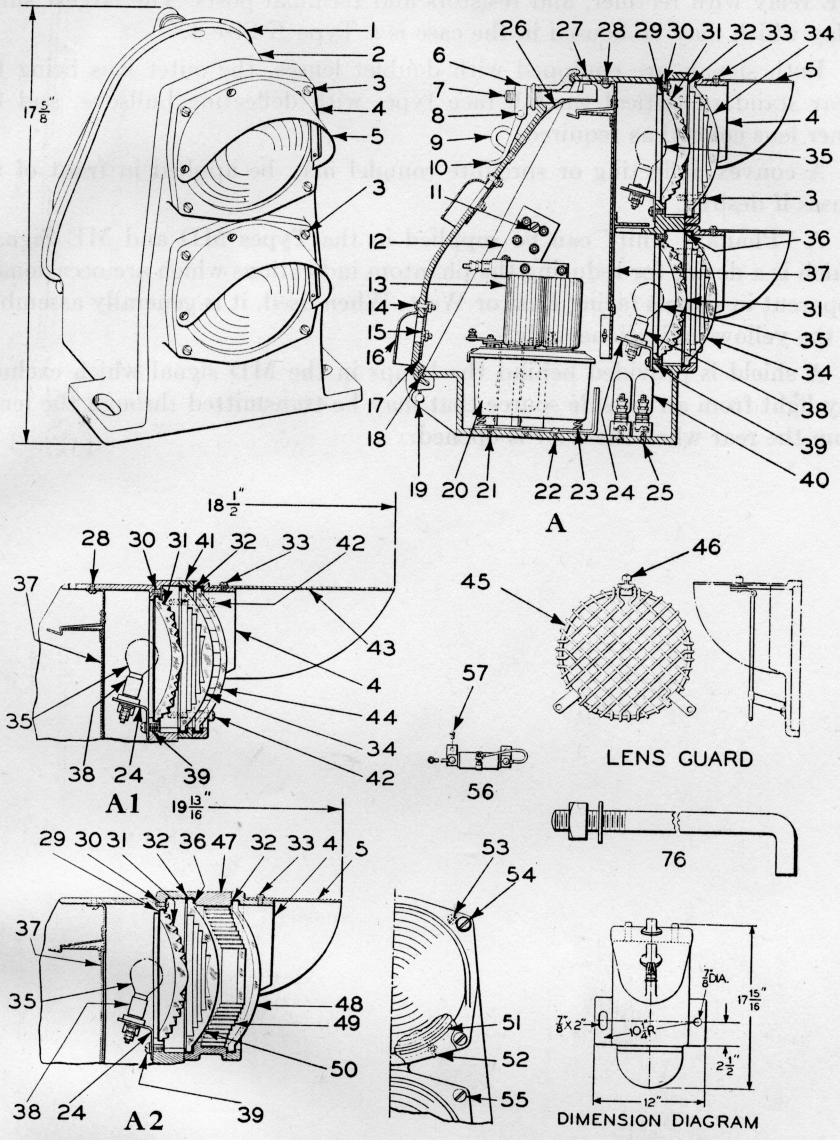
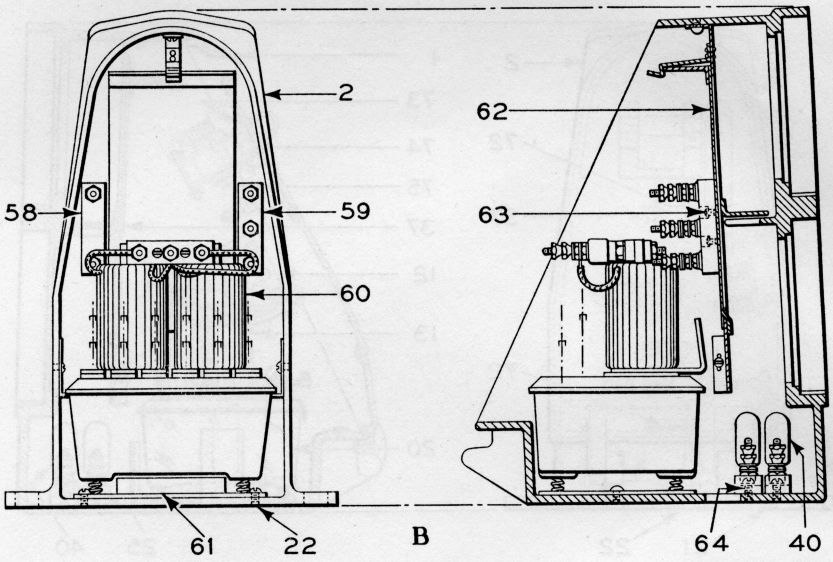
