 20	41902924	mA, Setpoint 0 to 200
20 to 100	41902056	RTD, °F
20 to 120	41902052	RTD, °F
30 to 180	41902038	RTD, °F, Recorder only
30 to 230	41902028	RTD, °F
30 to 230	41902926	mA, 4/20
60 to 180	41902027	RTD, °F
80 to 180	41902116	Thermocouple type J, °F
80 to 180	41902026	RTD, °F
100 to 250	41902042	RTD, °F
100 to 180	41902057	RTD, °F
120 to 220	41902037	RTD, °F
130 to 190	41902060	RTD, °F
135 to 195	41902065	RTD, °F
150 to 350	41902040	RTD, °F
200 to 300	41902045	RTD, °F
1000 to 3000	41902554	Thermocouple type S, °F
150 to 25	41902050	RTD, °F
180 to 30	41902039	RTD, °F
230 to 30	41902029	RTD, °F
-100 to 100	41902022	RTD, °C
-100 to 200	41902046	RTD, °C
-100 to 200	41902061	RTD, °F
-50 to 75	41902055	RTD, °C
-50 to 50	41902043	RTD, °C
-35 to 75	41902059	RTD, °C
-30 to 70	41902058	RTD, °C
0 to 100	41902011	RTD, °C
0 to 110	41902030	RTD, °C
0 to 200	41902009	RTD, °C
0 to 200	41902101	Thermocouple type J, °C

4100 SERIES

RANGE	KIT #	DESCRIPTION
0 to 200	41902303	Thermocouple type T, °C
0 to 300	41902010	RTD, °C
0 to 300	41902115	Thermocouple type J, °C
0 to 400	41902012	RTD, °C
0 to 400	41902102	Thermocouple type J, °C
0 to 600	41902114	Thermocouple type J, °C
0 to 600	41902201	Thermocouple type K, °C
0 to 1000	41902202	Thermocouple type K, °C
0 to 1200	41902208	Thermocouple type K, °C
0 to 1500	41902503	Thermocouple type R, °C
0 to 1500	41902553	Thermocouple type S, °C
110 to 0	41902031	RTD, °C
50 to 200	41902036	RTD, °F
0 to 50	41902909	mVDC
0 to 100	41902803	mVDC
0 to 150	41902914	mVDC, Setpoint 0 to 150
0 to 0.2	41902999	VDC
0 to 0.5	41902922	VDC
0 to 1.0	41902920	VDC
0 to 4.0	41902923	VDC
0 to 5.0	41902919	VDC
0 to 10.0	41902921	VDC
1 to 5.0	41902902	VDC
4 to 20	41902907	mA
30 to 180	41902032	032 RTD, °F
180 to 30	41902033	033 RTD, °F
0 to 80	41902034	034 RTD, °C
30 to 180	41902054	054 RTD, °F
210 to 30	41902062	062 RTD, °F
20 to 4	41902998	998 mA
50 to 0	41902044	044 RTD
-50 to 0	41902067	RTD, °C
0 to 2500	41902601	NI/NI/Moly, °F
0 to 1500	41902215	Thermocouple Type K, °F
-25 to 25	41902068	RTD, °C

NOTE: All kits include the appropriate range module, R23 (Resistor) for controllers, and installation instructions.

ASSEMBLY

KIT NUMBER

ACCESSORIES

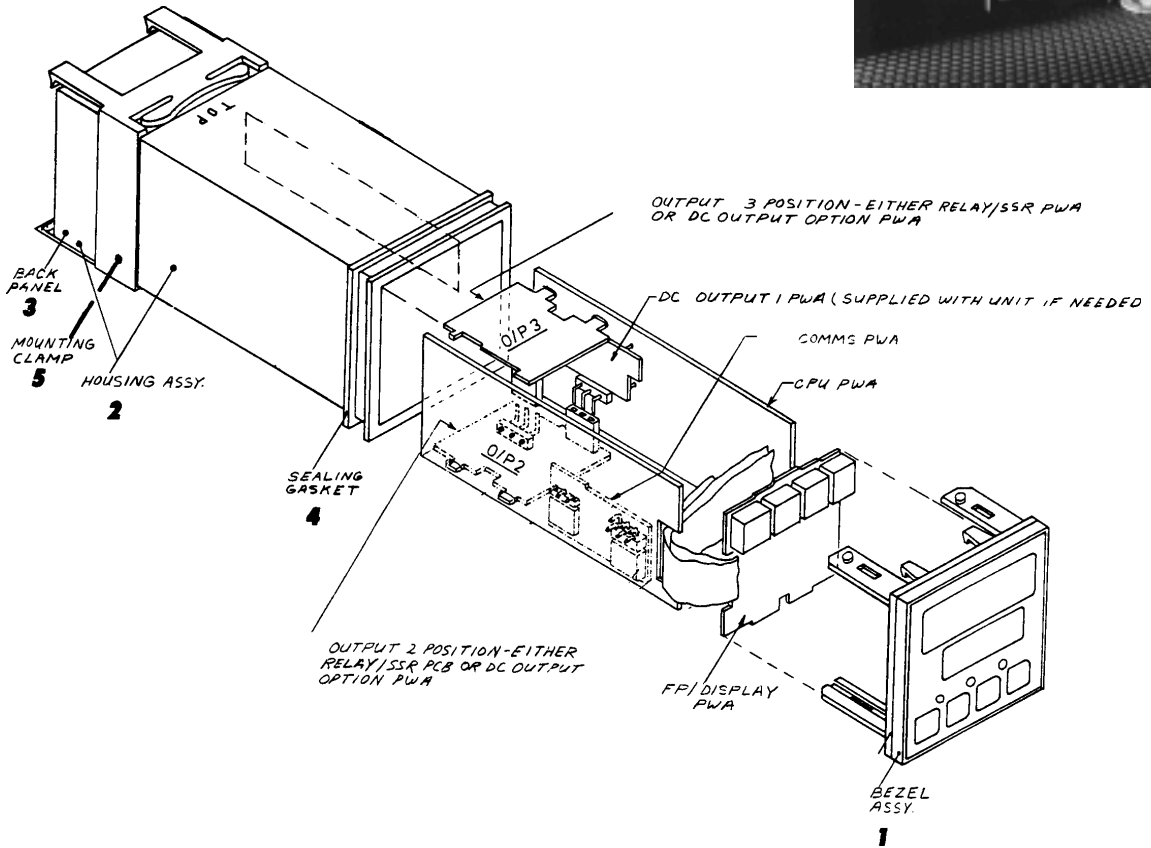
9. <i>MOUNTING BRACKET</i> (Plated mounting angle)	64402001
14. <i>PEN 1 CARTRIDGE</i> Red replacement cartridges (sold in pkg. of 5)	60500402
15. <i>PEN 2 CARTRIDGE</i> Green replacement cartridges (sold in pkg. of 5)	60500401
19. <i>EVENT PEN CARTRIDGE</i>	60500403

MIC 1160
 MIC 1800
 MIC 1400
 SERIES



1/16 DIN

MIC 1160, MIC 1161, MIC 1162, MIC 1167



ASSEMBLY

KIT NUMBER

1. FRONT PANELS

(Including overlay, does not include display board)

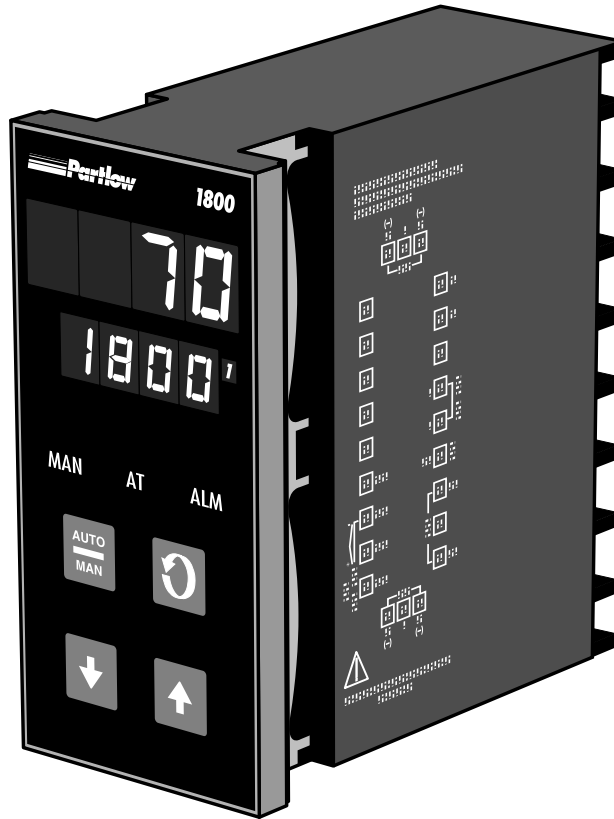
MIC 1160 Red Upper Display Red Lower Display	10119801
MIC 1161	10119802
MIC 1162	64434101
MIC 1167	10119803
MIC 1160 Red Upper Display Grn Lower Display	10119804

MIC 1160
MIC 1800
MIC 1400
SERIES

<i>ASSEMBLY</i>	<i>KIT NUMBER</i>
2. <i>HOUSINGS</i> (Includes rear panel, gasket & mounting bracket)	
MIC 1160, 1161, 1162, 1167 90/264V AC	10119701
24V AC/DC	10119702
3. <i>REAR PANEL</i>	
MIC 1160, 1161, 1162, 1167	10119401
4. <i>HOUSING GASKET</i>	10119501
5. <i>MOUNTING BRACKET</i>	10119601
6. <i>PEN RAIL CLIP</i>	UKM9995AO9766

MIC 1160
 MIC 1800
 MIC 1400
 SERIES

1/8 DIN MIC 1800, MIC 1801, MIC 1867, MIC 1810, MIC 1820



ASSEMBLY

KIT NUMBER

1. FRONT PANELS

(Includes overlay, does not include display board)

MIC 1800	74201501
MIC 1801	74201502
MIC 1807	74201503
MIC 1810 Red Display	74201504
MIC 1810 Green Display	74201505
MIC 1820	74201506

MIC 1160
MIC 1800
MIC 1400
SERIES

ASSEMBLY

KIT NUMBER

2. HOUSINGS

(Includes rear panel, gasket & mounting bracket)

MIC 1800, 1801, 1807, 1810
90/264 V AC
24V AC/DC

74201601
74201602

MIC 1820
90/264V AC
24V AC/DC

74201603
74201604

3. REAR PANELS

MIC 1800, 1801, 1807, 1810

74201701

MIC 1820

74201702

4. HOUSING GASKET

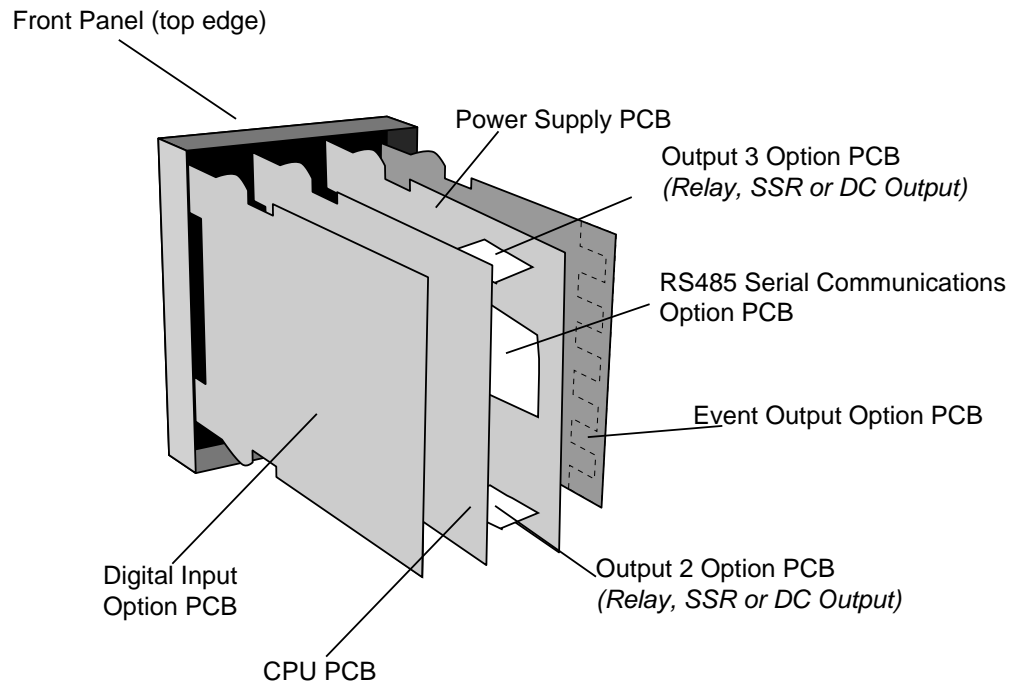
74201901

5. MOUNTING BRACKET

74201801

*MIC 1160
MIC 1800
MIC 1400
SERIES*

1/4 DIN MIC 1400, MIC 1401, MIC 1407, MIC 1420, MIC 1460, MIC 1462



ASSEMBLY

KIT NUMBER

1. FRONT PANELS

(Includes overlay, does not include display board)

MIC 1400 Red Upper Display Red Lower Display	74204601
MIC 1400 Red Upper Display Grn Lower Display	74204603
MIC 1401	74204501
MIC 1407	74204602
MIC 1420	74204502
MIC 1460	74204503
MIC 1462	64434001

MIC 1160
MIC 1800
MIC 1400
SERIES

ASSEMBLY

KIT NUMBER

2. HOUSINGS

(Includes rear center panel, gasket & mounting bracket)

MIC 1400, 1401, 1407
90/264 V AC
24V AC/DC

74205801
74205802

MIC 1420
90/264V AC
24V AC/DC

74205804
74205803

MIC 1460, 1462
90/264V AC
24V AC/DC

74205806
74205805

3. REAR CENTER PANEL

MIC 1400, 1401, 1407

74201701

MIC 1420, 1460, 1462

74201702

4. HOUSING GASKET

74205601

5. MOUNTING BRACKET

74205701

MIC 1160
MIC 1800
MIC 1400
SERIES

ASSEMBLY

KIT NUMBER

ACCESSORIES

PLUG-IN BOARDS OUTPUT 2/OUTPUT 3

DC OUTPUT BOARD	64424601
RELAY OUTPUT BOARD	64424701
SSR DRIVER BOARD	64424801
RS-485 COMM OUTPUT BOARD	64424901
REMOTE RESET BOARD (MODELS 1161, 1162, 1801, 1810, 1401)	64425901
EVENT OUTPUT BOARD (MODELS 1460, 1462)	64431801
DUAL SETPOINT BOARD (MODELS 1167, 1807, 1820, 1407, 1420)	64432101
REMOTE PROFILE CONTROL INPUT BOARD (MODELS 1460, 1462)	64431901
TRANSMITTER POWER SUPPLY BOARD (NOT FOR 1/16 DIN)	64431001

ADAPTOR KITS

1/4 DIN to 1/16 DIN	64422102
1/4 DIN to 1/8 DIN	64422101
1/8 DIN to 1/16 DIN	64422103

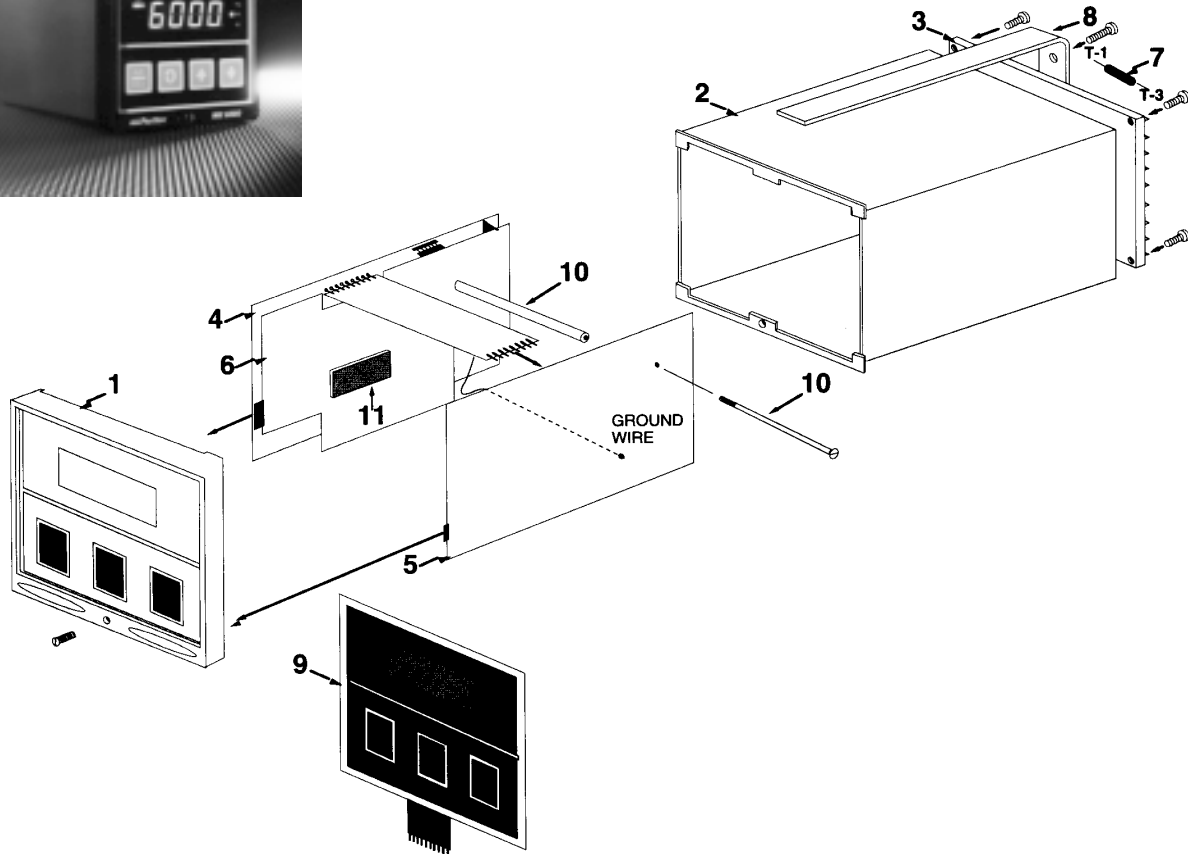
CONFIGURATION PACKAGES PRODUCT(S)

DIN (1800, 1801, 1807, 1810, 1820, 1400, 1401, 1407, 1420)	DINCONFIG
DIN (1160, 1161, 1162)	116ADAPT*
DIN (1460)**	1460CONFIG
DIN (1462)	1462 CONFIG

** Includes a "Configurator", "Tracker", and "Online Program (Profile) Editor".

* Required along with DINCONFIG to config any 1/16 DIN products.

