

INDICATION MAGNETS AND LEVER LOCK CIRCUIT CONTROLLERS

UNION SWITCH & SIGNAL CO.

STYLE "S-8" ELECTRO-MECHANICAL INTERLOCKING
MACHINE DETAIL PARTSA.C. AND D.C. INDICATION MAGNETS, LATCHES AND LEVER
LOCK CIRCUIT CONTROLLERS

Order by Plate, Piece, Reference and Abbreviated Description Given in
Heavy Face Type Only

D.C. Indication Magnet, complete.....ohms (Includes Latch and Latch Stem)					
Piece	Ref.	Ohms.	Latch & Stem Ref.	Magnet Ref.	Drawing Reference
86207	A	130 L. V.	6b	F	C-8193-1
	Aa	130 L. V.	7a	F	C-8193-1
89169	Ab	130 L. V.	8a	F	C-8193-1
	Ac	130 L. V.	9a	F	C-8193-1
	Ad	130 L. V.	10a	F	C-8193-1
	Ae	37.5 L. V.	6b	Fa	C-8193-1
	Af	37.5 L. V.	7a	Fa	C-8193-1
	Ag	37.5 L. V.	8a	Fa	C-8193-1
	Ah	37.5 L. V.	9a	Fa	C-8193-1
	Aj	37.5 L. V.	10a	Fa	C-8193-1
	Ak	90 L. V.	6b	Fb	C-8193-1
	Am	90 L. V.	7a	Fb	C-8193-1
	An	90 L. V.	8a	Fb	C-8193-1
	Ap	90 L. V.	9a	Fb	C-8193-1
	Aq	90 L. V.	10a	Fb	C-8193-1
	Ar	1000 H. V.	6b	Fc	C-8193-1
	As	1000 H. V.	7a	Fc	C-8193-1
	At	1000 H. V.	8a	Fc	C-8193-1
	Au	1000 H. V.	9a	Fc	C-8193-1
	Av	1000 H. V.	10a	Fc	C-8193-1
	Aw	2000 H. V.	6b	Fd	C-8193-1
	Ax	2000 H. V.	7a	Fd	C-8193-1
	Ay	2000 H. V.	8a	Fd	C-8193-1
	Az	2000 H. V.	9a	Fd	C-8193-1
	Aaa	2000 H. V.	10a	Fd	C-8193-1

Zachary C. Gillihan 2008

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STYLE "S-8" ELECTRO-MECHANICAL INTERLOCKING MACHINE DETAIL PARTS (Continued)

A.C. AND D.C. INDICATION MAGNETS, LATCHES AND LEVER LOCK CIRCUIT CONTROLLERS

Order by Plate, Piece, Reference and Abbreviated Description Given in
Heavy Face Type Only

A.C. Indication Magnet, Complete. Volts Cycles (Includes Latch and Latch Stem).						
Piece	Ref.	Voltage	Frequency	Latch & Stem Ref.	Magnet Ref.	Drawing Reference
	B	110 Volts 50 Volts	60 cycles 25 cycles	6a	G	C-8903-1
	Ba	110 Volts 50 Volts	60 cycles 25 cycles	7b	G	C-8903-1
	Bb	110 Volts 50 Volts	60 cycles 25 cycles	8b	G	C-8903-1
	Bc	110 Volts 50 Volts	60 cycles 25 cycles	9b	G	C-8903-1
	Bd	110 Volts 50 Volts	60 cycles 25 cycles	10b	G	C-8903-1
	Be	110 Volts	25 cycles	6a	Ga	C-8903-1
	Bf	110 Volts	25 cycles	7b	Ga	C-8903-1
	Bg	110 Volts	25 cycles	8b	Ga	C-8903-1
	Bh	110 Volts	25 cycles	9b	Ga	C-8903-1
	Bj	110 Volts	25 cycles	10b	Ga	C-8903-1
	Bk	110 Volts	50 cycles	6a	Gb	C-8903-1
	Bm	110 Volts	50 cycles	7b	Gb	C-8903-1
	Bn	110 Volts	50 cycles	8b	Gb	C-8903-1
	Bp	110 Volts	50 cycles	9b	Gb	C-8903-1
	Bq	110 Volts	50 cycles	10b	Gb	C-8903-1