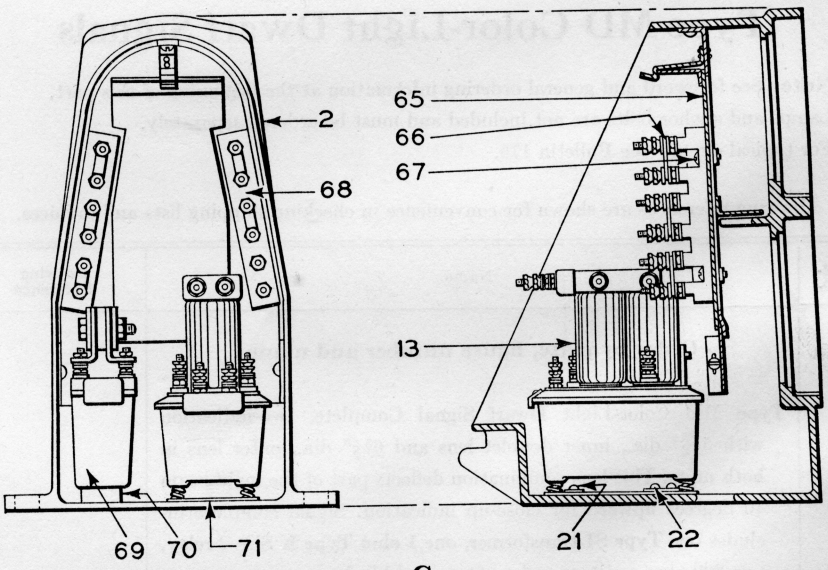