MIC SERIES



ASSEMBLY

KIT NUMBER

1. FRONT PANEL

Includes display board & Keypad

2000	SP40030001
6000	SP40030002
8000	SP40030006
8200	SP40030007
2000BA	SP40031201

Without display board

2000	64419301
6000	64419303
8000	64419304
8200	64419305

DISPLAY BOARD

2000	SP04611105
6000	SP04611106
8000	SP04611105
8200	SP04616205

LOCKING SCREW & O-RINGS

Kit of 10 each	SP61801202
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MIC SERIES

ASSEMBLY		KIT NUMBER
	MODEL/SERIAL NUMBER LABEL Qty 100	64419401
2.	HOUSING Includes rear panel	
	115 VAC	SP50013304
	230 VAC	SP50013305
	EXTRUDED HOUSING Without rear panel	40024307
	WIRING/RATING LABEL	
	2000	62509901
	6000	62511201
	8000	62515101
	8200	62515101
3.	REAR PANEL	
	115 VAC	10085902
	230 VAC	SP10085901
	AMBIENT COMPENSATOR ASSEMBLY	SP10059901
	SHUNT RESISTOR	
	2.5 OHM	64411702
	250 OHM	64411701
4.	ANALOG PROCESSOR BOARD	
	Without PROM and uncalibrated: All Models	SP0461130900
	With PROM and calibrated:	
	2000 Standard	SP0461130902
	6000 Standard	SP0461130904
	8000 Standard	SP0461130919
	8200 Standard	SP0461130924
	2000 Communication	SP0461130910
	6000 Communication	SP0461130911
	8000 Communication	SP0461130920
	8200 Communication	SP0461130925
	2000 EA Option	SP0461130907
	2000 EA w/Com	SP0461130912
	2000 EA/EB Option	SP0461130908
	2000 EA/EB w/Com	SP0461130914
	2000 Total Com w/EA/EB	SP0461130940
	6000 EO Option	SP0461130916
	6000 Total Com with EO	SP0461131043

ASSEMBLY

KIT NUMBER

8000 AA Option	SP0461130938
8200 AA Option	SP0461130937
8200 AB Option	SP0461130946
8200 Total Com	SP0461130945
8200 Total Com w/AB	SP0461130947

5. POWER SUPPLY BOARD

Key: RL = Relay; SS = Solid State Relay Driver; — = None; XP = Transmitter Power Supply

OUTPUT 1 2 3	115 VAC LINE VOLTAGE & RELAY VOLTAGE	230 VAC LINE VOLTAGE & RELAY VOLTAGE
RL/—/—	SP04611205	SP04611211
RL/RL/—	SP04611206	SP04611227
RL/RL/RL	04611208	SP04611213
RL/—/RL	SP04611207	SP04611215
RL/SS/RL	SP04611209	SP04611230
RL/SS/SS	SP04611222	SP04611231
RL/RL/SS	SP04611220	SP04611228
RL/—/SS	SP04611219	SP04611226
RL/SS/—	SP04611221	SP04611229
SS/—/—	SP04611210	SP04611232
SS/SS/—	SP04611217	SP04611238
SS/SS/SS	SP04611225	SP04611240
SS/—/SS	SP04611218	SP04611234
SS/—/RL	SP04611212	SP04611233
SS/RL/RL	SP04611216	SP04611236
SS/SS/RL	SP04611214	SP04611239
SS/RL/—	SP04611223	SP04611235
SS/RL/SS	SP04611224	SP04611237
RL/—/—/XP	SP04611205XP	SP04611211XP
RL/RL/—/XP	SP04611206XP	SP04611227XP
RL/RL/RL/XP	SP04611208XP	SP04611213XP
RL/—/RL/XP	SP04611207XP	SP04611215XP
RL/SS/RL/XP	SP04611209XP	SP04611230XP
RL/SS/SS/XP	SP04611222XP	SP04611231XP
RL/RL/SS/XP	SP04611220XP	SP04611228XP
RL/—/SS/XP	SP04611219XP	SP04611226XP
RL/SS/—/XP	SP04611221XP	SP04611229XP

MIC SERIES

OUTPUT 1 2 3	115VAC LINE VOLTAGE & RELAY VOLTAGE	230 VAC LINE VOLTAGE & RELAY VOLTAGE
SS/—/—/XP	SP04611210XP	SP04611232XP
SS/SS/—/XP	SP04611217XP	SP04611238XP
SS/SS/SS/XP	SP04611225XP	SP04611240XP
SS/—/SS/XP	SP04611218XP	SP04611234XP
SS/—/RL/XP	SP04611212XP	SP04611233XP
SS/RL/RL/XP	SP04611216XP	SP04611236XP
SS/SS/RL/XP	SP04611214XP	SP04611239XP
SS/RL/—/XP	SP04611223XP	SP04611235XP
SS/RL/SS/XP	SP04611224XP	SP04611237XP

OUTPUT 1 2 3	115 VAC LINE VOLTAGE & 230 V RELAY
RL/—/—	SP04611241
RL/RL/—	SP04611244
RL/RL/RL	SP04611245
RL/—/RL	SP04611242
RL/SS/RL	SP04611248
RL/SS/SS	SP04611249
RL/RL/SS	SP04611246
RL/—/SS	SP04611243
RL/SS/—	SP04611247
SS/—/RL	SP04611251
SS/RL/RL	SP04611254
SS/SS/RL	SP04611257
SS/RL/—	SP04611253
SS/RL/SS	SP04611255
RL/—/—/XP	SP04611241XP
RL/RL/—/XP	SP04611244XP
RL/RL/RL/XP	SP04611245XP
RL/—/RL/XP	SP04611242XP
RL/SS/RL/XP	SP04611248XP
RL/SS/SS/XP	SP04611249XP
RL/RL/SS/XP	SP04611246XP
RL/—/SS/XP	SP04611243XP
RL/SS/—/XP	SP04611247XP
SS/—/RL/XP	SP04611251XP
SS/RL/RL/XP	SP04611254XP
SS/SS/RL/XP	SP04611257XP
SS/RL/—/XP	SP04611253XP
SS/RL/SS/XP	SP04611255XP

ASSEMBLY

KIT NUMBER

For position proportioning models XXYYXIX - where X = any number and Y = 1 or 2

RL/RL/—	115 VAC	SP04611244
RL/RL/—	230 VAC	SP04611227
SS/SS/—	115 VAC	SP04611217
SS/SS/—	230 VAC	SP04611238
RL/RL/RL	115 VAC	SP04611263
RL/RL/RL	230 VAC	SP04611213
RL/RL/SS	115 VAC	SP04611246
RL/RL/SS	230 VAC	SP04611228
RL/RL/—/XP	115 VAC	SP04611244XP
RL/RL/—/XP	230 VAC	SP04611227XP
SS/SS/—/XP	115 VAC	SP04611217XP
SS/SS/—/XP	230 VAC	SP04611238XP
RL/RL/RL/XP	115 VAC	SP04611263XP
RL/RL/RL/XP	230 VAC	SP04611213XP
RL/RL/SS/XP	115 VAC	SP04611246XP
RL/RL/SS/XP	230 VAC	SP04611228XP

For Models XX100Y1 - where X = any number and Y= 4 or 6

SP04611264

For Models XX110Y1 - where X = any number and Y= 4 or 6

SP04611262

For Models XX110Y2 - where X = any number and Y= 4 or 6

SP04611272

For Models XX100Y1XP - where X = any number and Y = 4 or 6

SP04611264XP

For Models XX110Y1XP - where X = any number and Y = 4 or 6

SP04611262XP

For Models XX110Y2XP - where X = any number and Y = 4 or 6

SP04611272XP

MIC SERIES

ASSEMBLY

KIT NUMBER

6. *OPTIONS BOARD*

Key: RIN - Remote Setpoint or Remote RUN/HOLD (6000 only)
PPI - Position Proportioning
COM - Communications
XP - 24V Transmitter Supply

RIN	SP04611493
RIN/1st 4-20 mA	SP04611494
RIN/1st & 2nd 4-20 mA	SP04611424
RIN/2nd 4-20 mA	SP04611425
RIN/RTD	SP04611491
RIN/RTD/1st 4-20 mA	SP04611492
RIN/RTD/1st & 2nd 4-20 mA	SP04611407
RIN/RTD/2nd 4-20 mA	SP04611408
RTD	SP04611491
RTD/1st 4-20 mA	SP04611492
RTD/1st & 2nd 4-20 mA	SP04611407
RTD/2nd 4-20 mA	SP04611408
COM	SP04611426
COM/1st 4-20 mA	SP04611427
RTD/COM	SP04611410
RTD/COM/1st 4-20 mA	SP04611411
PPI	SP04611430
RTD/PPI	SP04611418
RTD/PPI/1st 4-20 mA	SP04611419
PPI/1st 4-20 mA	SP04611431
RIN/XP	SP04611422XP
RIN/1st 4-20 mA/XP	SP04611423XP
RIN/1st & 2nd 4-20 mA/XP	SP04611424XP
RIN/2nd 4-20 mA/XP	SP04611425XP
RIN/RTD/XP	SP04611405XP
RIN/RTD/1st 4-20 mA/XP	SP04611406XP
RIN/RTD/1st & 2nd 4-20 mA/XP	SP04611407XP
RIN/RTD/2nd 4-20 mA/XP	SP04611408XP
RTD/XP	SP04611405XP
RTD/1st 4-20 mA/XP	SP04611406XP
RTD/1st & 2nd mA/XP	SP04611407XP
RTD/2nd 4-20 mA/XP	SP04611408XP
COM/XP	SP04611426XP
COM/1st 4-20 mA/XP	SP04611427XP
RTD/COM/XP	SP04611410XP
RTD/COM/1st 4-20 mA/XP	SP04611411XP
PPI/XP	SP04611430XP
RTD/PPI/XP	SP04611418XP
RTD/PPI/1st 4-20mA/XP	SP04611419XP
PPI/1st 4-20mA/XP	SP04611431XP

ASSEMBLY		KIT NUMBER
7.	SHUNT RESISTOR	2.5 OHM 64411702
		250 OHM 64411701
8.	PANEL MOUNTING BRACKET MTG Bracket and 2 screws	64409301
9.	KEYPAD	2000 40029402
		6000 40031002
		8000 40033101
		8200 40034101
10.	HARDWARE KIT Includes long & short spacer & Assorted Screws	64416901
11.	EPROMS	2000 Standard SP10060102
		Communications SP10060110
		EA Option SP10060107
		EA/EB Option SP10060108
		Total Access Com SP10060140
		6000 Standard SP10060104
		Communications SP10060111
		EO Option SP10060116
		Total Access Com SP10060143
		AI w/Total Access Com (PROM & RAM Required for AI Option)
		PROM SP10060187
		RAM 70907902
		8000 Standard SP10060119
		Communications SP10060120
		AA Option SP10060138
		8200 Standard SP10060124
Communications SP10060125		
AA Option SP10060137		
Total Access Com SP10060145		
AB Option SP10060146		
AB with Com SP10060147		

MIC SERIES

ASSEMBLY		KIT NUMBER
12.	MISCELLANEOUS	
	TRANSFORMER	
	115 VAC without XP	73402201
	230 VAC without XP	73402202
	115 VAC with XP	64425201
	230 VAC with XP	64425201
	MICROCOMPUTER	
	8032	70909101
	RELAY (Replacement)	71802902
	BATTERY KIT	
	Disc	64414503
	Rectangle	64414504
	THUMBSCREWS FOR LIFEGUARD	64422701

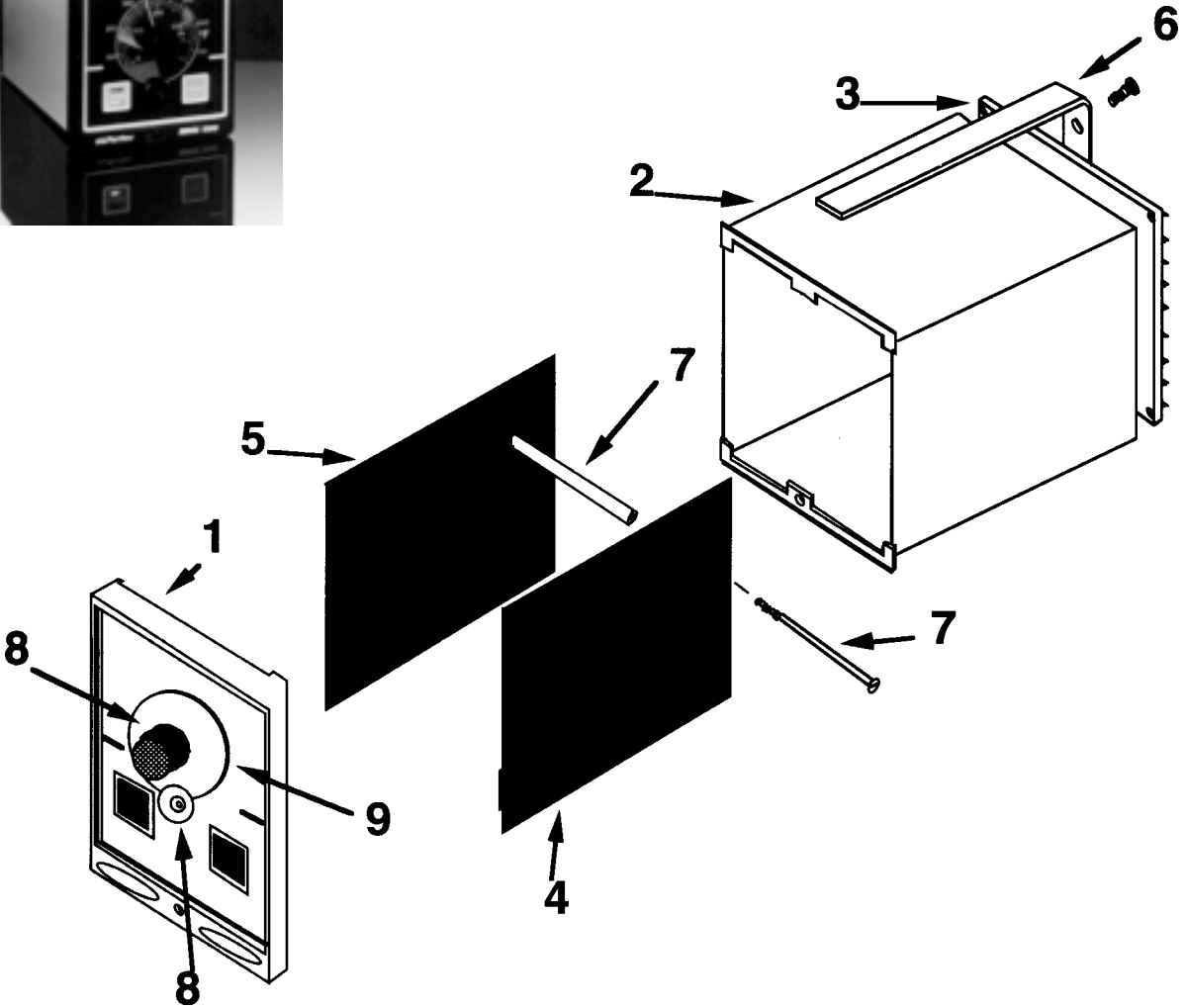
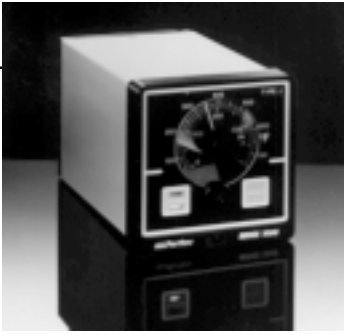
ASSEMBLY

KIT NUMBER

ACCESSORIES

RELAY KIT (add on)	115 VAC	64420001
	230 VAC	64420002
SOLID STATE RELAY KIT (add on)		64421301
POSITION PROPORTIONING KIT		64421501
COMMUNICATIONS KIT (add on)		
Does not include Options Board		
2000	Standard	64418901
	Total Access	64419201
6000	Standard	64418902
	Total Access	64419202
8000	Standard	64418903
8200	Standard	64418904
	Total Access	64419203
SURFACE MOUNT ADAPTOR		64405801
LIFEGUARD		64417801

1000 SERIES



ASSEMBLY

KIT NUMBER

1. **FRONT PANEL**
Includes front panel, setpoint circuit board,
S/N and Model number labels, no dial scale

High Limit
Low Limit
Controller

SP10084001
SP10084001L
SP10084002

1A. **FRONT PANEL WITHOUT SETPOINT CIRCUIT BOARD**

Hi/Low Limit
Controller

64421801
64421901

ASSEMBLY	KIT NUMBER
1B. SETPOINT CIRCUIT BOARD	
High Limit	SP04613705
Low Limit	SP04613705L
Controller	SP04613706
2. HOUSING	
Includes housing, rear panel assembly and labels	SP50013303
3. REAR PANEL	
Includes Cold Junction Compensator	SP10084101
3A. COLD JUNCTION COMPENSATOR ASSEMBLY	10083901
4. CONTROL BOARD	
Does Not include Range Module	
High Limit/Relay/115V	SP04613509H
Controller/Relay/115V	SP04613509C
Low Limit/Relay/115V	SP04613510
High Limit/Relay/230V	SP04613511H
Controller/Relay/230V	SP04613511C
Low Limit/Relay/230V	SP04613512
High Limit/SSRD/115V	SP04613513H
Controller/SSRD/115V	SP04613513C
Low Limit/SSRD/115V	SP04613514
High Limit/SSRD/230V	SP04613515H
Controller/SSRD/230V	SP04613515C
Low Limit/SSRD/230V	SP04613516
5. RELAY (SPDT) BOARD & REMOTE RESET	SP04613906
6. PANEL MOUNTING BRACKET	64409301
7. SPACER AND SCREW	64416901
8. DIAL KNOB, LOCK & SCREW	64419001

1000 SERIES

ASSEMBLY KIT NUMBER

9. *DIAL SCALE*

Hi/Lo Limit, 0/400C, 32/750F, Type J	00608511
Hi/Lo Limit, 0/760C, 32/1400F, Type J	00608512
Hi/Lo Limit, 0/120C, 32/250F, Type J	00608513
Hi/Lo Limit, 0/550C, 30/1000F, Type J	00608514
Hi/Lo Limit, 0/1370C, 32/2500F, Type K	00608521
Hi/Lo Limit, -100/200C only, Type T	00608531
Hi/Lo Limit, -100/200C, -150/400F, Type T	00608532
Hi/Lo Limit, 200/1650C, 400/3000F, Type R	00608541
Hi/Lo Limit, 500/1800C, 900/3300F, Type B	00608551
Hi/Lo Limit, 200/1650C, 400/3000, Type S	00608561
Controller, 0/400C, 32/750F, Type J	00608611
Controller, 0/760C, 32/1400F, Type J	00608612
Controller, 0/120C, 32/250F, Type J	00608613
Controller, 0/550C, 30/1000F, Type J	00608614
Controller, 0/1370C, 32/2500F, Type K	00608621
Controller, -100/200C only, Type T	00608631
Controller, -100/200C, -150/400F, Type T	00608632
Controller, 200/1650C, 400/3000F, Type R	00608641
Controller, 500/1800C, 900/3300F, Type B	00608651
Controller, 200/1650C, 400/3000F, Type S	N/A

10. *RANGE MODULE ONLY*

0/400C, 32/750F, Type J	SP10083811
0/760C, 32/1400F, Type J	SP10083812
0/120C, 32/250F, Type J	SP10083813
0/550C, 30/1000F, Type J	SP10083814
0/1370C, 32/2500F, Type K	SP10083821
-100/200C only, Type T	SP10083831
-100/200C, -150/400F, Type T	SP10083832
200/1650C, 400/3000F, Type R	SP10083841
500/1800C, 900/3300F, Type B	SP10083851
200/1650C, 400/3000F, Type S	SP10083861

ASSEMBLY

KIT NUMBER

ACCESSORIES

11. *RANGE CHANGE KITS*
Includes dial scale, range module, label and instructions

<u>Range</u>	<u>Hi/Lo Limit</u>	<u>Controllers</u>
0/400C, 32/750F, Type J, Code 11	64406911	64406811
0/760C, 32/1400F, Type J, Code 12	64406912	64406812
0/120C, 32/250F, Type J, Code 13	64406913	64406813
0/550C, 30/1000F, Type J, Code 14	64406914	64406814
0/1370C, 32/2500F, Type K, Code 21	64406921	64406821
-100/200C only, Type T, Code 31	64406931	64406831
-100/200C, -150/400F, Type T, Code 32	64406932	64406832
200/1650C, 400/3000F, Type R, Code 41	64406941	64406841
500/1800C, 900/3300F, Type B, Code 51	64406951	64406851
200/1650C, 400/3000F, Type S, Code 61	64406961	N/A
0/750 C/F, Type E, Code 71	64406971	N/A

12. *SURFACE MOUNT ADAPTOR* 64405801

<i>PART</i>	<i>PART NUMBER</i>
<i>CIRCUIT BOARD</i>	
First Motherboard	SPR76101 _____
Second Motherboard	SPR76104 _____
Relay Output Module	SPR76105 ____
4-20 MA Output Module	SPR76107 ____
PID Board with Manual Reset	SPR76108 _____
PID Board with Auto Reset	SPR76109 _____
Relay Output Module - SPDT	SPR76114 ____

**Price varies with options - consult factory

MECHANICAL PARTS (See page 10 for exploded view)

Enclosure	SPPPC510 ____
Front Panel (Analog)	SPPPC610 ____
Terminal Cover	PPC501
Cold Junction Compensator	SPPPA310
249 Ohm Resistor	PPA3102
10 Amp Triac Unit	PPB4001
20 Amp Triac Unit	PPB4002
Bezel Assembly - Control	SPPPC5201
Bezel Assembly - Limit	SPPPC5202
Meter Assembly	SPPPB301
Black Pointer	PPB198
Mounting Brackets	SPPPC308
Partlow Logo	PPA127
S/N Decal UL	PPA210
S/N Decal Non-UL	PPA170

** Price varies with options - consult factory

76 SERIES

<i>PART</i>	<i>PART NUMBER</i>
CSA Label	62501001
Rating Decal	PPA169
Analog Scales	*1*
Range ID Tags	*1*
Red Indicator Lens	72600601
Amber Indicator Lens	72600602
Mounting Brackets Screw	PPA204
Knob Control	60102001
Knob Limit	SP10066901
Knob Cover, Limit - FM	PPA177
Knob Cover, Limit - Non FM	PPA1771
Manual Reset Switch Assembly	SPPPA309
Dress Nut	73200302
Surface Mounting Kit	PPA306

1 - See Table 1 for Analog scales and Range ID Tags. Price is for both scale and tag.