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Order by Plate, Piece, Reference and Abbreviated Description Given in
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Piece	Ref.	Description	Drawing Reference
77278	C	Independent Lever Lock Circuit Controller, complete (Circuit open when magnet is de-energized), for use in connection with Separate Detector Magnet.....	C-8191-1
69481	D	Independent Lever Lock Circuit Controller, complete, (Circuit closed when Magnet is de-energized).....	C-8191-2
89374	E	Segment Guide, complete.....	C-8156-16
69234	F	D.C. Indication Magnet, complete L. V. 130-ohms. (Does not include latch and latch stem).....	C-8193-1
118175	Fa	D.C. Indication Magnet, complete, L. V. 37.5-ohms. (Does not include latch and latch stem).....	C-8193-1
97989	Fb	D.C. Indication Magnet, complete, L. V. 90-ohms. (Does not include latch and latch stem).....	C-8193-1
123108	Fc	D.C. Indication Magnet, complete, H. V. 1000-ohms. (Does not include latch and latch stem).....	C-8193-1
79382	Fd	D.C. Indication Magnet, complete H. V. 2000-ohms. (Does not include latch and latch stem).....	C-8193-1
78617	G	A.C. Indication Magnet, complete, 110 volts, 60 cycles or 50-volts, 25 cycles. (Does not include latch and latch stem).....	C-8903-1
92945	Ga	A.C. Indication Magnet, complete, 110-volts, 25- cycles. (Does not include latch and latch stem)....	C-8903-1
112939	Gb	A.C. Indication Magnet, complete, 110-volts, 50- cyc- les. (Does not include latch and latch stem).....	C-8903-1
49213	2	Segment Guide, only.....	C-8156-16
34065	3	Nut for Ref. E.....	8109-228

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A.C. AND D.C. INDICATION MAGNETS, LATCHES AND LEVER LOCK CIRCUIT CONTROLLERS

Order by Plate, Piece, Reference and Abbreviated Description Given in
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Piece	Ref.	Description	Drawing Reference
69223	4	Magnet, L. V. 130-ohms, complete for Ref. A.....	8133-129
118174	4a	Magnet, L. V. 37.5-ohms, complete for Ref. Aa.....	8133-129
97988	4b	Magnet, L. V. 90-ohms, complete for Ref. Ab.....	8133-129
83377	4c	Magnet, H. V. 1000-ohms, complete for Ref. Ac.....	8133-129
79390	4d	Magnet, H. V. 2000-ohms, complete for Ref. Ad....	8133-129
84393	5	Magnet, A. C. 110-volts, 60-cycles or 50-volts, 25-cycles, complete for Ref. B.....	B-8133-37
92944	5a	Magnet, A. C. 110-volts, 25-cycles, complete for Ref. Ba.....	B-8133-37
112938	5b	Magnet, A. C. 110-volts, 50-cycles, complete for Ref. Bb.....	B-8133-37
49820	6	Latch only for Normal and Reverse Indication Magnet for Switch Lever.....	8711-19
117504	6a	Latch with stem and pin, complete for Ref. B. (Includes 1-6, 1-12, 1-13).....	8711-37
82988	6b	Latch with Stem and Pin, complete for Ref. A. (Includes 1-6, 1-11, 1-13).....	8711-35
66461	7	Latch, only, for Segment with Latch Depressor for Signal Lever or Detector Lock on Switch Lever....	8711-31
122985	7a	Latch with Stem and Pin, complete for Ref. A. (Includes 1-7, 1-11, 1-13).....	8711-37
	7b	Latch with Stem and Pin, complete for Ref. B. (Includes 1-7, 1-12, 1-13).....	8711-37
50036	8	Latch, only, for Signal Lever without Latch Depressor	8711-20
82814	8a	Latch, with Stem and Pin, complete for Ref. A. (Includes 1-8, 1-11, 1-13).....	8711-35