Type MD Color-Light Dwarf Signals

Zachary Gillihan
Digitally signed by Zachary Gillihan
DN: cn=Zachary Gillihan, o=ZCG Utility Scrap, ou, email=zachary.gillihan@gmail.com, c=US
Date: 2018.10.15 10:55:12 -05'00'

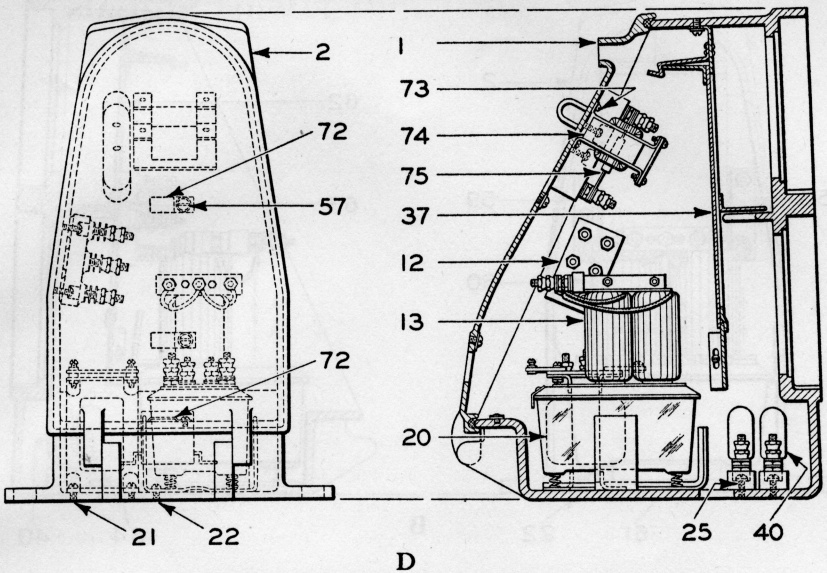


B



C

Type MD Color-Light Dwarf Signals



Type MD Color-Light Dwarf Signals

Type MD Color-Light Dwarf Signals

Note: See foreword and general ordering information at the beginning of this part.
Lamps and anchor bolts are not included and must be ordered separately.
For typical circuits see Bulletin 175.

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
	Order by plate, figure number and name	
A	Type MD Color-Light Dwarf Signal Complete, two-indication with 5½″ dia., inner doublet lens and 6⅜″ dia., outer lens in both units. This lens combination deflects part of the main beam 40 degrees upward for close-up indication. Signal complete includes one Type S1 transformer, one 1 ohm Type K Size 2 relay, two 200 ohm resistors and one terminal block.	

(*Continued on following page*)

August 1947 GENERAL RAILWAY SIGNAL COMPANY

Type MD Color-Light Dwarf Signals

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
	Order by plate, figure number and name	
	Order must specify the following: 1. Color required in each lens unit. 2. Voltage and wattage of lamps. 3. If voltage regulating resistor is required. 4. If lens guards are required. 5. State to what extent signal is to be factory-wired; lamp receptacles to terminals only or wired complete. In the latter case, give lighting bus voltage and frequency and normal rated voltage of control and indication or repeater circuits.....	36722–52
A1	as above, except with outer roundel. This lens combination deflects or spreads part of the main beam for curved track conditions. See Fig. 44 for roundels available. **Order must specify information called for under Fig. A**.....	36722–52
A2	same as Fig. A except with phankill unit Fig. 49 in yellow indication. **Order must specify information called for under Fig. A.**	36722–86
A3	same as Fig. A1 except with phankill unit Fig. 49 in yellow indication. **Order must specify information called for under Fig. A**.....	36722–86
B	Type MD Color-Light Dwarf Signal Complete, two-indication, with 5½″ dia., inner doublet lens and 6⅜″ dia., outer lens in both units. This lens combination deflects part of the main beam 40 degrees upward for close-up indication. Signal complete includes one 1 ohm Type K Size 4 relay, two 200 ohm resistors and two terminal blocks. **Order must specify the following:** 1. Color required in each lens unit. 2. Voltage and wattage of lamps. 3. If voltage regulating resistor is required. 4. If lens guards are required.	

(*Continued on following page*)

GENERAL RAILWAY SIGNAL COMPANY August 1947

Type MD Color-Light Dwarf Signals

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
	Order by plate, figure number and name	
	5. State to what extent signal is to be factory-wired; lamp receptacles to terminals only or wired complete. In the latter case, give lighting bus voltage and frequency and normal rated voltage of control and indication or repeater circuits...	36722–52
B1	as above, except with outer roundel Fig. 44, shown in Fig. A1. This lens combination deflects or spreads part of the main beam for curved track conditions. See Fig. 44 for roundels available. **Order must specify information called for under Fig. B.**	36722–52
B2	same as Fig. B except with phankill unit Fig. 49 in yellow indication. **Order must specify information called for under Fig. B.**	36722–86
B3	same as Fig. B1 except with phankill unit Fig. 49 in yellow indication. **Order must specify information called for under Fig. B**	36722–86
C	Type MD Color-Light Dwarf Signal Complete, two-indication, with 5½″ dia. inner doublet lens and 6⅜″ dia. outer lens in both units. This lens combination deflects part of the main beam 40 degrees upward for close-up indication. Signal complete includes one 500 or 750 ohm Type K Size 2 relay, one Type WE relay with rectifier, and two 6 way terminal blocks. **Order must specify the following:** 1. Color required in each lens unit. 2. Voltage and wattage of lamps. 3. If voltage regulating resistor is required. 4. If lens guards are required. 5. State to what extent signal is to be factory-wired; lamp receptacles to terminals only or wired complete. In the latter case, give lighting bus voltage and frequency and normal rated voltage of control and indication or repeater circuits.....	36722–52
C1	as above, except with outer roundel Fig. 44. This lens combination deflects or spreads part of the main beam for curved track conditions. See Fig. 44 for roundels available. **Order must specify information called for under Fig. C**.....	36722–52