RANGE CODE

PART NUMBER

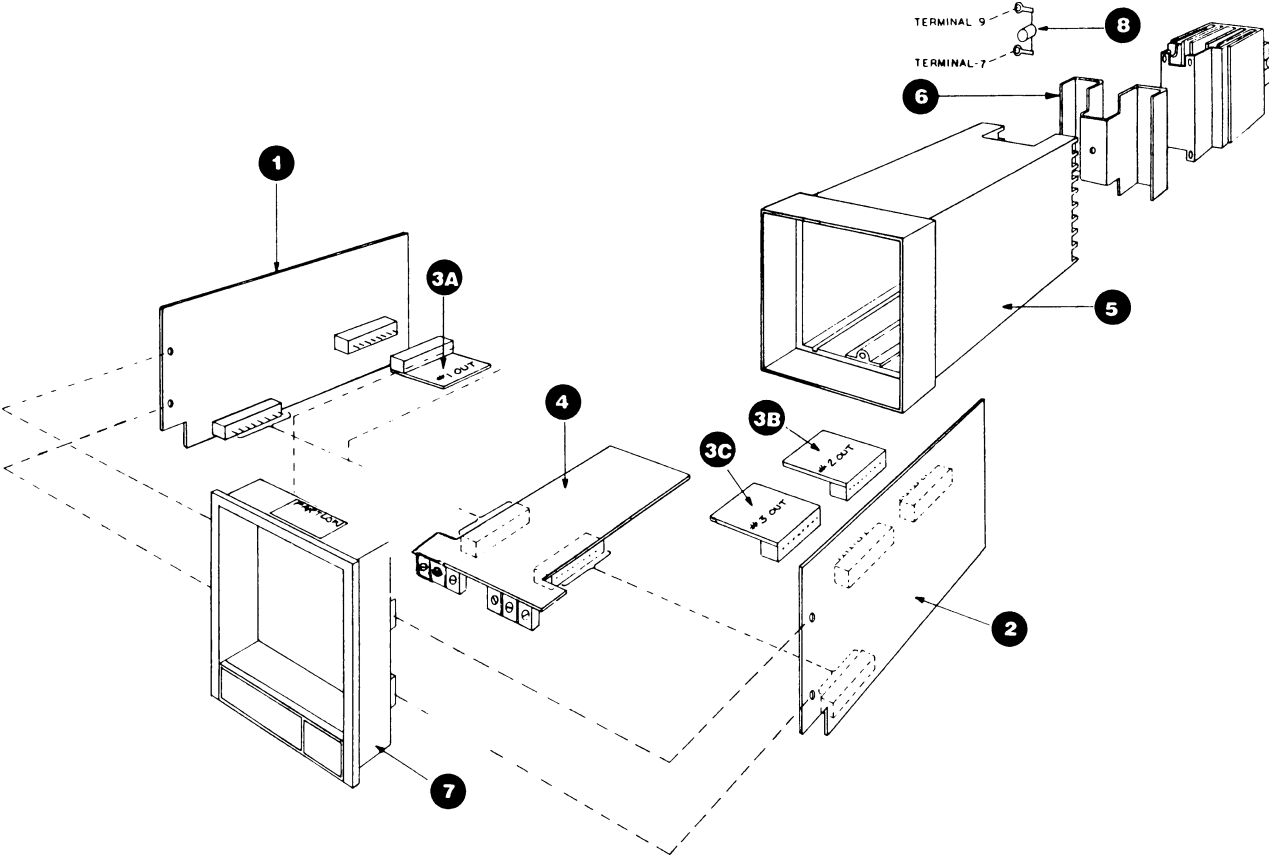
TABLE 1 - ANALOG SCALE/RANGE TAGS

101	0/200C	Type J	01100518
102	0/400C	Type J	01100520
103	0/400F	Type J	01100521
104	0/600F	Type J	01100522
106	0/800F	Type J	01100524
107	0/1000F	Type J	01100525
109*	0/500F/C	Type J	01100527
110*	0/1000F/C	Type J	01100528
111	0/300F	Type J	01100529
112*	0/1200F	Type J	01100530
117	0/150C	Type J	01100582
118	0/300C	Type J	01100583
201	0/600C	Type K	01100535
202*	0/1000C	Type K	01100536
203	0/1200F	Type K	01100537
204*	0/1500F	Type K	01100538
205*	0/2000F	Type K	01100539
206	0/2500F	Type K	01100540
207	0/1500F/C	Type K	01100541
208	0/1200C	Type K	01100542
210	0/2000F/C	Type K	01100544
212	0/400C	Type K	01100546
301*	-150/350F	Type T	01100550
302*	-450/200F/C	Type T	01100551
303	0/200C	Type T	01100552
304	0/400F	Type T	01100553
306	0/600F	Type T	01100554
308*	-200/200F	Type T	01100580
403*	-50/300F	Type E	01100557
501	0/3000F	Type R	01100558
511	0/3000F	Type B	01100578
525	0/3000F	Type C	01100560
551*	0/3000F	Type S	01100574
801	0/10 Linear	0/10MV	01100565
802	0/50 Linear	0/50MV	01100566
803	0/100 Linear	0/100MV	01100567
902	0/100 Linear	1/5VDC	01100601
907	0/100 Linear	4/20MA	01100602
908	0/100 Linear	0/10MV	01100603
909	0/100 Linear	0/50MV	01100604
913	0/100 Linear	0/25MV	01100605
916	0/1000 Linear	1/5VDC	01100573
920	0/100 Linear	0/1VDC	01100607

* Consult factory for availability.

76 SERIES

EXPLODED VIEW - BOARD PLACEMENT

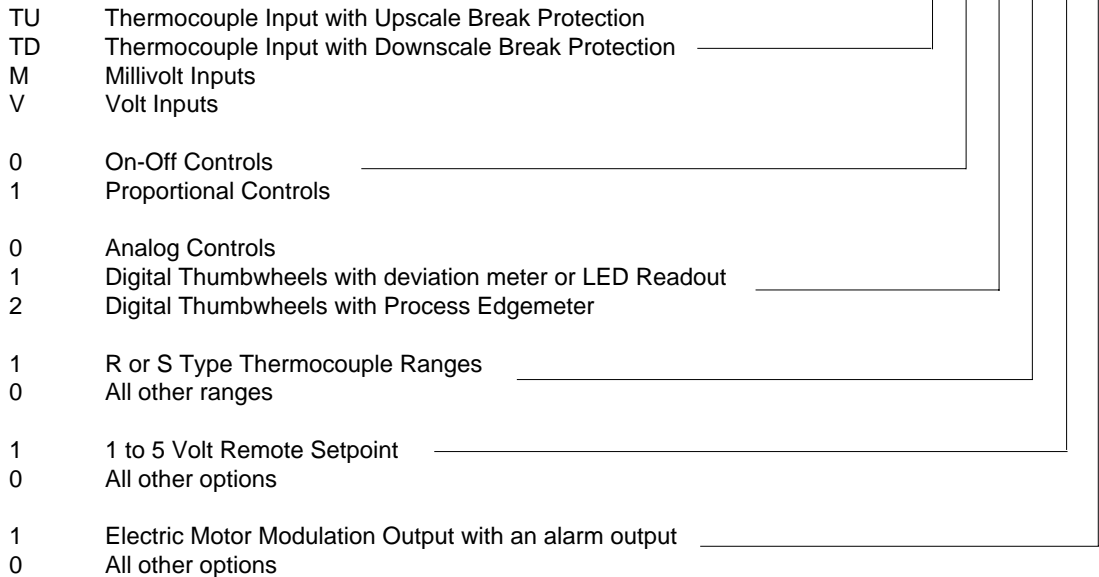


PART NUMBER OPTION LIST - CIRCUIT BOARD SLOTS

PART NUMBER

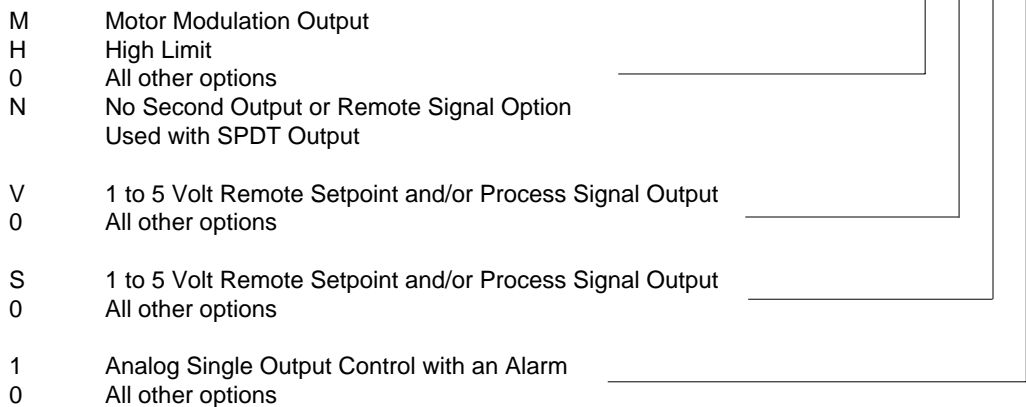
1. *FIRST MOTHERBOARD*

SPR7610 1



2. *SECOND MOTHERBOARD*

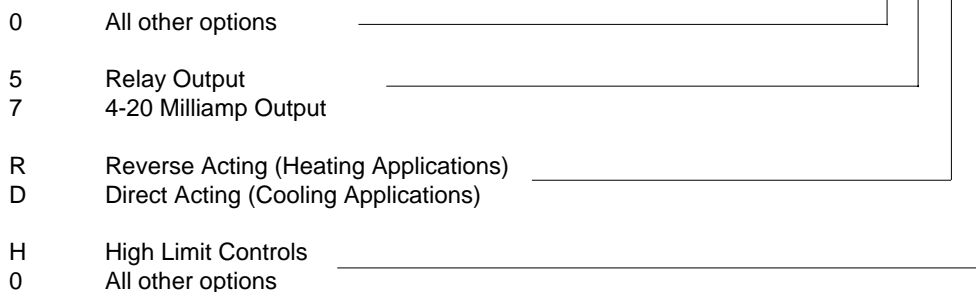
SPR7610 4



3A. *OUTPUT MODULE #1*

SPR761

Use part # R76114-R for SPDT Relay Output



76 SERIES

PART NUMBER OPTIONS LIST - CIRCUIT BOARD SLOTS

PART NUMBER

3B.	OUTPUT MODULE #2	SPR7610	0
5	Relay Output	_____	
6	Triac Output	_____	
R	Reverse Acting (Cooling Applications)*	_____	
D	Direct Acting (Heating Applications)*	_____	

*Note: To achieve the appropriate control action (heating or cooling) the designations R and D have opposite meanings for Output Module #2 as they did for Output Module #1.

3C.	OUTPUT MODULE #3	SPR7610	0
5	Relay Output	_____	
6	Triac Output	_____	
R	Reverse Acting (Heating Alarm)**	_____	
D	Direct Acting (Cooling Alarm)**	_____	

**Note: Alarms have the opposite operation of a control output.

4.	PID BOARD	SPR7610						
9	Proportional + Integral and/or Derivative	_____						
8	All other options							
0	Single Output On-Off Controls or No Outputs (Indicators Only)	_____						
P	All other options							
T	Proportional Controls	_____						
0	On-Off Controls or No Outputs (Indicators Only)							
S	Dual Output Controls Except Motor Modulations Output	_____						
0	All other options							
M	Motor Modulation Output							
P	Process Alarm	_____						
D	Deviation Alarm	_____						
0	All other options							
D	Derivative Action	_____						
0	All other options							
1	Dual Proportional Outputs	_____						
0	All other options							

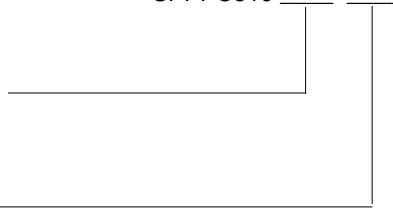
PART NUMBER OPTIONS LIST - MECHANICAL SUB-ASSEMBLIES

PART NUMBER

5. ENCLOSURE

SPPPC510

- 18 18 Terminals needed for Dual Outputs, Alarms,
Remote Signals or Motor Modulation Output
- 9 9 Terminals - All other options
- 00 Volt or Millivolt Inputs
- 10 T/C Inputs
- 20 Milliamp Inputs



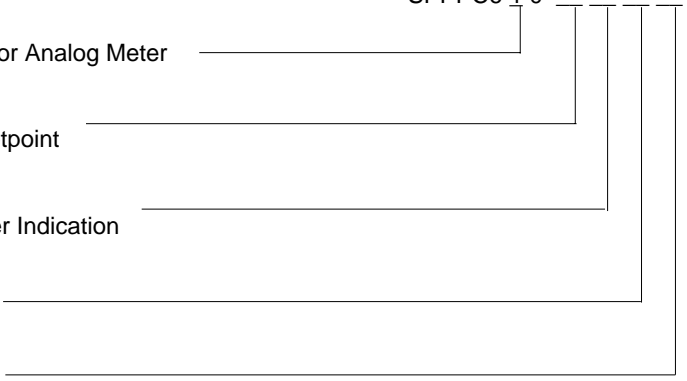
6. TERMINAL COVER (Optional)

PPC501

7. FRONT PANELS

SPPPC6 1 0

- 1 Analog Setpoint and/or Analog Meter
- 0 No Setpoint
- 1 Calibrated Analog Setpoint
- 0 No Indication
- PM Analog Process Meter Indication
- 1 High Limit Controls
- 2 All other options
- H High Limit Controls
- 0 All other options



8. COLD JUNCTION COMPENSATOR (Thermocouple Input Only)

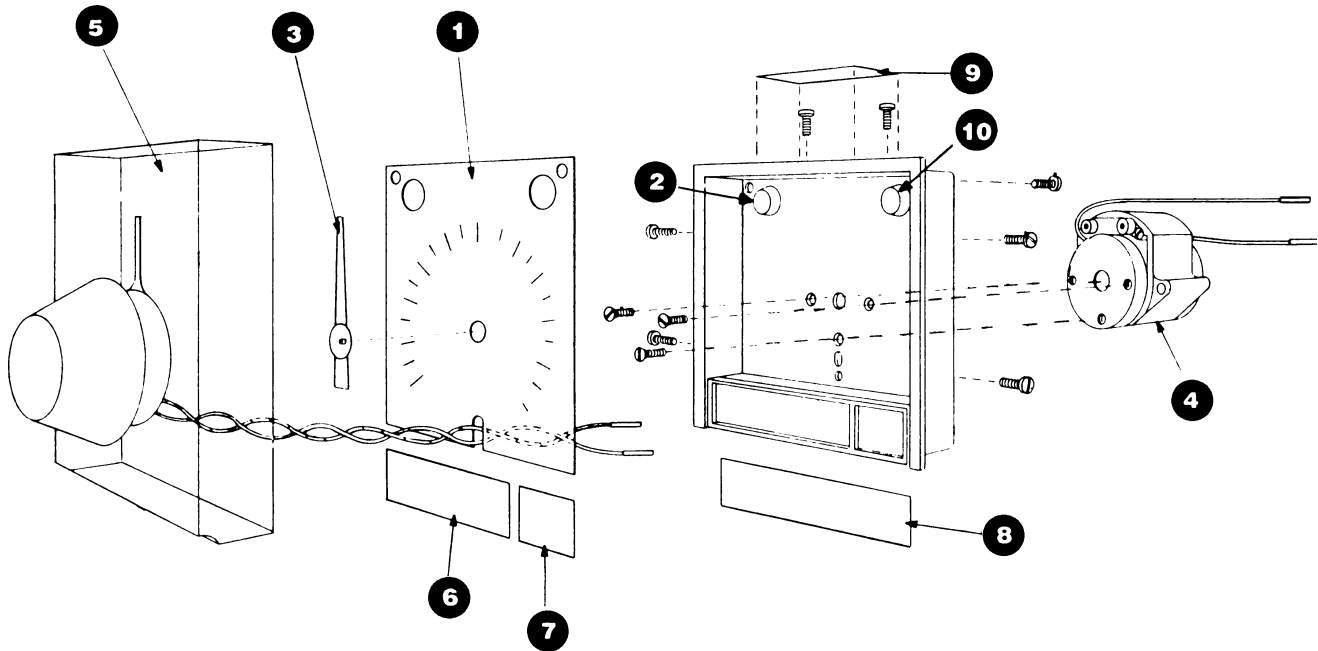
PPA310

249 OHM RESISTOR (4-20mA Input)

PPA3102

76 SERIES

FRONT PANEL ASSEMBLY
SEE PAGE 3 & 4 FOR COMPLETE LISTING AND PRICES

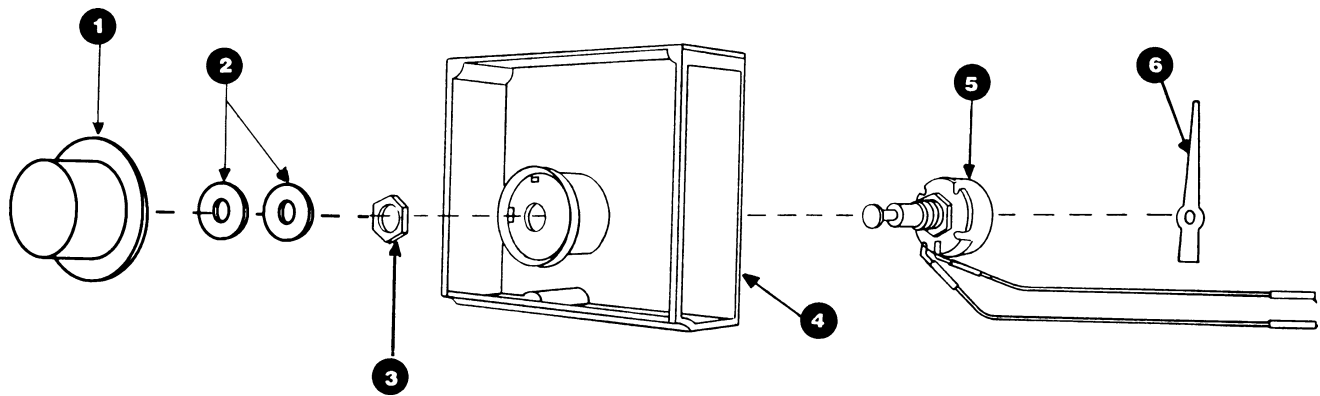


PART	PART NUMBER
1. SCALE PLATE	PPA129*
2. RED INDICATOR LENS	72600601
3. BLACK POINTER	PPB198
4. METER ASSEMBLY	SPPPB301
5. CLEAR BEZEL ASSEMBLY	
Controls	SPPPC5201
Limits	SPPPC5202
6. LOGO PLATE	PPA127
7. SCALE ID TAG	PPA128*
8. SERIAL NO. DECAL	PPA210
9. MANUFACTURER & RATING DECAL	PPA169
10. AMBER INDICATOR LENS	72600602

*Order as a set. See Table 1.