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LOCK CIRCUIT CONTROLLERS

Order by Plate, Piece, Reference and Abbreviated Description Given in
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Piece	Ref.	Description	Drawing Reference
78461	8b	Latch with Stem and Pin, complete for Ref. B. (Includes 1-8, 1-12, 1-13).....	8711-35
55624	9	Latch for Independent Lever Lock Circuit Controller Ref. D.....	8711-27
	9a	Latch with Stem, Tip and Pin for Ref. A. (Includes 1-9, 1-11, 1-13, 1-45).....	8711-37
	9b	Latch with Stem, Tip and Pin for Ref. B. (Includes 1-9, 1-12, 1-13, 1-45).....	8711-37
49209	10	Latch only with Top Projection for Independent Lever Lock Circuit Controller Ref. C.....	8711-18
84378	10a	Latch with Stem and Pin, complete for Ref. A. (Includes 1-10, 1-11, 1-13).....	8711-35
	10b	Latch with Stem and Pin, complete for Ref. B. (Includes 1-10, 1-12, 1-13).....	8711-37
61868	11	Armature Stem, only for Ref. A, "Z" dimension $7\frac{5}{16}$ "	9595-67
78460	12	Armature Stem, only for Ref. B, "Z" dimension $7\frac{15}{16}$ "	9595-67
45693	13	Pin only, for attaching Latch to Armature Stem.....	8097-473
69253	14	Backstrap with Armature Bars, Insulating Block, Screw, Nut, Sleeve and Rivets complete for Ref. A..	8162-186
	15	Machine Screw No. 14-24x $\frac{3}{4}$ " Flat Hd. S. for attaching Ref. 14 to Ref. 16.	
49806	16	Core for Ref. A.....	8101-203
25948	17	Pin for Ref. A.....	8097-167
133525	18	Latch Nut for Ref. A.....	8150-44

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Piece	Ref.	Description	Drawing Reference
133523	19	Locking Clip with two $\frac{1}{16}$ "x $\frac{1}{2}$ " S. Cotters.....	11893-273
	20	Locking Plate for Ref. B.....	11893-137
69310	21	Armature for Ref. A.....	8157-258
124985	22	Armature complete for Ref. B.....	8157-274
69265	23	Pin only for Ref. A.....	8097-793
116181	24	Pin only for Ref. B.....	8097-793
	24a	Cotter, $\frac{1}{16}$ "x $\frac{3}{8}$ " Br. for Refs. 23, 24, 25 and 26.	
69265	25	Pin only for Ref. A.....	8097-798
78839	26	Pin only for Ref. B.....	8097-793
	27	Machine Screw No. 10-30x1" Fil. Hd. S. case hardened for Ref. A.	
112140	28	Nut for Refs. 27 and 29.....	8109-70
	29	Machine Screw No. 10-30x $\frac{3}{4}$ " Fil. Hd. S. case hardened for Ref. B.	
	30	Cap Screw, $\frac{5}{16}$ "-18x2 $\frac{1}{4}$ " Oval Fil. Hd. S. for attaching Magnets Ref. A to Unit.	
	31	Cap Screw, $\frac{5}{16}$ "-18x1 $\frac{7}{8}$ " Flat Hd. S. for attaching Magnets Ref. A to Unit.	
	32	Cap Screw, $\frac{5}{16}$ "-18x1 $\frac{3}{8}$ " Fil. Hd. S. for attaching Magnets Ref. B to Unit.	
	33	Cap Screw, $\frac{5}{16}$ "-18x $\frac{7}{8}$ " Flat Hd. S. for attaching Magnets Ref. B to Unit.	