(*Continued on following page*)

Type MD Color-Light Dwarf Signals

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
	Order by plate, figure number and name	
C2	same as Fig. C except with phankill unit Fig. 49 in yellow indication. **Order must specify information called for under Fig. C.**	36722–86
C3	same as Fig. C1 except with phankill unit Fig. 49 in yellow indication. **Order must specify information called for under Fig. C**	36722–86
D	Type MD Color-Light Dwarf Signal Complete, two-indication, with 5½″ dia. inner doublet lens and 6⅜″ dia. outer lens in both units. This lens combination deflects part of the main beam 40 degrees upward for close-up indication. Signal complete includes one Type S1 Transformer, one Type S2 Transformer, one 1 ohm Type K Size 2 relay, two 200 ohm resistors, one 5000 ohm resistor and one 6 way terminal block. **Order must specify the following:** 1. Color required in each lens unit. 2. Voltage and wattage of lamps. 3. If voltage regulating resistor is required. 4. If lens guards are required. 5. State to what extent signal is to be factory-wired; lamp receptacles to terminals only or wired complete. In the latter case, give lighting bus voltage and frequency and normal rated voltage of control and indication or repeater circuits	36722–52
D1	as above, except with outer roundel Fig. 44, shown in Fig. A1. This lens combination deflects or spreads part of the main beam for curved track conditions. See Fig. 44 for roundels available. **Order must specify information called for under Fig. D.**	36722–52
D2	same as Fig. D except with phankill unit Fig. 49 in yellow indication. **Order must specify information called for under Fig. D.**	36722–86
D3	same as Fig. D1 except with phankill unit Fig. 49 in yellow indication. **Order must specify information called for under Fig. D**	36722–86

(*Continued on following page*)

Type MD Color-Light Dwarf Signals

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
	Order by plate, figure number and name	
1	Door Complete, for case Fig. 2, includes gasket, latch, hasp, staple and ventilators	53057–2 Gr. 1
2	Case, only, for signal. Specify figure number of signal complete for which case is to be used	53071
3	Screw, No. 14-24 x 1″ fil. hd., with lock washer, for fastening hood ring to case	0504–4 0510–1
4	Hood Ring, for hood Fig. 5	49127–34
5	Hood, 4″ long, for signal	49127–61
6	Nut, for lock latch	9525–6
7	Lock Latch, for door	53106–1
8	Pin, $\frac{3}{16}$″ dia. x $1\frac{1}{8}$″ lg., for hasp	7568
9	Staple, for door	16914
10	Hasp, for door	9524
11	Screw, No. 10-32 x $\frac{1}{2}$″ fil. hd., with lock washer, for fastening terminal block to case	12563–1 0622
12	Terminal Block Complete, for signal	46048–23 Gr. 3
13	Relay, 1 ohm Type K Size 2. For details and order references see Section E Part 21, Plate E2105	53000–121 Gr. 42
13a	as above, except 500 ohms	53000–122 Gr. 18
13b	same as Fig. 13 except 750 ohms	53000–122 Gr. 20
14	Screw, No. 10-32 x $\frac{5}{8}$″ rd. hd., with hex. nut and lock washer, for fastening ventilator to door	2784 38239 0622
15	Screen, for ventilator	36022
16	Hood, for ventilator	36020
17	Plate, for screen on ventilator	36021
18	Gasket, for door	43460
19	Pin, with cotter, for door hinge	730–21 0663–1