BEZEL ASSEMBLY - CONTROLS

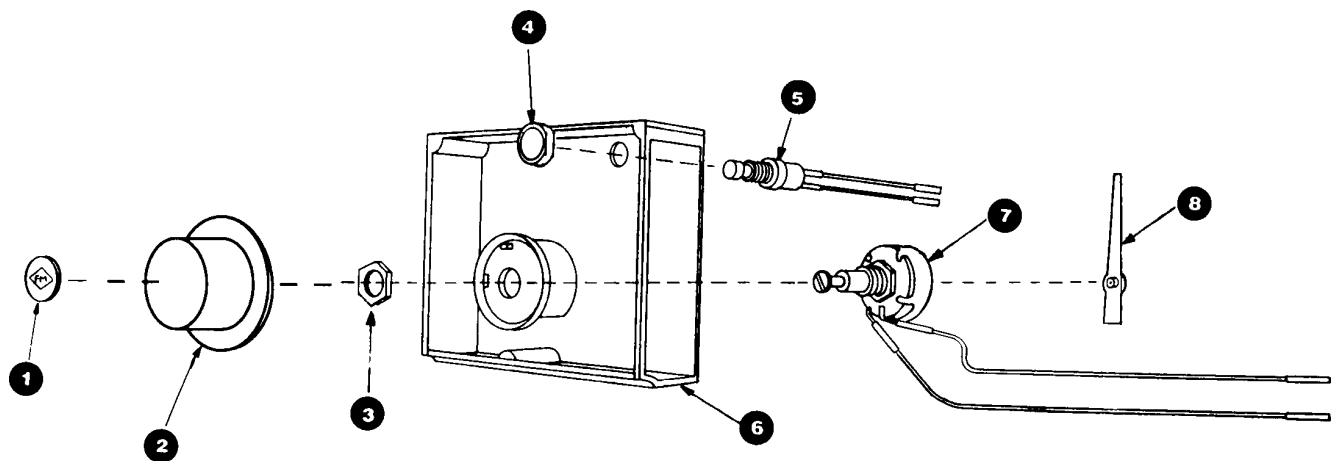
SPPPC5201



ITEM	DESCRIPTION	PART NUMBER	QTY	ITEM	DESCRIPTION	PART NUMBER	QTY
1.	KNOB	60102201	1	4.	BEZEL	PPC104	1
2.	SPRING WASHER	62102701	2	5.	POTENTIOMETER	SPPPB311	1
3.	NUT	61200801	1	6.	POINTER	PPA199	1

BEZEL ASSEMBLY - HIGH/LOW LIMIT CONTROLS

SPPPC5202

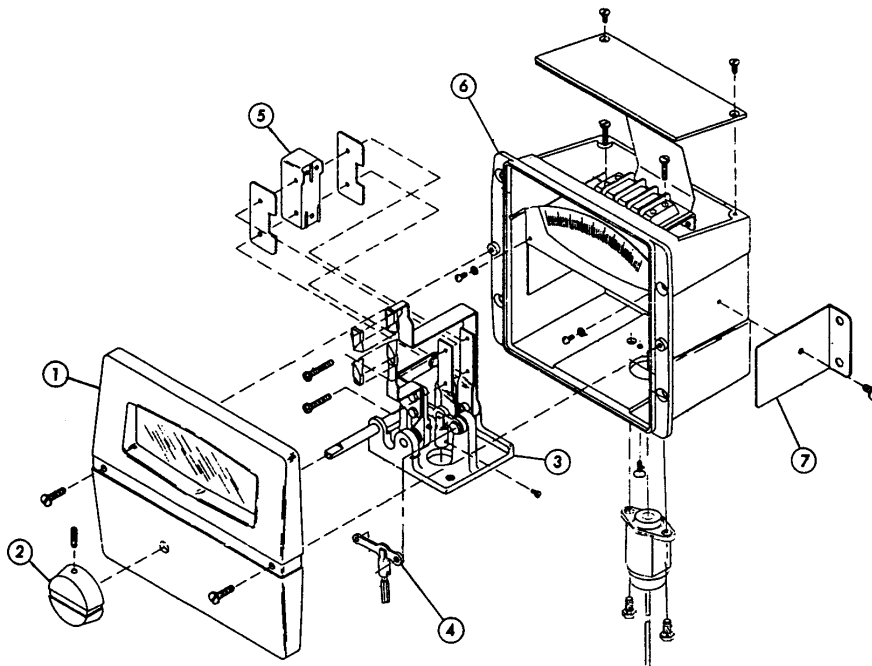


ITEM	DESCRIPTION	PART NUMBER	QTY	ITEM	DESCRIPTION	PART NUMBER	QTY
1.	PLUG WITH FM PLUG WITHOUT FM	PPA177 PPA177-1	1	5.	RESET SWITCH	SPPPA309	1
2.	KNOB	SP10066901	1	6.	BEZEL	SPPPC404	1
3.	NUT (3/8-32 nickel plate)	61200801	1	7.	POTENTIOMETER	SPPPB311	1
4.	NUT	73200302	1	8.	POINTER	PPA199	1

MECHANICAL INSTRUMENTATION SPARE PARTS

MF79 INDICATING CONTROLLER

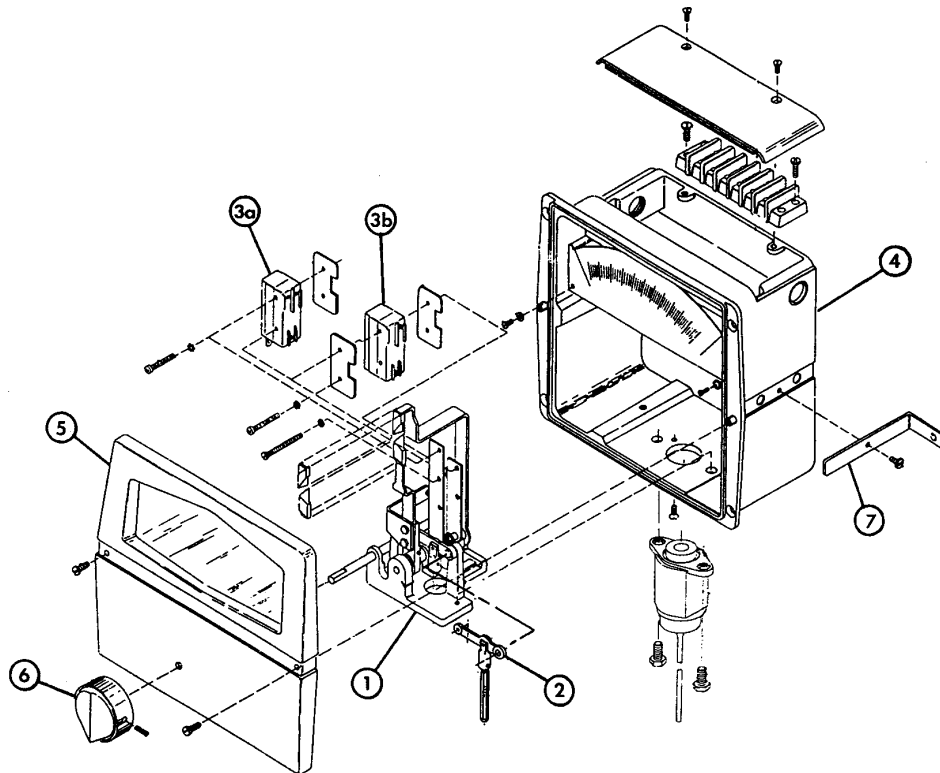
1. Cover Assembly Includes: Cover, Cover Glass, Cover Screws.	64415801	6. Case Includes: Case, Top Plate, Terminal Block Mounting Brackets and Screws, Mounting Brackets with Screws.	64416001
2. Knob Assembly Includes: Knob, Set Screw.	64410401	7. Mounting Brackets	64402002
3. Mechanism Assembly Includes: #79 Micro Switch, Wiring and Terminal Block, Push Rod.	10074014	8. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64416101
4. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64415901	Not Illustrated: Top Terminal Blank Cover Plate	64411001
5. Micro Switch Kit Includes: Terminal Screws. #73	64403018	Mechanism Gears: Pinion Gear and Pins	64403201
#79	64403021	Pinion Gear and Brake Assembly	64410801
		Sector Gear and Pointer Assembly	SPMFSS10
		Set Point Tip (Red)	LF11
		Process Pointer Tip (Blade)	MFSS19



MECHANICAL INSTRUMENTATION SPARE PARTS

LF15-79 INDICATING CONTROLLER

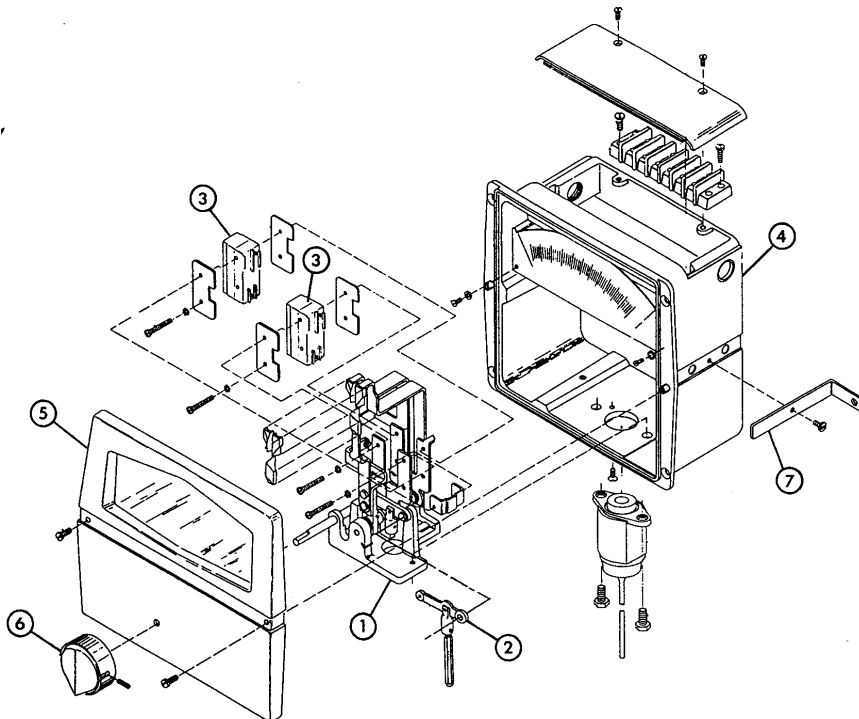
1. Mechanism Assembly Includes: #15 and #79 Switches Wiring and Terminal Block with Mounting Screws, Push Rod.	10072114	5. Cover Assembly Includes: Cover, Glass, and Screws.	64412201
2. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64412001	6. Knob Assembly Includes: Knob, Set Screw.	10041301
3. Micro Switch Kit Include: Terminal Screws #15 #79	64403008 64403021	7. Mounting Brackets 3 required	64402003
Note: #79 replaces #4 switch.		8. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64412701
4. Case Assembly Includes: Top plate with screws, Terminal Block Barrier, Mounting brackets with screws.	64412101	Not Illustrated: Mechanism Gears: Pinion Gear and Pins	64403201
		Sector Gear	SPLFS3
		Pinion Gear and Brake Assembly	SPLFSS
		Set Point Tip (Red)	LF11
		Process Pointer Tip (Blade)	MFSS19



MECHANICAL INSTRUMENTATION SPARE PARTS

LFB73-73 INDICATING CONTROLLER

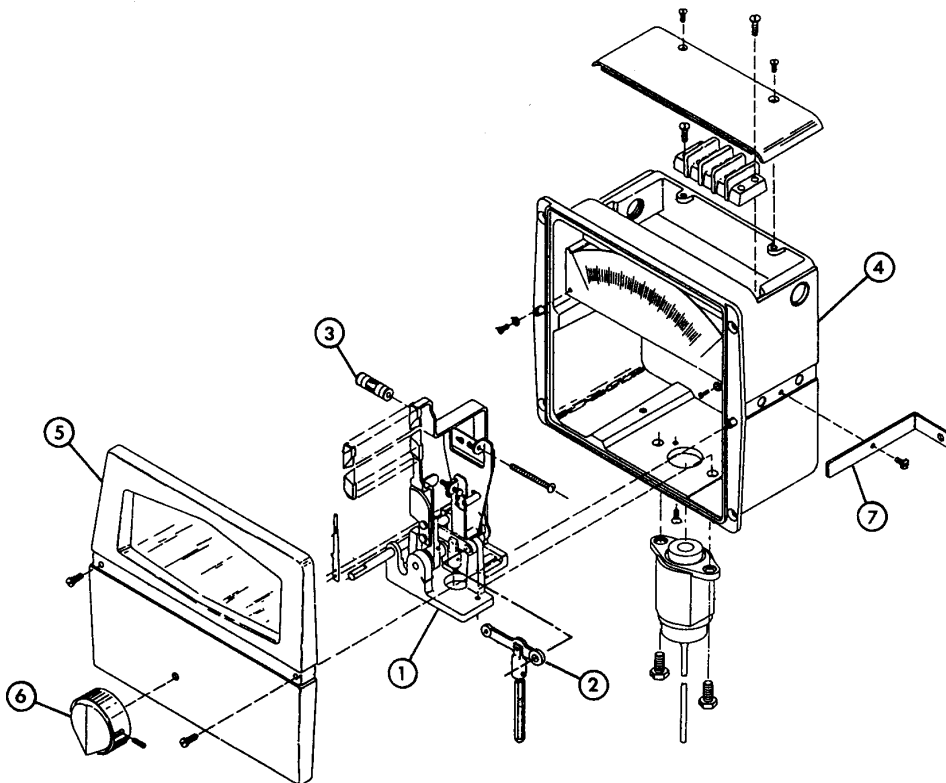
1. Mechanism Assembly Includes: Two #73 Switches, Wiring and Terminal Block with Mounting Screws, Push Rod.	10072013	5. Cover Assembly Includes: Cover, Glass, and Screws.	64412201
2. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64412001	6. Knob Assembly Includes: Knob, Set Screw.	10041301
3. Micro Switch Includes: Terminal Screws #73	64403018	7. Mounting Brackets (3 required)	64402003
Note: #73 replaces #7 switch.		8. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64412701
4. Case Assembly Includes: Top plate with screws, Terminal Block Barrier, Mounting brackets with screws.	64412101	Not Illustrated: Mechanism Gears: Sector Gears - Left Hand	SPLFBSSS3
		Right Hand	SPLFBSSS4
		Left Hand Set Pt Tip	LFBSS5
		Right Hand Set Pt Tip	LFBSS4
		Process Pointer Tip	MFSS19



MECHANICAL INSTRUMENTATION SPARE PARTS

LFP INDICATING CONTROLLER

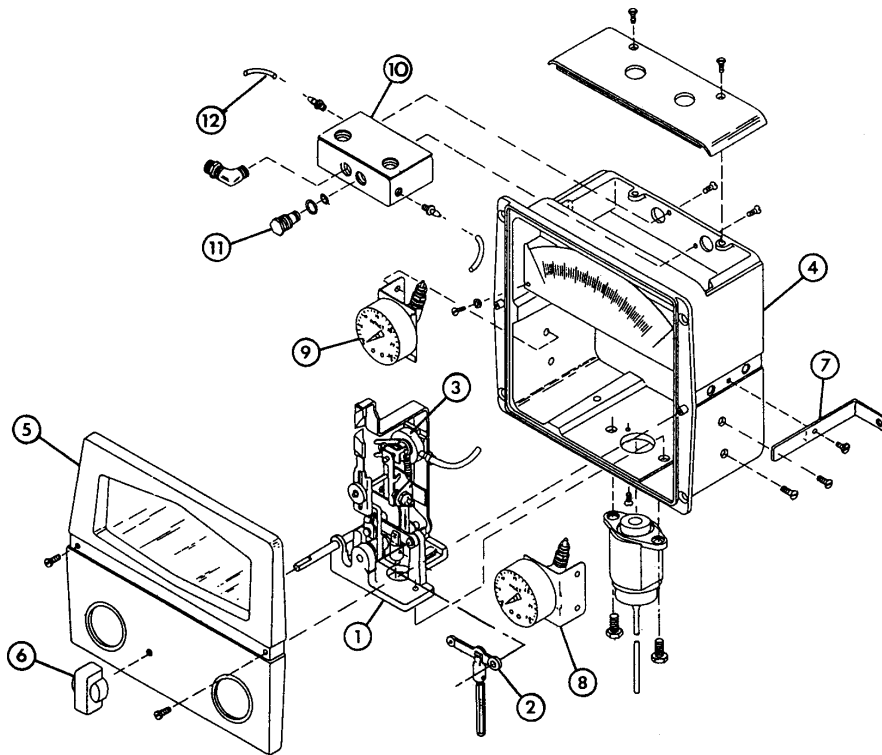
1. Mechanism Assembly Includes: Potentiometer, Wiring, Terminal Block with Mounting Screws, Push Rod.	10071811	5. Cover Assembly Includes: Cover, Glass, and Screws	64412201
2. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64412001	6. Knob Assembly Includes: Knob, Set Screw.	10041301
3. Potentiometer Includes: Potentiometer Insulating Washers and Installation Hardware		7. Mounting Brackets	64402003
135-1/8	64403501	8. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64412701
Std. 135-5/16	64403502	Not Illustrated: Mechanism Gears: Pinion Gear and Pins	64403201
135-5/8	64403503	Pinion Gear Setting Shaft	SPLFS5
100-1/8	64403504	Sector Gear	SPLFS3
100-5/16	64403505	Wiper Blade & Wire & Screws	SP-LFPS7
5000-5/8	64403506	Set Pointer Tip (Red)	LF11
4. Case Assembly Includes: Top plate with screws, Terminal Block Barrier, Mounting brackets with screws.	64412101	Process Pointer Tip (Blade)	MFSS19



MECHANICAL INSTRUMENTATION SPARE PARTS

LFA PNEUMATIC CONTROLLER

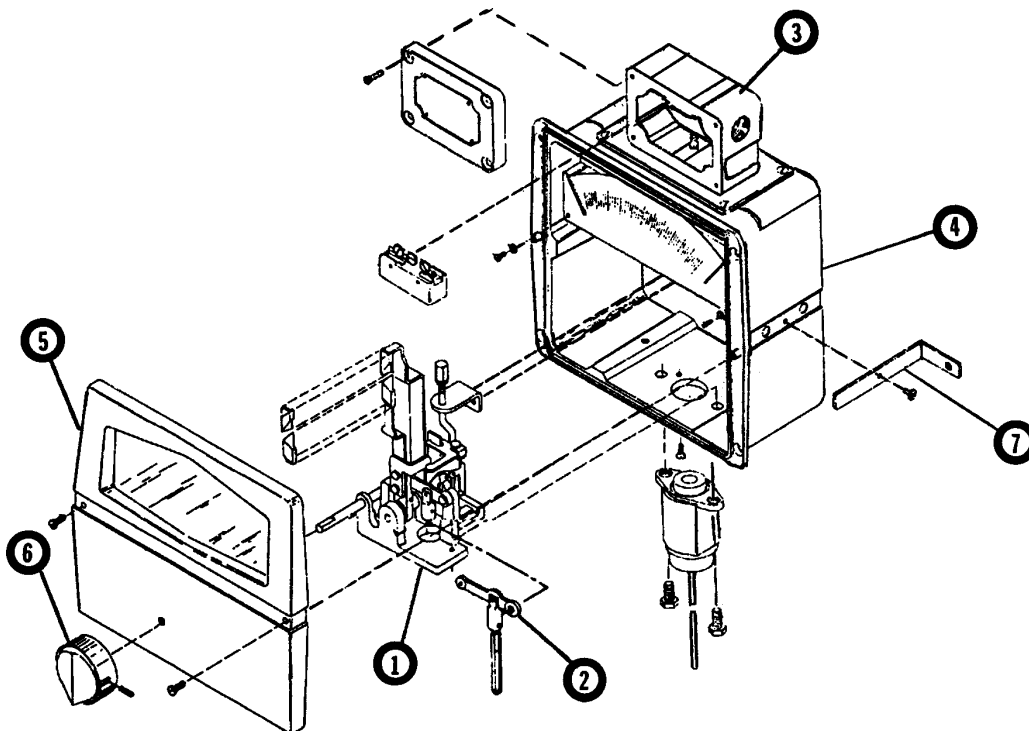
1. Mechanism Assembly	10071904	9. Outlet Gauge Assembly	SPLFAS18A
2. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64412001	10. Distribution Block Assembly with Fittings	SPRFAS2B
3. Kit Valve Arm Assembly	64411601	11. Fixed Orifice with O-Rings	64414201
4. Case Assembly Includes: Top plate with screws, Terminal Block Barrier, Mounting brackets with screws.	64412102	12. Plastic Tubing	64414301
5. Cover Assembly Includes: Cover, Glass, and Screws.	64412202	13. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64412701
6. Knob Assembly Includes: Knob, Set Screw.	LFA20	Not Illustrated: Mechanism Gears: Pinion Gear and Roll Pins	64403201
7. Mounting Brackets	64402003	Pinion Gear and Brake Assembly	SPLFS5
8. Inlet Gauge Assembly	SPLFAS18	Sector Gear	SPLFS3
		"O" Rings for Fixed Orifice Large -	60800305
		Small -	60800401
		Set Pointer Tip	LF11
		Process Pointer Tip	MFSS19



