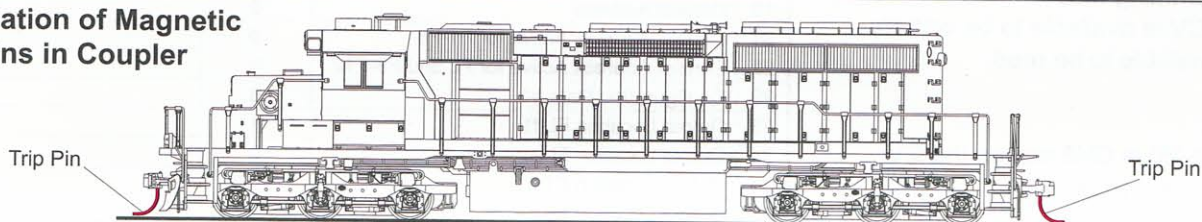


### ■ Installation of Magnetic Trip Pins in Coupler



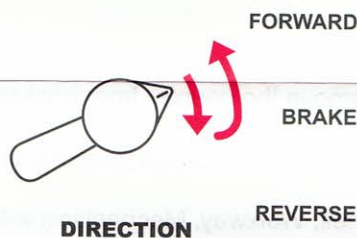
### ■ Ditch Light

This product is equipped with ditch lights that utilize a flashing feature in addition to a fully-lit mode. The alternating lights feature depicts prototypical lighting for road crossing and yard use.

The ditch lights can be switched between fully-lit and flashing modes on both analog and DCC operation by the factory installed DCC decoder.

#### ● How to control the lighting pattern of ditch lights on analog operation

For controlling the ditch lights on analog (DC) operation, the DIRECTION switch on the power pack is used. While running in the FORWARD direction, quickly switching the DIRECTION lever from FORWARD to BRAKE and then back to FORWARD again will switch the ditch lights between fully-lit and flashing. The ditch light settings will also change any time power to the locomotive is switched off.



- Clean the rail and wheels before operation for better performance.
- The ditch light starts lighting/flashing with over 3.5 volts.
- The ditch lights will not function correctly on an AC, non DCC system.

#### ● How to control the lighting pattern of ditch lights on DCC operation

This product is equipped with a DCC decoder for controlling the ditch lights on DCC and analog (DC) operation. To control the motor and headlights on DCC, a secondary decoder with an NMRA standard 8-pin plug type must be connected to the PCB (please consult the diagram on the opposite side of this sheet for correct placement).

### Specifications

- Available to set 2 digit and 4 digit address
- Available to change each function number to another number
- Supporting all programming modes

Service Mode (Address only, physical resister, page addressing, direct configuration), and Operation Mode

- High level consist function installed
- Available to reset the CV number
- Available for all speed steps of 14/28/128
- Automatic distinguishment of analog and DCC. Available to set function valid / invalid on analog operation.



## ■ Main DCC Specifications

Initial Setting of function for ditch lights

F0 ... ON/OFF

F1 ... Changing Lighting/Flashing

Programming Mode

Each CV is available to be written.

Not available to be read.

Reset

Writing "8" in CV8 makes the CV reset to the original.

CV	Description	Initial Setting	Note
1	Primary Address	3	
13	Alternate Mode Function Status	1	
14	Alternate Mode Function 2 Status	1	
17	Extended Address	0	
18	Extended Address	0	
19	Consist Address	0	
21	Consist Address Active for F1-F8	0	
22	Consist Address Active for FL and F9-F12	0	
29	Configuration Data #1	6	
33	Output Location FL(f)	1	
34	Output Location FL(r)	2	
35	Output Location F1	4	
36	Output Location F2	8	
37	Output Location F3	16	
38	Output Location F4	4	
39	Output Location F5	8	
40	Output Location F6	16	
41	Output Location F7	32	
42	Output Location F8	64	
43	Output Location F9	16	
44	Output Location F10	32	
45	Output Location F11	64	
46	Output Location F12	128	
63	Ditch Light Blink Cycle Time	0	0=0.5sec. 5=1sec. Max=5

## ■ Rate

Rated Voltage : 12V

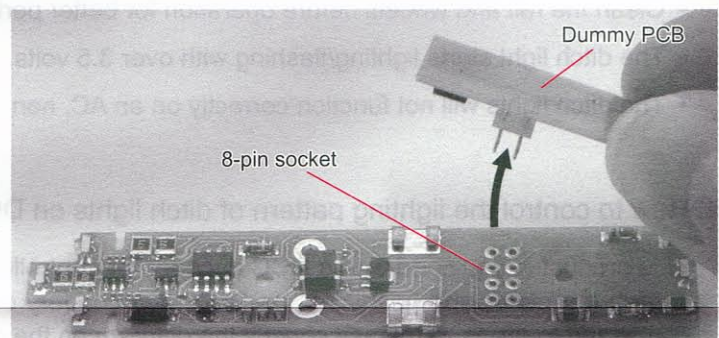
Absolute Maximum Rating : 27V (DC), ±22V (DCC)

## ■ How to disassemble the bodyshell

1. Detach couplers by removing screws, and remove the coupler from pocket.
2. Gently squeeze sides of body inward, with attention to location of hooks at bottom edge of shell, and lift.
3. Separating the model's components (Bodyshell, Walkway, Mechanism) will make part installation easier.  
The Cab may be removed from the Long Hood for additional ease of part installation.

## ■ How to install DCC decoder

When installing a DCC decoder for motor, take off the dummy PCB originally mounted on the 8-pin socket, and install the 8-pin plug of decoder to the socket.



### NOTICE:

1. Max.Operational voltage:12V DC
2. Additional lubrication at time of purchase is not recommended.

### LIMITED WARRANTY

KATO U.S.A, INC. warrants that this product will be free from defects in material and workmanship for a period of sixty (60) days from the date of purchase. If this product fails during the warranty period, carefully pack the assembled item in the original carton, together with the dated sales receipt, and return to : KATO U.S.A., INC. 100 Remington Road, Schaumburg, IL 60173. Defects due to misuse, improper maintenance and/or abuse are not covered by this warranty. Items that have been modified by the modeler or anyone other than an authorized KATO repair person are not covered by the warranty. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.