(*Continued on following page*)

Type MD Color-Light Dwarf Signals

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
	Order by plate, figure number and name	
20	Transformer, Type S, Size 1, 110 volts, 60 cycles, 12.5 volt secondary. For other transformers see Section P, Part 1, Plate P0175	53715–1 Gr. 1 AMUS–TR–13AS–47
20a	as above, except 10.5 volt secondary	53715–1 Gr. 1 AMUS–TR–13AS–50
21	Screw, No. 10-32 x 3/8″ rd. hd., with lock washer, for mounting transformer	3044–5 0622
22	Screw, No. 8-32 x 5/16″ rd. hd., with lock washer, for fastening relay brackets Figs. 23 and 61 to signal case	2430–5 43058–1
23	Bracket Complete, for relay mounting	42819–1 Gr. 1
24	Bracket, for holding receptacle Fig. 38	53170–1
25	Screw, No. 10-32 x 1/2″ rd. hd., with pasteboard washer, for fastening resistor Fig. 40 to case	3044–9 29728–2
26	Spring, for lock latch	53105–2
27	Stud, for door locking device	441–121
28	Screw, No. 10-32 x 5/16″ rd. hd., with lock washer, for fastening shield to case	3044–2 0622
29	Gasket, for use between inner lens and adapter	13014–74
30	Screw, No. 8-32 x 3/8″ rd. hd., with washer and lock washer, for holding inner lens in case	2553–11 1601–64 43058–1
31	Inner lens, 5 1/2″ dia., red, 1/2″ focus, for use with Figs. A to D inclusive	43988–2
31a	as above, except yellow	43988–1
31b	same as Fig. 31 except green	43988
31c	same as Fig. 31 except purple	43988–4
31d	same as Fig. 31 except lunar white	43988–5
32	Gasket, for use between outer lens and adapter	13014–56
33	Screw, No. 10-32 x 5/16″ rd. hd., with lock washer, for fastening hood to hood ring	3044–3 53029–7

(*Continued on following page*)

Type MD Color-Light Dwarf Signals

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
	Order by plate, figure number and name	
34	Outer lens, 6⅜″ dia., clear, 3¾″ focus, with 40-degree deflecting bulls eye. This lens deflects part of the main beam 40 degrees upward for close-up indication, for use with Fig. A to D inclusive.	53119–18
34a	as above, except with gasket	54193–1 Gr. 2
35	Incandescent Lamp, single contact, candelabra bayonet base. Refer to Section H, Part 39 and order separately	34866
36	Candle Wicking, for use between outer lens and adapter	0160
37	Shield Complete, includes door, spring and plate	52885–1 Gr. 6
38	Receptacle Complete, for lamp	53058 Gr. 3
39	Screw, No. 14-24 x ½″ rd. hd., with lock washer, for fastening bracket Fig. 24 to case	21029–1 0510–1
40	Resistor Complete, 200 ohms	50482–12 Gr. 7
41	Bezel Ring, for use between hood ring and case	43983–68
42	Screw, No. 14-24 x 1⅝″ fil. hd., with lock washer, for fastening hood ring and bezel ring to case	0504–13 0510–1
43	Hood, for signal, 8″ long	49127–50
44	Outer Roundel, 6⅜″ dia., clear, 25 degree deflecting	9238–60
44a	as above, except with gasket	
44b	same as Fig. 44, except 20 degree deflecting	9238–14
44c	same as Fig. 44b, except with gasket	54194–1 Gr. 1
44d	same as Fig. 44, except 10 degree deflecting	9238–8
44e	same as Fig. 44d, except with gasket	
44f	same as Fig. 44, except 25 degree spredlite	9238–65
44g	same as Fig. 44f, except with gasket	
45	Lens Guard Complete, for signal	38040–8 Gr. 1
46	Screw, No. 10-32 x ⅝″ hex. hd., with hex. nut, leather washer and lock washer, for lens guard	3044–11 6471 1533–7 0622–1
47	Ring, for use with phankill unit	43983–75
48	Outer Roundel, 6⅜″ dia., plain convex, for use with phankill unit.	9238–2