MECHANICAL INSTRUMENTATION SPARE PARTS

LFV4 EXPLOSION PROOF CONTROLLER

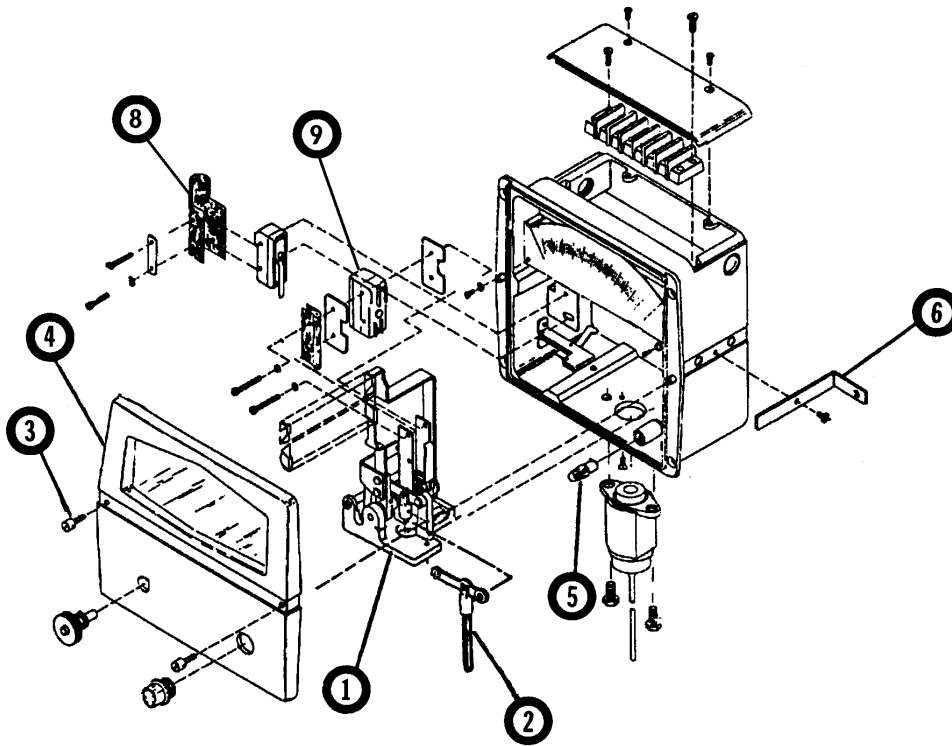
1. Mechanism Assembly Includes: Actuating Arm, Push Rod, Mounting Screws.	10072702	6. Knob Assembly Includes: Knob, Set Screw.	10041301
2. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64412001	7. Mounting Brackets	64402003
3. Switch Assembly Includes: Switch, housing, and cover.	10081202	8. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64412701
4. Case Assembly Includes: Top plate	LFVSS5	Not Illustrated: Mechanism Gears: Pinion Gear and Pins	64403201
5. Cover Assembly Includes: Cover, Glass, and Screws.	64412201	Pinion Gear and Brake Assembly	SPLFS5
		Sector Gear Assembly	SPLFVSS3
		Set Pointer Tip (Red)	LF11
		Process Pointer Tip (Blade)	MFSS19



MECHANICAL INSTRUMENTATION SPARE PARTS

LFHL HIGH TEMPERATURE LIMIT CONTROL

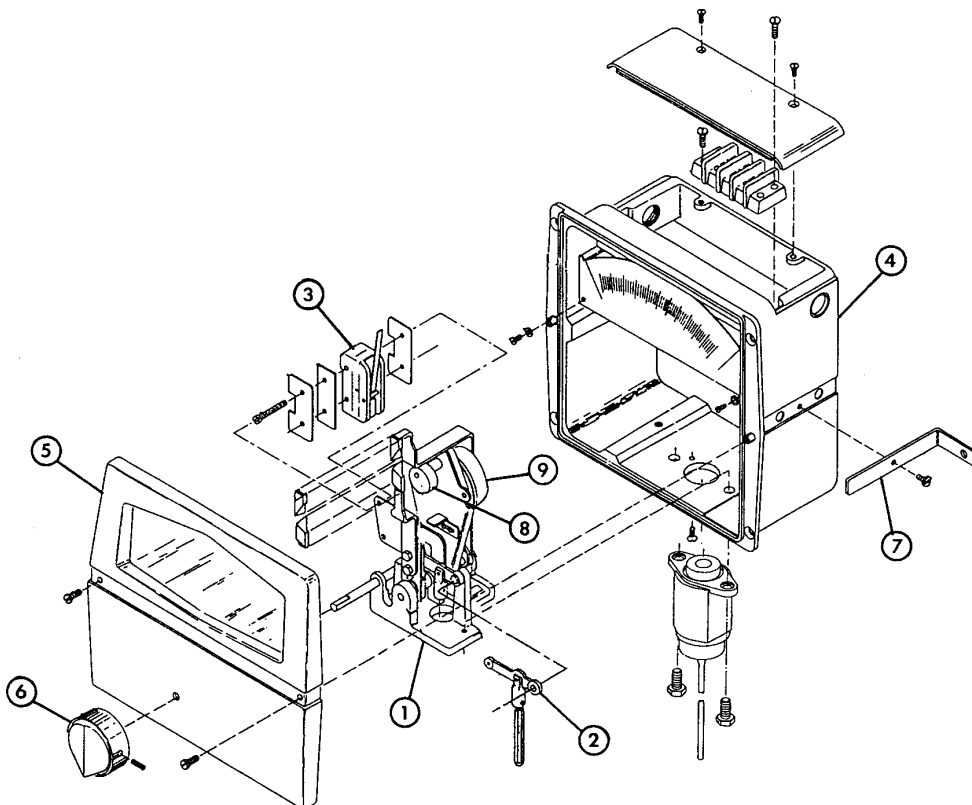
1. Mechanism Assembly	10072302	7. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64412701
2. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64412001	8. Element Failure Switch	64403002
3. Sealable Cover Screws 2 required	LFHL10	9. High Limit Switch	64403006
4. Cover Assembly Includes: Cover, Glass, Reset Knob, Light Lens.	SPLFHS6	Not Illustrated: Pinion Gear and Pins	64403201
5. Signal Light	72500801	Sector Gear Assembly	SPLFS3
6. Mounting Brackets	64402003	Set Pointer Tip (Red)	LF11
		Process Pointer Tip (Blade)	MFSS19



MECHANICAL INSTRUMENTATION SPARE PARTS

LFE18 IMPULSE-TYPE MODULATING CONTROL

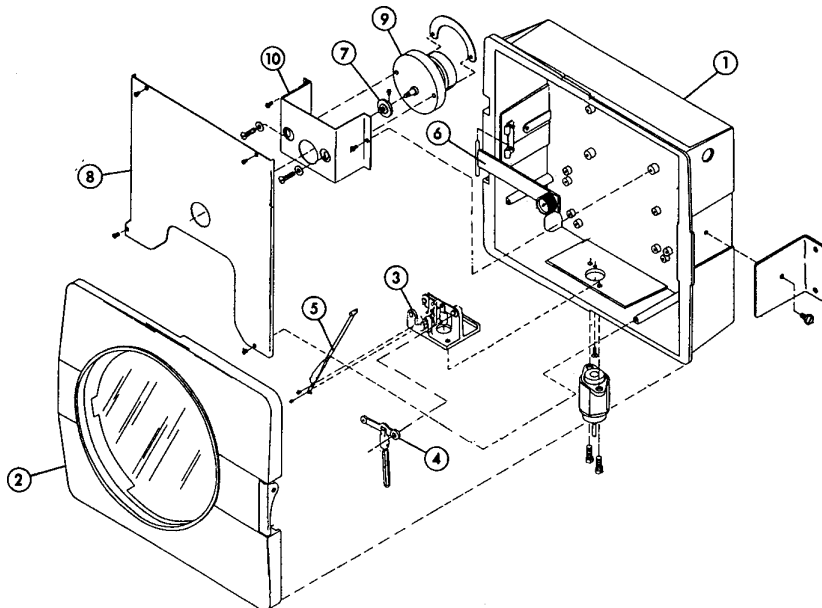
1. Mechanism Assembly Includes: #18 Switch, Wiring, Terminal Block with Mounting Screws, Push Rod with std. motor 220 VAC 60 Hz 2RPM 8% cam.	10072615	9. Motor Includes Motor with Wires	
		1 rpm 110/60	64414101
		1 rpm 220/60	64414102
2. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64412001	2 rpm 110/60	64414103
		2 rpm 220/60	64414104
3. Micro Switch Includes: Terminal Screws #18	64403009	4 rpm 110/60	64414105
		4 rpm 220/60	64414106
4. Case Assembly Includes: Top plate with Screws, Terminal Block Barrier, Mounting brackets with screws.	64412101	10. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64412701
5. Cover Assembly Includes: Cover, Glass, and Screws.	64412201	Not Illustrated: Mechanism Gears: Pinion Gear and Pins	64403201
6. Knob Assembly Includes: Knob, Set Screw.	10041301	Sector Gear Assembly	SPLFESS3
7. Mounting Brackets (3 required)	64402003	Set Pointer Tip (Red)	LF11
8. Cam	8%	Process Pointer Tip (Blade)	MFSS19
	4%		SPLFESS6B



MECHANICAL INSTRUMENTATION SPARE PARTS

RFT RECORDING THERMOMETER

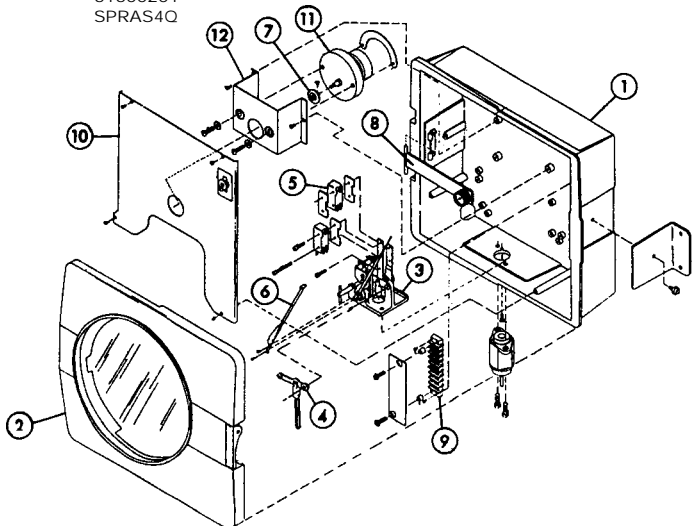
1. Case Assembly Includes: Case, Ground Plane, Latch Bracket, Mounting Brackets with Screws, Hinge Pins and Plates, Hub Strip Hinge.	64415101	10. Chart Drive Mounting Stand (not required for platen mounted drives) Includes: Clamp Plate, Fasteners.	
2. Cover Assembly One piece cover	64412916	For all Electric Stand Mounted Drives	64415601
3. Mechanism Assembly Includes: Push Rod, Pen Arm, and Ink Cartridge.	10068505	For 24, 48 Hour, 7 Day Spring Wound CCW	64415602
4. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64414801	For 14, 31 Day Spring Wound CCW	64415603
5. Pen Arm Kit Includes: Arm, Cartridge, and Screws.	64402201	For other Spring Wound with Turret on Drive	64415604
Cartridge - Red (sold in multiples of 5)	60500403	<u>Not Shown</u> Terminal Block Includes: Terminal Block, Insulators, Misc. Hardware	
6. Chart Hub Name Strip For CCW Chart Rotation	RFS12	For 3 Positions	64415001
7. Chart Nut and Flange Kit (Note application) Includes Hub Nut, Retainer Clip, Flange Assembly		For 6 Positions	64415002
For Stand mounted - CCW	64415201	For 9 Positions	64415003
For Platen mounted - CCW	64415202	For 12 Positions	64415004
For Stand Mounted Spring Wound Drives with Turrets, only nut and clip are included.	64415204	For 14 Positions	64415005
8. Platen Assembly For Spring Wound or Electric Drives, Stand or Platen mounted.	SP10067701	Hardware Kit Includes: All body fasteners (may include fasteners not required for specific models).	64415701
9. Chart Drive Contact factory for re-ordering. Specify time base, voltage cycle, and stand or platen mounted device being replaced.	(See back of manual for listed replacements.)	Not Illustrated: Mounting Brackets	64402001
		Door Handle Kit: Complete Assembly	64422501
		Spring Wound Replacement Key	60101101



MECHANICAL INSTRUMENTATION SPARE PARTS

RF15-79 RECORDING TEMPERATURE CONTROL

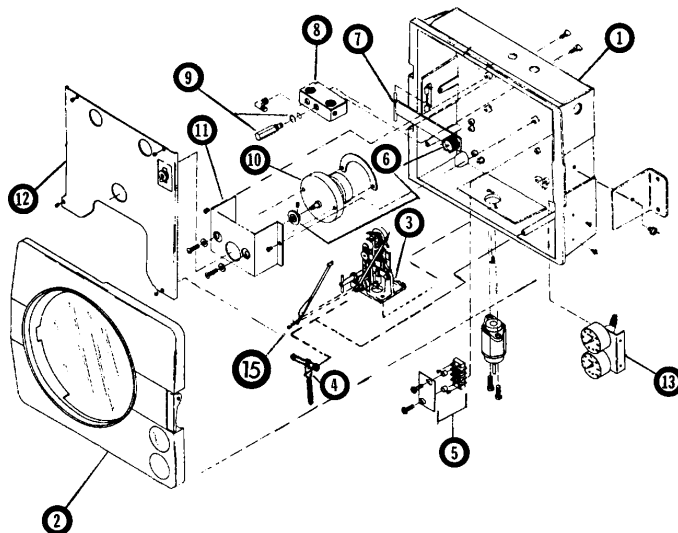
1. Case Assembly Includes: Case, Ground Plane, Latch Bracket, Mounting Brackets with Screws, Hinge Pins and Plates, Hub Strip Hinge.	64415101	10. Platen Assembly For Spring Wound or Electrical Drives, Stand or Platen mounted.	SP10067701
2. Cover Assembly One piece cover	64412916	11. Chart Drive Contact factory for re-ordering. Specify time base, voltage cycle, and stand or platen mounted device being replaced.	(See back of manual for listed replacements.)
3. Mechanism Assembly Includes: #15 and #79 Switches, Wiring, Push Rod, Pen Arm and Ink Cartridge.	10069320	12. Chart Drive Mounting Stand (not required for platen mounted drives) Includes: Clamp Plate, Fasteners.	
4. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64414801	For all Electric Stand Mounted	64415601
5. Micro Switches Includes: Terminal screws.		For 24, 48 Hour, 7 Day Spring Wound CCW	64415602
#15	64403008	For 14, 31 Day Spring Wound CCW	64415603
#79	64403021	For other Spring Wound with Turret on Drive CCW	64415604
#73	64403018	13. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64415701
6. Pen Arm Kit Includes: Arm, Cartridge, and Screws	64402201	Not Illustrated:	
Cartridge - Red (sold in multiples of 5)	60500403	Door Handle Kit:	
7. Chart Nut and Flange Kit (Note application) Includes Hub Nut, Retainer Clip, Flange Assembly		Complete Assembly	64422501
For Stand mounted	64415201	Spring Wound Key Assembly	60101101
For Platen mounted	64415202	Mechanism Gears:	
For Stand Mounted Spring Wound Drives with turrets, only nut and clip are included	64415204	Pinion Gears and Pins	64403201
8. Chart Hub Name Strip For CCW Chart Rotation	RFS12	Sector Gear	SPRSS2
9. Terminal Block Kit Includes: Terminal Block, Insulators, Misc. Hardware		Mounting Brackets	64402001
For 6 Positions	64415002	Pinion Gear for Mechanism with pins	64403201
For 9 Positions	64415003	Sector Gear for Mechanism	SPRSS2
For 12 Positions	64415004	Chart Drive Nut w/Snap Ring	SP329s2
For 14 Positions	64415005	Stem Nut and Screw Assembly	SP248s3
		Spare Chart Drive Nut	SPRFTJ6755
		Snap Ring	61600201
		Set Pointer - Red	SPRAS4Q



MECHANICAL INSTRUMENTATION SPARE PARTS

RFA - PNEUMATIC RECORDING TEMPERATURE CONTROL

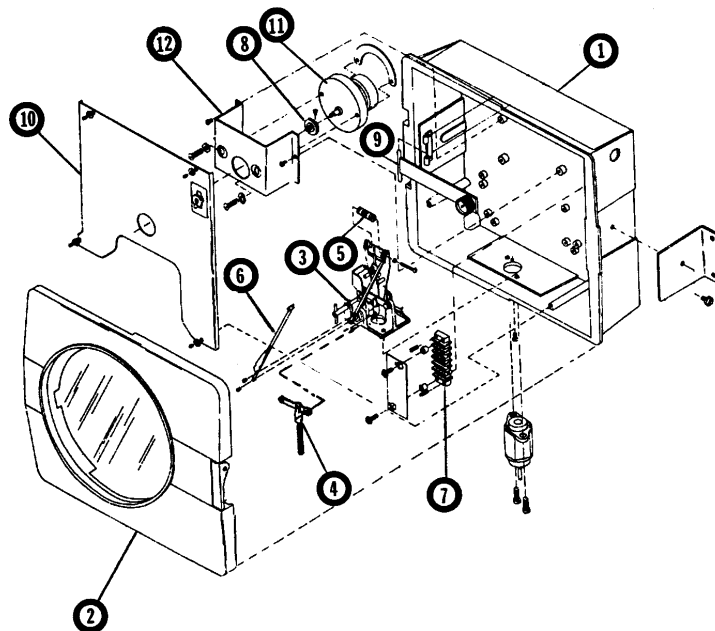
1. Case Assembly Includes: Case, Ground Plane, Latch Bracket, Mounting Brackets with Screws, Hinge Pins and Plates, Hub Strip Hinge.	64415103	9. Fixed Orifice Device Includes: Orifice and "O" Rings	64414201
2. Cover Assembly One piece cover	10067402	10. Chart Drive Contact factory for re-ordering. Specify time base, voltage cycle, and stand or platen mounted device being replaced.	(See back of manual for listed replacements.)
3. Mechanism Assembly Includes: Entire mechanism including Air line, Setpoint Pointer, Pen Cartridge, Push Rod, Set Screw.	10068604	11. Chart Drive Mounting Stand (not required for platen mounted drives) Includes: Clamp Plate, Fasteners.	
3A. Orange Pointer & Hub Assembly	RAS40	For all Electric Stand Mounted Drives	64415601
4. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64414801	For 24 Hour, 7 Day Spring Wound CCW	64415602
5. Terminal Block Kit Includes: Terminal Block, Insulators, Misc. Hardware.		For other Spring Wound with Turret	64415603
For 3 Positions	64415001	12. Platen Assembly For Spring Wound or Electrical Drives, Stand or Platen mounted.	SP10067701
For 6 Positions	64415002	13. Gauges Includes: Inlet and Outlet Gauges, Bracket and Rear Fittings.	SPRFAS6
For 9 Positions	64415003	14. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64415701
6. Chart Nut and Flange Kit Includes Hub Nut, Retainer Clip, Flange Assembly		15. Pen Arm Kit Includes: Arm, Cartridge, and Screws.	64402201
For Stand mounted	64415201	Cartridge - Red (sold in multiples of 5)	60500403
For Platen mounted	64415202	Not Illustrated: Mounting Brackets	64402001
For Stand Mounted Spring Wound	64415204	Door Handle Kit: Complete Assembly	64422501
Chart Drives with turrets, only nut and clips are included.		Spring Wound Replacement Key	60101101
7. Chart Hub Name Strip For CCW Chart Rotation	RFS12	Mechanism Gears: Pinion Gears and Pins	64403201
8. Air Distribution Block Assembly SPRFAS2B Includes: Block, Orifice, "O" Rings, Gasket, Plastic Barbed Fittings		Sector Gear	SPRSS2
		Fixed Orifice "O" Rings Large	60800305
		Small	60800401