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Order by Plate, Piece, Reference and Abbreviated Description Given in
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Piece	Ref.	Description	Drawing Reference
49320	34	Magnet Filler Block for Ref. A.....	C-8156-19
78841	35	Core, Complete for Ref. B.....	8101-259
78840	36	Armature Bar for Ref. B.....	8130-289
73642	37	Armature Bar for Ref. B.....	8130-288
	38	Machine Screw No. 10-30x1½" Fil. Hd. S. with Nut Ref. 38a for fastening Magnet Core to Armature Bars.	
26942	38a	Nut for Ref. 38.....	8109-184
73643	39	Bushing for Ref. B.....	8350-608
14528	40	Ferrule for Ref. B.....	10389-20
39369	41	Pin for Ref. B.....	8097-362
38328	42	Pin for Ref. B.....	8097-473
32844	43	Pin for Ref. B.....	8097-243
43353	44	Pin for Ref. B.....	8097-336
30689	45	Insulating Stud for Latch Ref. 10.....	8095-371
36514	46	Insulating Bushing for Wire Conduit at top of Mag- net Ref. A.....	8095-426
94538	47	Contact Spring, complete for Ref. C.....	8385-1856
94542	48	Contact Support, complete for Ref. C.....	C-8192-1
49761	49	Bracket Strap, for Ref. C.....	C-8192-1
53795	50	Bracket Strap, for Ref. D.....	C-8192-1

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Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
49762	51	Lever for Ref. C.....	C-8192-1
49766	52	Terminal Board, only for Ref. C.....	9968-285
53775	53	Terminal Board, only for Ref. D.....	9968-326
94955	54	Pivot Block for Ref. C.....	C-8192-1
79764	55	Terminal Plate for Ref. C.....	C-8192-1
53797	56	Terminal Plate for Ref. D.....	C-8192-1
35324	57	Insulating Bushing, complete.....	8095-412
1515	58	Nut for Ref. 57.....	8109-23
19409	59	Nut Lock for Ref. 57.....	8486-68
	60	Machine Screw No. 6-32x1 $\frac{1}{4}$ " Fil. Hd. Br. for Ref. C.	
20686	61	Washer for Ref. 60 and Ref. 72.....	7828-108
	62	Machine Screw No. 10-30x1 $\frac{1}{8}$ " Fil. Hd. Br. for Ref. C.	
	63	Machine Screw No. 10-30x1 $\frac{1}{8}$ " Fil. Hd. Br. with Hex. Nut and Washer, for Ref. C.	
70810	64	Contact Spring, complete for Ref. D.....	8385-1420
70811	65	Contact Spring, complete for Ref. D.....	8385-1421
53776	66	Washer, only for Ref. 67.....	7828-247
	67	Machine Screw No. 10-30x $\frac{1}{16}$ " Fil. Hd. Br. for Ref. D.	
15577	68	Washer only for Ref. 67.....	7828-67

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Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	69	Machine Screw No. 10-30x $\frac{3}{4}$ " Fil. Hd. Br. with Hex. Nut Ref. 70 for Ref. D.	
44230	70	Hex. Nut only for Ref. 69 and Ref. 71.....	8109-281
	71	Machine Screw No. 10-30x $\frac{1}{8}$ " Fil. Hd. Br. with Hex. Nut Ref. 70 for Ref. D.	
	71a	Machine Screw No. 10-30x $\frac{1}{8}$ " Fil. Hd. Br. for Ref. D.	
	72	Machine Screw No. 6-32x $\frac{7}{8}$ " Fil. Hd. Br. for Ref. D.	
	73	Machine Screw $\frac{5}{16}$ "-18x1" Fil. Hd. S. with Hex. Nut for Ref. C and Ref. D.	
133524	74	Hex. Nut for Ref. A and Ref. B.....	8109-70
54713	75	Nut Lock for Ref. B.....	8486-267