(*Continued on following page*)

Type MD Color-Light Dwarf Signals

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
	Order by plate, figure number and name	
48a	same as Fig. 48, except with gasket	
49	Phankill Unit, 5⅞″ dia., with 25 degree prism close-up	56629–1
50	Outer lens, 6⅜″ dia., clear, for use with phankill unit	53119
50a	as above, except with gasket	54193–1 Gr. 1
51	Strap, for holding phankill unit in ring	51432–71
52	Screw, No. 10-32 x 21/32″, headless, cup point, with hex. nut, for fastening phankill unit in ring	3018–30 40796
53	Screw, No. 10-32 x 1⅞″, with lock washer, for holding phankill ring to case	0325–8 34494–1
54	Screw, No. 14-24 x 3″ rd. hd., with lock washer, for fastening hood ring to case where phankill is used	48561–8 0510–1
55	Screw, No. 14-24 x 1″ rd. hd., with lock washer, for fastening hood ring Fig. 4 to case	50651–1 0510–1
56	Resistor Complete, voltage regulating, 1 ohm	55945–1 Gr. 4
56a	as above, except 2 ohms	55945–8 Gr. 8
57	Screw, No. 8-32 x 5/16″ rd. hd., with lock washer, for fastening cleat Fig. 72 to door, also for fastening resistor Fig. 56 to case	2553–9 53029–4
58	Terminal Block Complete	46048–9 Gr. 2
59	Terminal Block Complete	46048–9 Gr. 1
60	Relay, 1 ohm, Type K Size 4. For details and order references see Section E, Part 21, Plate E2109	53000–84 Gr. 55
61	Bracket Complete, for relay mounting	53008 Gr. 1
62	Shield Complete, for Fig. B	52885–1 Gr. 5
63	Screw, No. 10-32 x ⅞″ rd. hd., with lock washer and nut, for fastening terminal block to shield shown in Fig. B	12563–9 0622 577–13
64	Screw, No. 10-32 x 7/16″ rd. hd., with pasteboard washer, for fastening resistor to case	3044–7 29728–2
65	Shield Complete, for Fig. C	52885–1 Gr. 4
66	Connector, for terminal block Fig. 68	43587–6

(*Continued on following page*)

GENERAL RAILWAY SIGNAL COMPANY August 1947

Type MD Color-Light Dwarf Signals

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
	Order by plate, figure number and name	
67	Screw, No. 10-32 x ¾″ rd. hd., with hex. nut and lock washer, for fastening terminal block to shield	2438–16 577–13 0622–1
68	Terminal Block Complete	46048–24 Gr. 5
69	Relay, Type WE, with rectifier. For use in series with 10 volt, 10 watt lamp	54250–18 Gr. 28
69a	as above, except for 11 volt, 14 + 3.5 watt lamp	54250–18 Gr. 27
70	Bracket Complete, for Type WE relay mounting	54844–60
71	Plate, for mounting Type K Size 2 Relay	53008–13 Gr. 1
72	Cleat, for holding trasnformer and resistor leads	54108–2
73	Screw, No. 8-32 x 5/16″ rd. hd., with washers, for fastening transformer to door	2430–6 40257–1 43058–1
74	Transformer, Type S Size 2, 110 volts, 60 cycles, 64 volt secondary. For other transformers see Section P, Part 1, Plate P0175	53715–2 Gr. 1
75	Resistor, 5000 ohms, for signal Fig. D	57831–2 Gr. 8
76	Anchor Bolt, ¾″–9 x 18″ long, with sq. nut and washer, for fastening signal to foundation	36182 35703