MECHANICAL INSTRUMENTATION SPARE PARTS

RFP MODULATING TEMPERATURE RECORDER

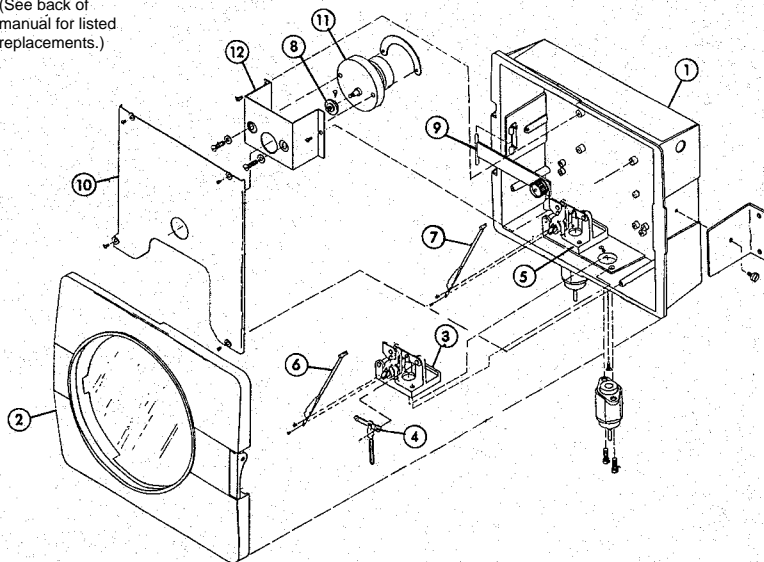
1. Case Assembly Includes: Case, Ground Plane, Latch Bracket, Mounting Brackets with Screws, Hinge Pins and Plates, Hub Strip Hinge.	64415101	9. Chart Hub Name Strip For CCW Chart Rotation	RFS12
2. Cover Assembly One piece cover	64412916	10. Platen Assembly For Spring Wound or Electrical Drives, Stand or Platen mounted.	SP10067701
3. Mechanism Assembly Includes: 5/14 Potentiometer, Wiring, Push Rod, Ink Cartridge.	10068808	11. Chart Drive Contact factory for re-ordering. Specify time base, voltage cycle, and stand or platen mounted device being replaced.	(See back of manual for listed replacements.)
4. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64414801	12. Chart Drive Mounting Stand (Not required for platen mounted drives) Includes: Clamp Plate, Fasteners.	
5. Potentiometer Coil Assemblies Includes: Coil, Mounting Hardware.		For all Electric Stand Mounted Drives	64415601
1/8" Sensitivity	64403501	For 24, Hour and 7 Day Spring Wound	64415602
Std. 5/16" Sensitivity	64403502		
5/8" Sensitivity	64403503		
6. Pen Arm Kit Includes: Arm, Cartridge, and Screws.	64402201	13. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64415701
Cartridge - Red (sold in multiples of 5)	60500403	Not Illustrated: Door Handle Kit:	
7. Terminal Block Kit Includes: Terminal Block, Insulators, Misc. Hardware.		Complete Assembly	64422501
For 6 Positions	64415002	Spring Wound Replacement Key	60101101
For 9 Positions	64415003	Mounting Brackets	64402001
For 12 Positions	64415004	Mechanism Gears: Pinion Gears and Pins	64403201
For 14 Positions	64415005	Sector Gear	SPRSS2
8. Chart Nut and Flange Kit (Note application) Includes Hub Nut, Retainer Clip, Flange Assembly.		Slide Wire Feed Blade Blade Contact & Screws Set Pointer - Red	SPLFP-S7 SPRAS4Q
For Stand mounted 64415201			
For Platen mounted 64415202			



MECHANICAL INSTRUMENTATION SPARE PARTS

RFHTT DUAL RECORDING THERMOMETER

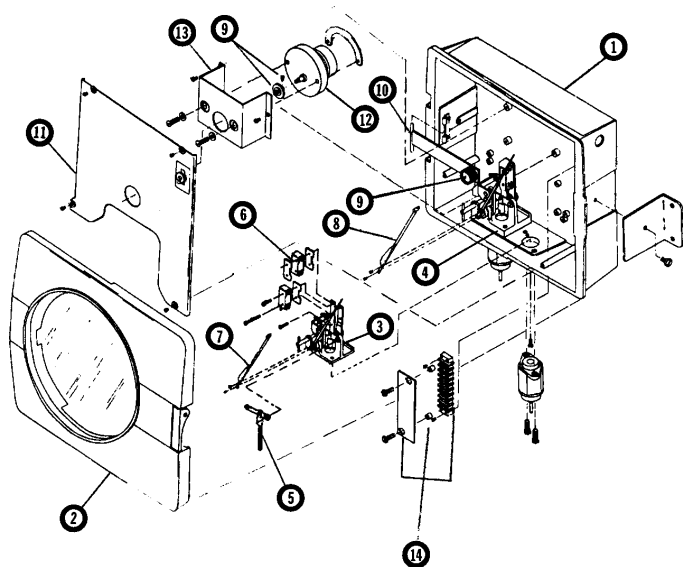
1. Case Assembly Includes: Case, Ground Plane, Latch Bracket, Mounting Brackets with Screws, Hinge Pins and Plates, Hub Strip Hinge.	64415102	12. Chart Drive Mounting Stand (not required for platen mounted drives) Includes: Clamp Plate, Fasteners.	
2. Cover Assembly One piece cover	SP10067403	For all Electric Stand Mounted Drives	64415601
3. Right Mechanism Assembly Includes: Push Rod, Pen Arm and Ink Cartridge.	10070206	For 24, 48 Hour, 7 Day Spring Wound CCW	64415602
4. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64414901	For 14, 31 Day Spring Wound CCW	64415603
5. Left Mechanism Assembly Includes: Push Rod, Pen Arm and Ink Cartridge.	10070205	For other Spring Wound with Turret on Drive	64415604
6. and 7. Pen Arm Kit Includes: Arm, Cartridge, and Screws.	64402202	<u>Not Shown</u> Terminal Block Includes: Terminal Block, Insulators, Misc. Hardware.	
Cartridge - Green (sold in multiples of 5)	60500401	For 3 Positions	64415001
Cartridge - Red (sold in multiples of 5)	60500404	For 6 Positions	64415002
8. Chart Nut and Flange Kit (Note application) Includes Hub Nut, Retainer Clip, Flange Assembly		For 9 Positions	64415003
For Stand mounted	64415201	For 12 Positions	64415004
For Platen mounted	64415202	For 14 Positions	64415005
For Stand mounted Spring Wound Drives with Turrets, Only nut and clip are included.	64415204	Hardware Kit Includes: All body fasteners (may include fasteners not required for specific models).	64415701
9. Chart Hub Name Strip For CCW Chart Rotation	RFS12	Not Illustrated: Door Handle Kit: Complete Assembly	64422501
10. Platen Assembly SP10067701 For Spring Wound or Electrical Drives, Stand or Platen mounted.		Spring Wound Replacement Key	60101101
11. Chart Drive Contact factory for re-ordering. Specify time base, voltage cycle, and stand or platen mounted device being replaced.	(See back of manual for listed replacements.)	Mounting Brackets	64402001



MECHANICAL INSTRUMENTATION SPARE PARTS

RFH15-79/15-15 DUAL RECORDING TEMPERATURE CONTROL

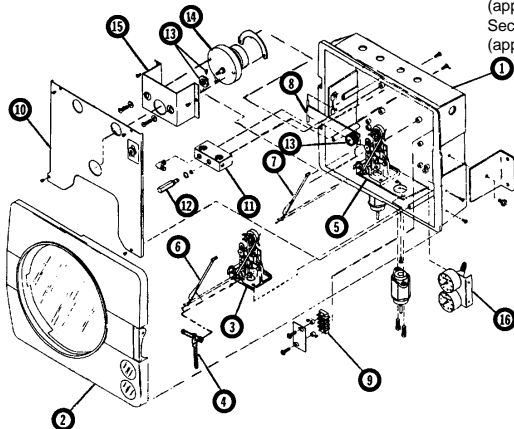
1. Case Assembly Includes: Case, Ground Plane, Latch Bracket, Mounting Brackets with Screws, Hinge Pins and Plates, Hub Strip Hinge.	64415102	11. Platen Assembly For Spring Wound or Electrical Drives, Stand or Platen mounted.	SP10067701
2. Cover Assembly One piece cover	SP10067403	12. Chart Drive Contact factory for re-ordering. Specify time base, voltage cycle, and stand or platen mounted device being replaced.	(See back of manual for listed replacements.)
3. Right Mechanism Assembly Includes: Two #15 switches, Wiring, Push Rod, Pen Arm and Ink Cartridge. Set Pointer - Red	10069319 SP10089404	13. Chart Drive Mounting Stand (not required for platen mounted drives) Includes: Clamp Plate, Fasteners.	
4. Left Mechanism Assembly Includes: #15 & #79 switches, Wiring, Push Rod, Pen Arm and Ink Cartridge. Set Pointer - Green	10069318 SP10089402	For all Electric Stand Mounted Drives	64415601
5. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64414901	For 24, 48 Hour, 7 Day Spring Wound CCW	64415602
6. Micro Switches Includes Terminal Screws		For 14, 31 Day Spring Wound CCW	64415603
#15	64403008	For other Spring Wound with Turret on Drive	64415604
#79	64403021	14. Terminal Block Kit Includes: Terminal Block, Insulators, Misc. Hardware.	
#73	64403018	For 9 Positions	64415003
7. and 8. Pen Arm Kit Includes: 2 Arms, Cartridges, and Screws	64402202	For 12 Positions	64415004
Cartridge - Green (sold in multiples of 5)	60500401	For 14 Positions	64415005
Cartridge - Red (sold in multiples of 5)	60500404	15. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64415701
9. Chart Nut and Flange Kit (Note application) Includes Hub Nut, Retainer Clip, Flange Assembly.		Not Illustrated:	
For Stand mounted - CCW	64415201	Door Handle Kit:	
For Platen mounted - CCW	64415202	Complete Assembly	64422501
For Stand mounted Spring Wound Drives with Turrets, only nut and clip are included.	64415204	Spring Wound Replacement Key	60101101
10. Chart Hub Name Strip For CCW Chart Rotation	RFS12	Mounting Brackets	64402001
		Pinion Gears and Pins (1 set) (applicable to either mechanism)	64403201
		Sector Gear (1 set) (applicable to either mechanism)	SPRSS2



MECHANICAL INSTRUMENTATION SPARE PARTS

RFHAA - DUAL RECORDING PNEUMATIC TEMPERATURE CONTROL

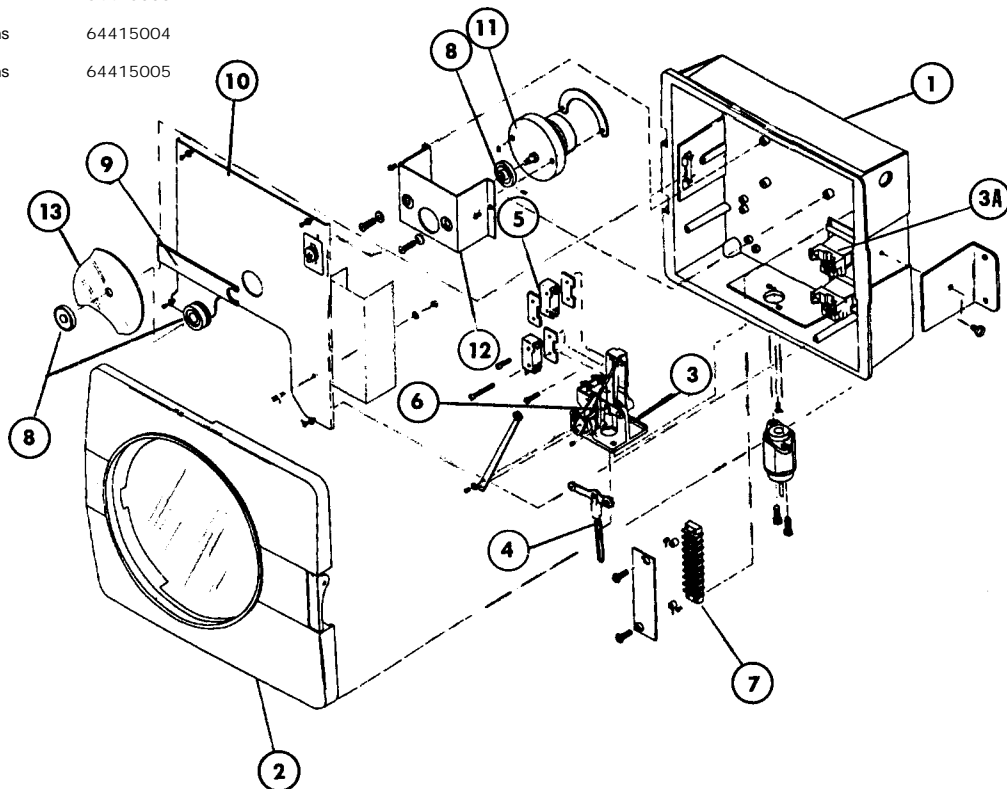
1. Case Assembly Includes: Case, Ground Plane, Latch Bracket, Mounting Brackets with Screws, Hinge Pins and Plates, Hub Strip Hinge.	64415104	12. Fixed Orifice Device Includes: Orifice and "O" Rings. Note: 2 used in instrument, may be purchased separately.	64414201
2. Cover Assembly One piece cover	SP10067404	13. Chart Nut and Flange Kit (Note application) Includes Hub Nut, Retainer Clip, Flange Assembly.	
3. Right Mechanism Assembly Includes: Air Line, Push Rod, Pen Arm and Ink Cartridge. Set Pointer - Red	10070304 SP10089404	For Stand mounted	64415201
4. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64414801	For Platen mounted	64415202
5. Left Mechanism Assembly Includes: Air Line, Push Rod, Pen Arm and Ink Cartridge. Set Pointer - Green	10070303 SP10089402	For Stand mounted Spring Wound Drives with Turrets, only nuts and clip are included.	64415204
6. and 7. Pen Arm Kit Includes: 2 Arms, Cartridges, Screws.	64402202	14. Chart Drive Contact factory for re-ordering. Specify time base, voltage cycle, and stand or platen mounted device being replaced.	(See back of manual for listed replacements.)
Cartridge - Green (sold in multiples of 5)	60500401	15. Chart Drive Mounting Stand (not required for platen mounted drives) Includes: Clamp Plate, Fasteners.	
Cartridge - Red (sold in multiples of 5)	60500404	For all Electric Stand Mounted Drives	64415601
8. Chart Hub Name Strip For CCW Chart Rotation	RFS12	For 24 Hour, 7 Day Spring Wound	64415602
9. Terminal Block Kit Includes: Terminal Block, Insulators, Misc. Hardware.		For other Spring Wound with Turret on Drive	64415603
For 6 Positions	64415002	16. Gauges Includes: Inlet and Outlet Gauges, Bracket, and Rear Fittings.	SPRFAS6A
For 9 Positions	64415003	17. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64415701
For 12 Positions	64415004	Not Illustrated:	
For 14 Positions	64415005	Door Handle Kit:	
10. Platen Assembly For Spring Wound or Electrical Drives, Stand or Platen mounted.	SP10067701	Complete Assembly	64422501
11. Air Distribution Block Assembly Includes: Block, Orifice, "O" Rings, Gasket, Plastic Barbed Fittings. Note: Two used in this unit one each Left, Right.	SPRFAS2B	Spring Wound Replacement Key	60101101
		"O" Rings for Fixed Orifice	
		Large	60800305
		Small	60800401
		Mounting Brackets	64402001
		Pinion Gears and Pins (1 set) (applicable to either mechanism)	64403201
		Sector Gear (1 set) (applicable to either mechanism)	SPRSS2



MECHANICAL INSTRUMENTATION SPARE PARTS

RFC15-52 RECORDING TEMPERATURE PROGRAMMER

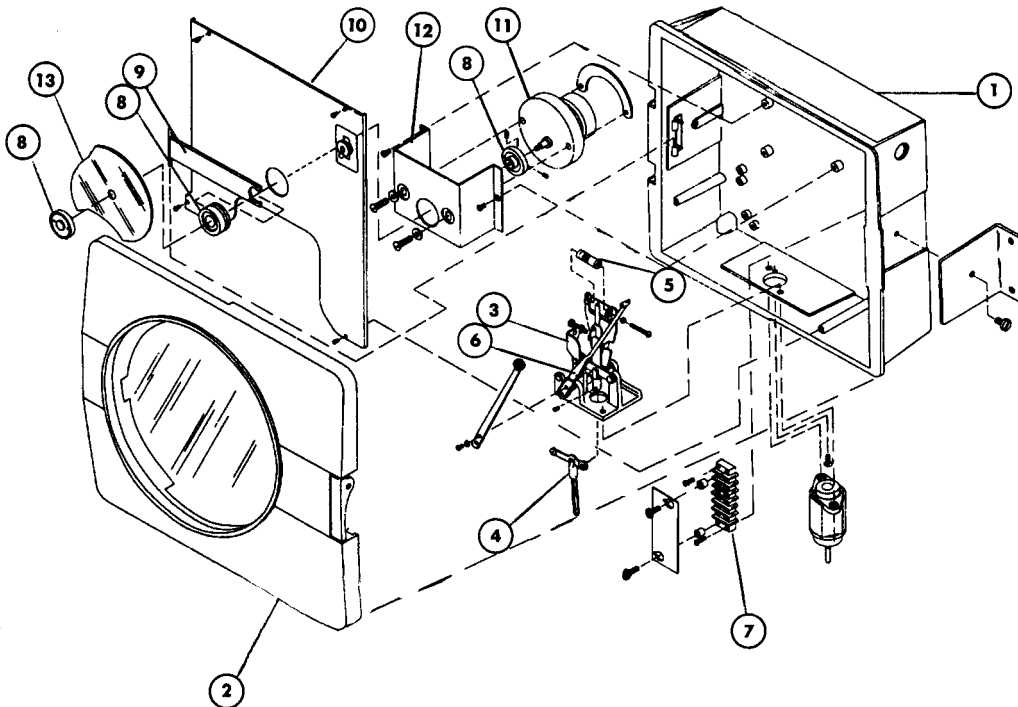
1. Case Assembly Includes: Case, Ground Plane, Latch Bracket, Mounting Brackets with Screws, Hinge Pins and Plates, Hub Strip Hinge.	64415101	8. Chart Nut and Flange Kit Includes Hub Nut, Cam Clamp, Wrenches, Flange Assembly.	64415203
2. Cover Assembly One piece cover	64412916	9. Chart Hub Name Strip For CCW Chart Rotation	RFCS2
3. Mechanism Assembly Includes: #15 and #52 Switches, Wiring, Push Rod, Pen Arm, and Pen Cartridge.	10069802	10. Platen Assembly	SP10067701
3A.* Relay Pack Assembly 125 VAC	SPRFCSSS2	11. Chart Drive Contact factory for re-ordering. Specify time base, voltage, and cycle.	(See back of manual for listed replacements.)
250 VAC	SPRFCSSS2A	12. Chart Drive Mounting Stand (not required for platen mounted drives) Includes: Clamp Plate, Fasteners.	
*Replace switch when replacing Relay Pack Assembly		For all Electric Stand Mounted Drives	64415601
4. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64414801	13. Blank Cam	RFCS9
5. Switch Kit Includes: Terminal Screws. #15	64403008	14. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64415701
#52	64403012	Not Illustrated: Door Handle Kit: Complete Assembly	64422501
6. Pen Arm Kit Includes: Arm, Cartridge, and Screws.	64402204	Mounting Brackets	64402001
Cartridge - Red (sold in multiples of 5)	60500403	Cam Roller Arm Assembly Mounts to Mechanism (Follows Plastic Cam)	SPRFCSSS5
7. Terminal Block Kit Includes: Terminal Block, Insulators, Misc. Hardware			
For 6 Positions	64415002		
For 9 Positions	64415003		
For 12 Positions	64415004		
For 14 Positions	64415005		



MECHANICAL INSTRUMENTATION SPARE PARTS

RFCP RECORDING TEMPERATURE PROGRAMMER

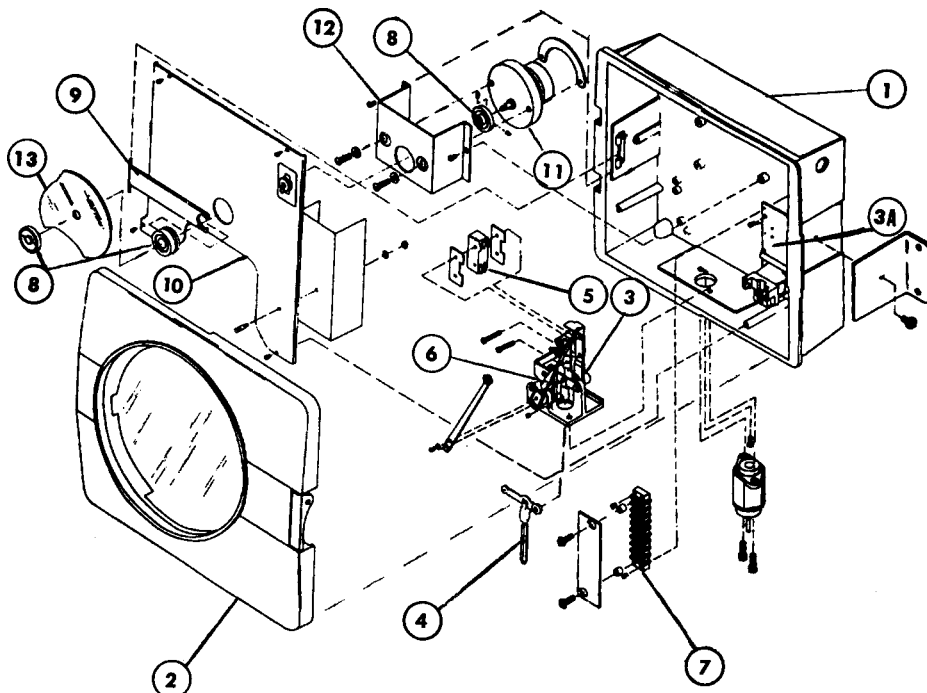
1. Case Assembly Includes: Case, Ground Plane, Latch Bracket, Mounting Brackets with Screws, Hinge Pins and Plates, Hub Strip Hinge.	64415101	8. Chart Nut and Flange Kit Includes Hub Nut, Cam Clamp, Wrenches, Flange Assembly.	64415203
2. Cover Assembly One piece cover	64412916	9. Chart Hub Name Strip For CCW Chart Rotation	RFCS2
3. Mechanism Assembly Includes: 5/16 Potentiometer, Wiring, Push Rod, and Pen Cartridge.	10070709	10. Platen Assembly	SP10067701
4. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64414801	11. Chart Drive Contact factory for re-ordering. Specify time base, voltage, and cycle,	(See back of manual for listed replacements.)
5. Potentiometer Coil Assemblies Includes: Coil, Mounting Hardware.		12. Chart Drive Mounting Stand (not required for platen mounted drives) Includes: Clamp Plate, Fasteners.	
1/8" sensitivity	64403501	For all Electric Stand Mounted Drives	64415601
Std. 5/16" sensitivity	64403502		
5/8" sensitivity	64403503		
6. Pen Arm Kit Includes: Arm, Cartridge, and Screws.	64402204	13. Blank Cam	RFCS9
Cartridge - Red (sold in multiples of 5)	60500403	14. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64415701
7. Terminal Block Kit Includes: Terminal Block, Insulators, Misc. Hardware.		Not Illustrated: Door Handle Kit: Complete Assembly	64422501
For 6 Positions	64415002	Mounting Brackets	64402001
For 9 Positions	64415003	Cam Roller Arm Assembly Mounts to Mechanism (Follows Plastic Cam)	SPRFCSS5
For 12 Positions	64415004	Slide with Feed Blade Blade Contact and Screws	SPLFPS7
For 14 Positions	64415005		



MECHANICAL INSTRUMENTATION SPARE PARTS

RFC52 RECORDING TEMPERATURE PROGRAMMER

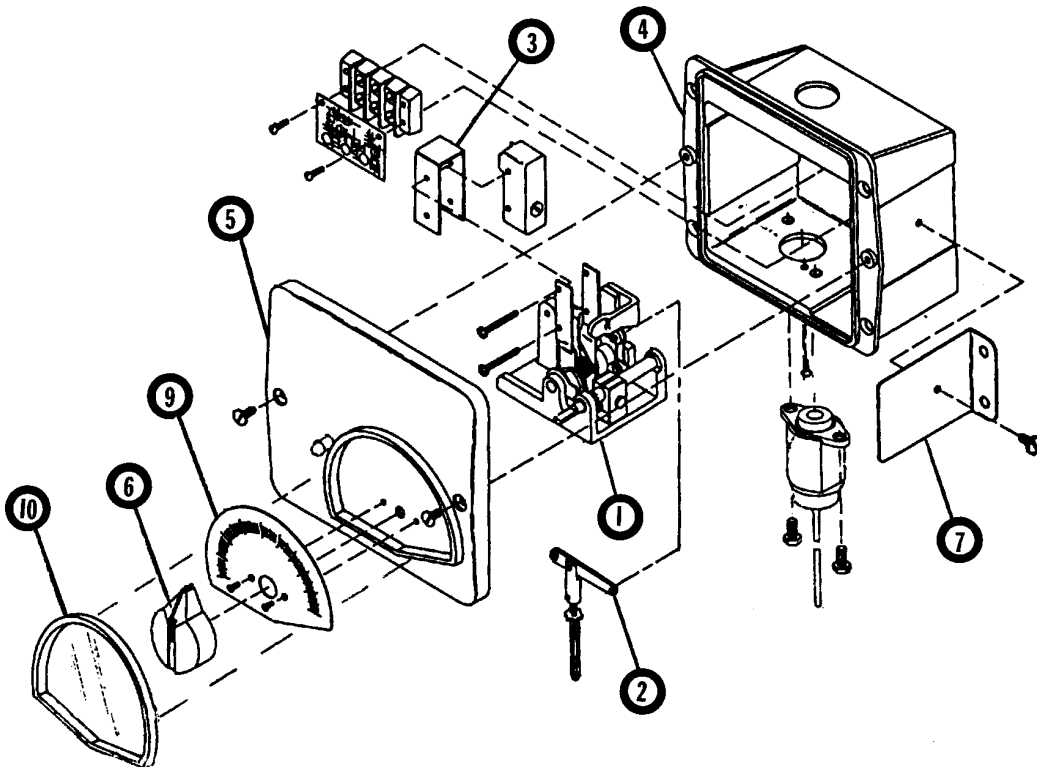
1. Case Assembly Includes: Case, Ground Plane, Latch Bracket, Mounting Brackets with Screws Hinge Pins and Plates, Hub Strip Hinge.	64415101	8. Chart Nut and Flange Kit Includes Hub Nut, Cam Clamp, Wrenches, Flange Assembly.	64415203
2. Cover Assembly One piece cover	64412916	9. Chart Hub Name Strip	RFCS2
3. Mechanism Assembly Includes: #52 Switch, Pen, Push Rod, and Cartridge.	10069205	10. Platen Assembly For Spring Wound or Electric Drives, Stand or Platen Mounted.	SP10067701
3A.* Relay Pack Assembly 125 VAC	SPRFCSS4	11. Chart Drive Contact factory for re-ordering. Specify time base, voltage, and cycle,	(See back of manual for listed replacements.)
250 VAC	SPRFCSS4A	12. Chart Drive Mounting Stand Includes: Clamp Plate, Fasteners.	
*Replace switch when replacing Relay Pack Assembly		For all Electric Stand Mounted Drives	64415601
4. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64414801	13. Blank Cam	RFCS9
5. Switch Kit #52	64403012	14. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64415701
6. Pen Arm Kit Includes: Arm, Cartridge, and Screws.	64402204	Not Illustrated: Door Handle Kit: Complete Assembly	64422501
Cartridge - Red (sold in multiples of 5)	60500403	Mounting Brackets	64402001
7. Terminal Block Includes: Terminal Block, Insulators, Misc. Hardware. For 6 Positions	64415002	Cam Roller Arm Assembly Mounts to Mechanism (Follows Plastic Cam)	SPRFCSS5
For 9 Positions	64415003		
For 12 Positions	64415004		
For 14 Positions	64415005		



MECHANICAL INSTRUMENTATION SPARE PARTS

ZFHL - NON-INDICATING HIGH TEMPERATURE LIMIT DEVICE

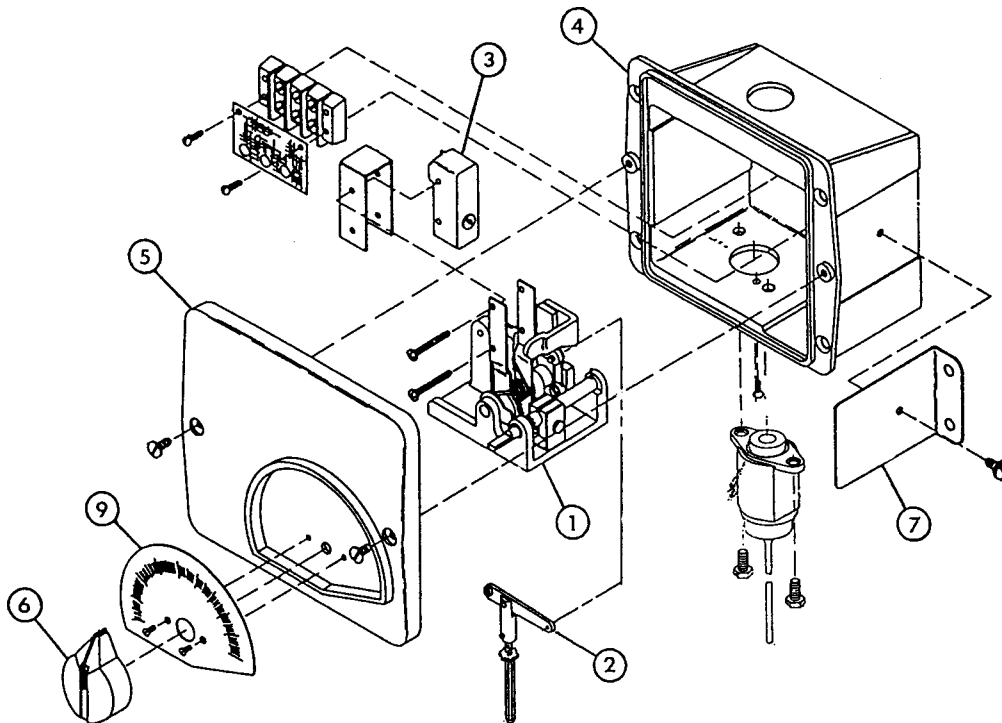
1. Mechanism Assembly Includes: Micro Switch, Wiring and Terminal Block, Push Rod.	SP10076401	7. Mounting Brackets Consult factory for re-order.	64402002
2. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64412301	8. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64412501
3. Micro Switch Includes: Terminal Screws.	64403006	9. Dial Scale Specify range and standard or inverted mount.	
4. Case Assembly Includes: Mounting Brackets.	64412401	10. Cover Shield	ZFHL5
5. Cover Assembly Includes: Dial Screws, Cover Screws.	SP10093501		
6. Knob Assembly Includes: Set Screw.	ZFS7		



MECHANICAL INSTRUMENTATION SPARE PARTS

ZF79 NON-INDICATING TEMPERATURE CONTROL

1. Mechanism Assembly Includes: Micro Switch, Wiring and Terminal Block, Push Rod.	10076107	5. Cover Assembly Includes: Dial Screws, Cover Screws.	64412601
2. Main Lever Assembly Includes: Main Lever with Push Rod Cap, Push Rod, Set Screw.	64412301	6. Knob Assembly Includes: Set Screw.	ZFS7
3. Micro Switch Includes: Terminal Screws. #73 #79	64403018 64403021	7. Mounting Brackets Consult factory for re-order.	64402002
4. Case Assembly Includes: Mounting Brackets.	64412401	8. Hardware Kit (not shown) Includes: All body fasteners (may include fasteners not required for specific models).	64412501
Note: #73 replaces #7, #79 replaces #4.		9. Dial Scale Specify range and standard or inverted mount.	



MECHANICAL INSTRUMENTATION SPARE PARTS

MODEL 10 GAS CONTROL

1. Knob Kit Includes: Knob, Set Screw.	64404101	7. Dial Kit Includes: Dial and Screws.	
2. Stuffing Box Includes: Stem, Head Screw, Stuffing Box, O-Ring Spring Washer.	64404003	091 - 112F	64403901
3. Valve Assembly Includes: Valve Seat Cage Assembly, Valve, Rings, Retainer, Spring.	64404201	094 { 217F	64403902
4. By-Pass Kit Includes: Needle Valve, O-Ring, Pipe Plug.	64403602	{ 217C	64403903
5. Element Screw and O-Ring Seal Includes: Element Screws and O-Ring Seal.	64417901	101 { 225F	64403904
6. Conversion Kit	64400201	{ 225C	64403905
		104 { 335F	64403906
		{ 335C	64403907
		106 { 445F	64403908
		{ 445C	64403909
		108 { 555F	64403010
		{ 555C	64403911
		109 { 665F	64403912
		{ 665C	64403913
		111 { 780F	64403914
		{ 780C	64403915
		113 { 910F	64403916
		{ 910C	64403917
		115 - 1011F	64403918
		094 - 217F Uncal.	64403919
		101 - 225F Uncal.	64403920
		104 - 335F Uncal.	64403921
		106 - 445F Uncal.	64403922
		108 - 555F Uncal.	64403923
		109 { 665F Uncal.	64403924
		{ 665C Uncal.	64403925
		111 - 780F Uncal.	64403926
		113 - 910F Uncal.	64403927
		115 - 1011F Uncal.	64403928

Note: Uncalibrated scales to be used with
Acc. 194 Indicator.

MECHANICAL INSTRUMENTATION SPARE PARTS

MODEL 20 & 28 GAS CONTROL

1. Knob Kit
Includes: Knob, Set Screw. 64404101

2. Adjusting Stem Kit\$
Includes: Core Box,
Adjusting Stem, Washer,
Spring, Rollpin, Cap, O-Ring,
Model 20 64404005
Model 28 64404006

3. Valve Kit
Includes: O-Ring, Valve
Seat Guide, Valve, Valve
Spring, Valve Assembly.
Model 20 64404203
Model 28 64404204

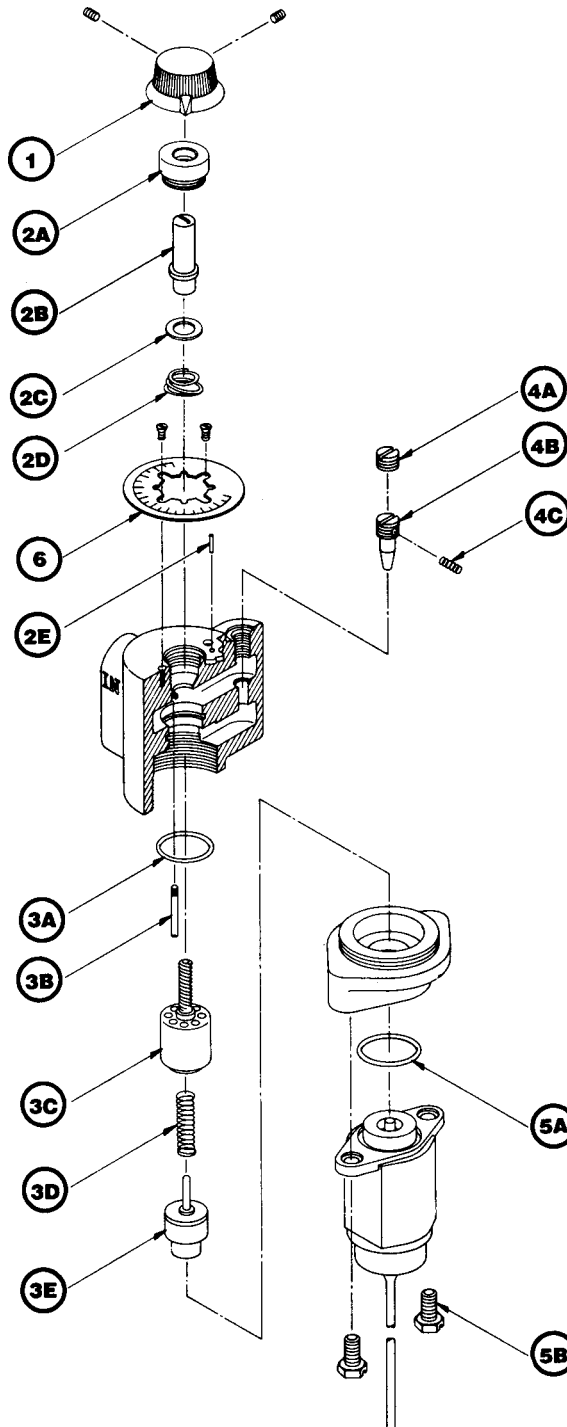
4. Plug Cap 64403603
Includes: Plug, Screw, Spring.

5. Element Screw and
O-Ring Seal 64417901
Includes: Element Screws
and O-Ring Seal.

6. Dial Kit
Includes: Dial and Screws.

091 - 112F	64405601
094 { 217F	64405602
217C	64405603
101 { 225F	64405604
225C	64405605
104 { 335F	64405606
335C	64405607
106 { 445F	64405608
445C	64405609
108 { 555F	64405610
555C	64405611
109 { 665F	64405612
665C	64405613
111 { 780F	64405614
780C	64405615
113 { 910F	64405616
910C	64405617
115 - 1011F	64405618
094 - 217F Uncal.	64405619
101 - 225F Uncal.	64405620
104 - 335F Uncal.	64405621
106 - 445F Uncal.	64405622
108 - 555F Uncal.	64405623
109 { 665F Uncal.	64405624
665C Uncal.	64405625
111 - 780F Uncal.	64405626
113 - 910F Uncal.	64405627
115 - 1011F Uncal.	64405628

Note: Uncalibrated scales to be used with
Acc. 194 Indicator.



MECHANICAL INSTRUMENTATION SPARE PARTS

MODEL 40 & 48 GAS CONTROL

1. Valve Arm 64418101
Includes: Valve Arm, Valve Arm Guide Screw, Pivot Screw, Pipe Plug.

2. Valve Assembly
Includes: Valve, Valve Arm, Valve Arm Guide Screw, Valve Stem, Stem Nut, Pivot Screw, Pipe Plug.
Model 40 64404205
Model 48 64404206

3. Stuffing Box Kit 64404001
Includes: O-Ring, Stuffing Box, Adjusting Stem, Adjusting Stem Washer, Stuffing Box Spring, Stuffing Box Body, Adjusting Screw.

4. Dial Kit
Includes: Knob, Dial Scale, and Screws.

091	{	112F	64403701
		112C	64403702
094	{	217F	64403703
		217C	64403704
		225F	64403705
		225C	64403706
104	{	335F	64403707
		335C	64403708
106	{	445F	64403709
		445C	64403710
108	{	555F	64403711
		555C	64403712
107	-	655F	64403713
109	{	665F	64403714
		665C	64403715
111	{	780F	64403716
		780C	64403717
113	{	910F	64403718
		910C	64403719
115	{	1011F	64403720
		1011C	64403721
		38 0/50 Uncal.	64403722
091	{	112F Uncal.	64403723
		112C Uncal.	64403724
094	{	217F Uncal.	64403725
		217C Uncal.	64403726

101	{	225F Uncal.	64403727
		225C Uncal.	64403728
104	{	335F Uncal.	64403729
		335C Uncal.	64403730
106	{	445F Uncal.	64403731
		445C Uncal.	64403732
108	{	555F Uncal.	64403733
		555C Uncal.	64403734
109	{	665F Uncal.	64403735
		665C Uncal.	64403736
111	{	780F Uncal.	64403737
		780C Uncal.	64403738
113	{	910F Uncal.	64403739
		910C Uncal.	64403740
115	{	1011F Uncal.	64403741
		1011C Uncal.	64403742

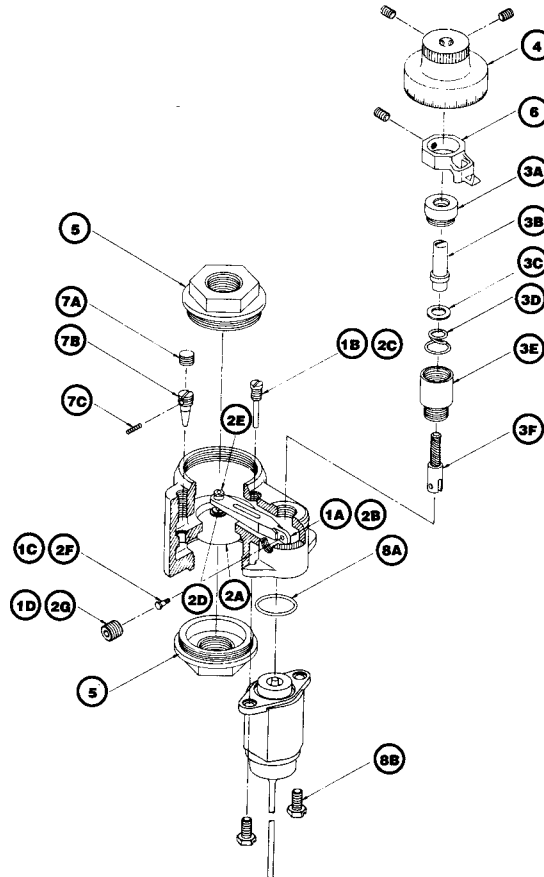
Note: Uncalibrated scales to be used with Acc. 194 Indicator.

5. Cap Kit
Includes: Top and Bottom Caps, Threaded for 1" NPT.
Model 40 64405404
Model 48 64405402

6. Dial Stop Kit 64405301
Includes: Dial Stop and Screws.

7. By-Pass Kit 64403601
Includes: Plug, By Pass Screw, Spring.

8. Element Screw and O-Ring Seal 64417901
Includes: Element Screws and O-Ring Seal.



MECHANICAL INSTRUMENTATION SPARE PARTS

MODEL 60 GAS CONTROL

1. By Pass Cap Kit 64403601
Includes: By Pass Screw, Pipe Plug,
By Pass Spring.

2. Secondary By Pass Cap Kit
Includes: Cap, Adjustment Screw,
Gland, Packing, Cap Top.
60 - 1 1/2", 2" 64405502
60 - 1", 1 1/4" 64405501

3. Valve Assembly Kit
Includes: Valve Stem Nut, Valve Arm,
Valve Stem, Valve, Pivot Screw, Pipe
Plug, Guide Screw.
60 - 1", 1 1/4" 64404209
60 - 1 1/2" 64404210
60 - 2" 64404211

4. Lower Valve Cap
60 - 1", 1 1/4" 64405407
60 - 1 1/2", 2" 64405408

5. Dial Kit
Includes: Knob, Dial Scale, and Screws.

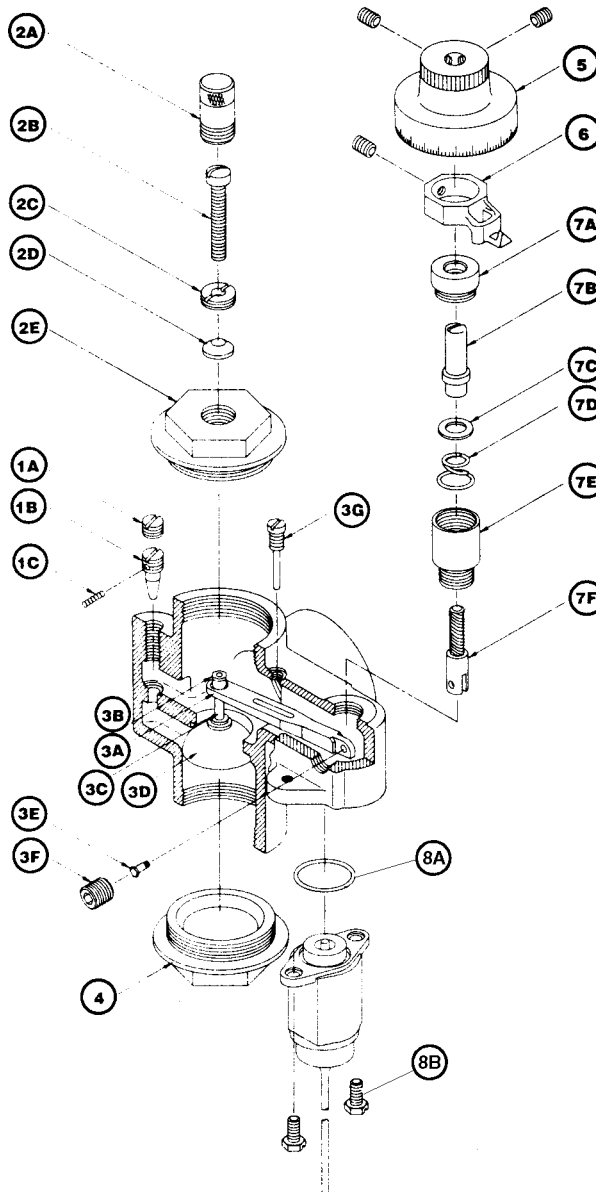
091	{ 112F	64403701
	{ 112C	64403702
	{ 217F	64403703
094	{ 217C	64403704
	{ 225F	64403705
	{ 225C	64403706
	{ 335F	64403707
104	{ 335C	64403708
	{ 445F	64403709
106	{ 445C	64403710
	{ 555F	64403711
108	{ 555C	64403712
107	- 655F	64403713
109	{ 665F	64403714
	{ 665C	64403715
111	{ 780F	64403716
	{ 780C	64403717
113	{ 910F	64403718
	{ 910C	64403719
115	{ 1011F	64403720
	{ 1011C	64403721
	38 0/50 Uncal.	64403722
091	{ 112F Uncal.	64403723
	{ 112C Uncal.	64403724
	{ 217F Uncal.	64403725
094	{ 217C Uncal.	64403726
	{ 225F Uncal.	64403727
	{ 225C Uncal.	64403728
101	{ 335F Uncal.	64403729
	{ 335C Uncal.	64403730
104	{ 445F Uncal.	64403731
	{ 445C Uncal.	64403732
106	{ 555F Uncal.	64403733
	{ 555C Uncal.	64403734
108	{ 665F Uncal.	64403735
	{ 665C Uncal.	64403736
109	{ 780F Uncal.	64403737
	{ 780C Uncal.	64403738
111	{ 910F Uncal.	64403739
	{ 910C Uncal.	64403740
113	{ 1011F Uncal.	64403741
	{ 1011C Uncal.	64403742

Note: Uncalibrated scales to be used with
Acc. 194 Indicator.

6. Dial Stop Kit 64405301
Includes: Dial Stop and Screws.

7. Stuffing Box Kit 64404001
Includes: O-Ring Stuffing Box,
Adjusting Stem, Adjusting Screw
Washer, Stuffing Box Spring,
Stuffing Box body, Adjusting
Screw, O-Ring.

8. Element Screw and
"O" Ring Seal Kit 64417901
Includes: Element Screws and
"O" Ring Seal



MECHANICAL INSTRUMENTATION SPARE PARTS

MODEL 70 & 713 GAS CONTROL

1. Top Cap Kit

70 - 3/4"	64405406
70 - 1 1/4"	64405407
70 - 2"	64405409
70 - 3"	64405410
713 - 1 1/4"	64405407

2. Primary By Pass Kit 64403601

Includes: By Pass Screw,
Pipe Plug, By Pass Spring.

3. Secondary By Pass Kit

Includes: Lower Valve Cap, Packing,
Gland, Adjustment Screw, Adjustment
Screw Cap.

70 - 3/4"	64405503
70 - 1 1/4"	64405504
70 - 2"	64405505
70 - 3"	64405506
713 - 1 1/4"	64405504

4. Valve Assembly Kit

Includes: Valve Arm Pivot Screw,
Lower Valve Assembly, Pivot Screw,
Pipe Plug, Valve Seat and Roll Pin
Assembly, Guide Screw, Valve Arm
Assembly.

70 - 3/4"	64404212
70 - 1 1/4"	64404213
70 - 2"	64404214
70 - 3"	64404215
713 - 1 1/4"	64404216

5. Dial Kit

Includes: Knob, Dial Scale,
and Screws.

091 - 112F	64403801
091 - 217F	64403802
094 { 217C	64403803
094 { 225F	64403804
101 { 225C	64403805
101 { 335F	64403806
104 { 335C	64403807
104 { 445F	64403808
106 { 445C	64403809
106 { 555F	64403810
108 { 555C	64403811
107 - 655F	64403812
109 { 665F	64403813
109 { 665C	64403814
111 { 780F	64403815
111 { 780C	64403816
113 { 910F	64403817
113 { 910C	64403818
115 { 1011F	64403819
115 { 1011C	64403820
51 Kit	64403821
091 - 112F Uncal.	64403822
091 { 217F Uncal.	64403823
094 { 217C Uncal.	64403824
094 { 225F Uncal.	64403825
101 { 225C Uncal.	64403826
101 { 335F Uncal.	64403827
104 { 335C Uncal.	64403828
104 { 445F Uncal.	64403829
106 { 445C Uncal.	64403830
106 { 555F Uncal.	64403831
108 { 555C Uncal.	64403832
108 { 665F Uncal.	64403833
109 { 665C Uncal.	64403834
109 { 780F Uncal.	64403835
111 { 780C Uncal.	64403836
113 { 910F Uncal.	64403837
113 { 910C Uncal.	64403838
115 { 1011F Uncal.	64403839
115 { 1011C Uncal.	64403840

6. Dial Pointer Kit 64405301

Includes: Dial Pointer and
Screws.

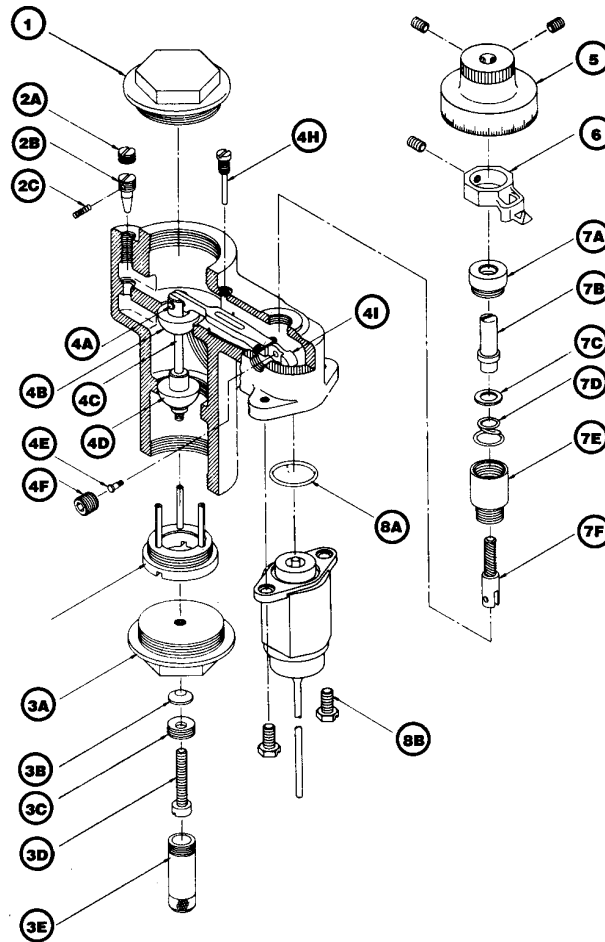
7. Stuffing Box Kit

Includes: O-Ring Stuffing Box,
Adjusting Stem, Adjusting Screw
Washer, Stuffing Box Spring,
Stuffing Box body, Adjusting
Screw, O-Ring.

70 - 3/4, 1 1/4, 2	64404002
713 - 1 1/4	64404002
70 - 3	64404001

8. O-Ring & Element Screw Kit 64417901

Includes: O-Ring, Element Screws.



Note: Uncalibrated scales to be used with
Acc. 194 Indicator.

MECHANICAL INSTRUMENTATION SPARE PARTS

REPLACEMENT FIELD INSTALLED CARTRIDGE PEN KITS

<u>Kit Number</u>	<u>Used for</u>	<u>Kit Includes</u>
64402201 (was Acc. 404)	All RF single mechanism recorders	Arm, Cartridge (P/N 60500403-red), and screws Pen Blade 50009801
64402204 (was Acc. 404B)	All RFC Recorders (Cam programmers)	Arm, Cartridge (P/N 60500403-red), and screws Pen Blade 50009803
64402202 (was Acc. 404C)	All RFH recorders (dual mechanism) CCW "A" Clock rotation	2 Arms, Cartridges (P/N 60500404-red, right hand mech. and P/N 60500401-green, left hand mech.), screws Pen Blades 50009802 Right Hand 50009801 Left Hand
64402208 (was Acc. 404G)	All RFH recorders (dual mechanism) CW "R" Clock rotation	2 Arms, Cartridges (P/N 60500403-red, right hand mech. and P/N 60500405-green, left hand mech.), screws
64402203 (was Acc. 404A)	RFPR (discontinued recorder)	Arm, Cartridges (P/N 60500403-red, right hand mech. and P/N 60500405-green-left hand mech), screws
64402205 (was Acc. 404D)	ER, ET, ERC, ETC, EV, EVC Series of discontinued recorders	Arm, Cartridge (P/N 60500403-red), screws Pen Blade 50007702
64402206 (was Acc. 404E)	ER, ET, ERC, ETC, EV, EVC Series of discontinued recorders	Arm, Cartridge (P/N 60500401-green), screws Pen Blade 50007702
64402207 (was Acc. 404F)	ER-Pr, ET-Pr Series of discontinued recorders	Arm, Cartridge (P/N 60500404-red, right hand mech and P/N 60500401-green, left hand mech. Pen Blades 50007702 Left Hand 50009802 Right Hand
Pen Lengths:		
60500401	Green	.150 inches
60500402	Red	.400 inches
60500403	Red	.150 inches
60500404	Red	.650 inches
60500405	Green	.650 inches

MECHANICAL INSTRUMENTATION SPARE PARTS

ELECTRIC CHART DRIVE REPLACEMENT KITS

Kit Number	Replaces P/N(s)	Description/Usage
64415316	SP10023607	RF 24 Hr 110V/60 CW
64415317	SP10023608	RF 48 Hr 110V/60 CW
64415318	SP10023611	RF 7 Day 110V/60CW
64415301	SP10023703	RF 3 Hr 110V/60 CCW
64415302	SP10023705	RF 8 Hr 110V/60 CCW
64415303	SP10023706	RF 12 Hr 110V/60 CCW
64418501	XXXXXXXXXX	RF 24 Hr 110V/60 CCW (RFC only-comes with flange)
64415304	SP10023707	RF 24 Hr 110V/60 CCW
64415305	SP10023708	RF 48 Hr 110V/60 CCW
64415306	SP10023709	RF 72 Hr 110V/60 CCW
64418401	XXXXXXXXXX	RF 72 Hr 110V/60 CCW (RFC type with flange)
64418502	XXXXXXXXXX	RF 7 Day 110V/60 CCW (RFC only-comes with flange)
64415307	SP10023711	RF 7 Day 110V/60 CCW
64415308	SP10023715	RF 31 Day 110V/60 CCW
64415361	SP10023906	RF 12 Hr 110V/50 CCW
64415362	SP10023907	RF 24 Hr 110V/50 CCW
64415363	SP10023911	RF 7 Day 110V/50 CCW
64415346	SP10024011	RF 7 Day 220V/60 CW
64415331	SP10024103	RF 3 Hr 220V/60 CCW
64415332	SP10024106	RF 12 Hr 220V/60 CCW
64415333	SP10024107	RF 24 Hr 220V/60 CCW
64415334	SP10024108	RF 48 Hr 220V/60 CCW
64415335	SP10024111	RF 7 Day 220V/60 CCW
64415371	SP10024303	RF 3 Hr 220V/50 CCW
64415372	SP10024307	RF 24 Hr 220V/50 CCW
64415373	SP10024311	RF 7 Day 220V/50 CCW
64415374	SP10024315	RF 31 Day 220V/50 CCW
64415401	SP10067601	RF 24 Hr 110V/60 CCW Platen mounted
64415402	SP10067602	RF 7 Day 110V/60 CCW Platen mounted
XXXXXXX	SP10067603	RF 24 Hr 110V/50 CCW Platen mounted
64418503	XXXXXXXXXX	RF 48 Hr 110V/60 CCW (RFC only-comes with flange)
64418508	XXXXXXXXXX	RF 24 Hr 220VAC CCW (RFC type with flange)
64418507	XXXXXXXXXX	RF 72 Hr 120V/50 CCW (RFC type with flange)
64418506	XXXXXXXXXX	RF 24 Hr 120V/50 CCW (RFC type with flange)
64418505	XXXXXXXXXX	RF 7 Day 220VAC CCW (RFC type with flange)
64418401	XXXXXXXXXX	RF 72 Hr 120V/60 CCW (RFC type with flange)
64418509		RFC 48 Hr 120VAC 50Hz CCW (RFC type with flange)
64418510		RFC 12 Hr 120VAC 60Hz CCW (RFC type with flange)
64418512		RFC 7 Day 220VAC 60Hz CCW (RFC type with flange)
64418401		RFC 72 Hr 120VAC 60Hz CCW (RFC type with flange)
64416201		24 Hr Spring Wound Unit
64416203		7 Day Spring Wound Unit
SP10023606		Chart Drive Assembly RF 12 Hr 120VAC 60HZ CW
SP10024007		Chart Drive Assembly RF 24 Hr 220VAC 60Hz CW
SP10024008		Chart Drive Assembly RF 48 Hr 220VAC 60Hz CW
SP10070501		Chart Drive Assembly RF 24 Hr 120VAC 60Hz CCW (Mfg. for use in units less toggle switch)
SP10070601		Chart Drive Assembly RF 12 Hr 120VAC 60Hz CCW (Mfg. for use in units less toggle switch)
SP10070605		Chart Drive Assembly RF 12 Hr 220VAC 60Hz CCW (Mfg. for use in units less toggle switch)
SP10070606		Chart Drive Assembly RF 7 Day 120VAC 60Hz CCW (Mfg. for use in units less toggle switch)
SP10070607		Chart Drive Assembly RF 48 Hr 120VAC 60Hz CW (Mfg. for use in units less toggle switch)
SP10070608		Chart Drive Assembly RF 7 Day 120VAC 60Hz CW (Mfg. for use in units less toggle switch)
SP10070609		Chart Drive Assembly RF 24 Hr 120VAC 60Hz CW (Mfg. for use in units less toggle switch)
SP10070611		Chart Drive Assembly RF 24 Hr 120VAC 60Hz CCW (Mfg. for use in units less toggle switch)
SP10070613		Chart Drive Assembly RF 24 Hr 220VAC 60Hz CW (Mfg. for use in units less toggle switch)
SP3296		Chart Drive Nut CW
LF\$0P		Adjusting Wrench for Hex Push Rod in Mechanical Controllers and Recorders
60101102		Key, Chart Drive

Due to product modifications made through the years, it is important to always specify the model number of the Partlow recorder the clock will be used for, as well as the serial number of the unit, if available. This will insure the correct part is supplied.

MECHANICAL INSTRUMENTATION SPARE PARTS

CCW CHART DRIVE NUTS

<u>Chart Drive Type Thread</u>	<u>Mounting</u>	<u>Ch Nut Service P/N</u>	<u>Chart Nut</u>
Electric	Stand	SP248S3	Male 10-24
Electric	Platen	SPRFTJ6755	Female 1/4-28
Spring w/Turret	Stand	64415204	Female 3/8-32 Quadruple
Spring	Stand	SP248S3	Male 10-24
Electric w/Pin	Stand	SPRFTJ6755	Female 1/4-28

NOTES

NOTES

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