FS-2B

DC Flasher for RRFB Systems
User Manual
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SPECIFICATIONS
The FS-2B is a highly versatile, programmable DC flasher.

ELECTRICAL SPECIFICATIONS
• Input voltage range......11.4 VDC to 30 VDC
• Max load power...........40 Watts per output circuit at 11.4 VDC to 30 VDC
• Operating temp..........-20°C to +74°C

PHYSICAL SPECIFICATIONS
• Length......................5.5”
• Width......................2.625”
• Height......................1.64”

FUNCTIONAL SPECIFICATIONS
Three Flash Patterns:
1. Standard Wig-Wag: 75 cycles / minute
2. Rapid Flash Pattern 1: (2/4-1)  ref: FHWA 4(09) (I)
3. Rapid Flash Pattern 2: (WW+S)  ref: FHWA 4(09)-41 (I)

Slow Flash Mode – for visualizing Rapid Flash patterns
Night Dimming – Automatic via Photocell (may be disabled)

Operation Modes:
1. 24-hour flash
2. Flash when control input line taken high (5-12 VDC)
3. Flash when control input grounded

The FS-2B is microcontroller-based which gives it tremendous versatility and low power consumption. The FS-2B is intended for use in solar power applications, or in any application where there is a ready source of 11.4 VDC to 30 VDC.
CONFIGURING THE FLASHER

To configure the FS-2B first remove the case cover. With a Phillips screwdriver, remove the two cover retaining screws. The cover should easily slide off.

User configurable features are accessed through

1. DIP switch for flash-related options and
2. A 5-pin header for control options.

CONTROL OPTIONS

The 2-pin jumper provided should be positioned on the header for the desired mode of operation. The three modes of operation are:

1. Continuous flash or **ON 24-HR**. The jumper selection is shown in Fig. 1 above.
2. Flash when control input wire (yellow) is grounded – see **ON GND** in Fig. 1.
3. Flash when control input wire brought high (5-12 VDC) – see **ON 5-12V** in Fig. 1.

FLASH OPTIONS

The 4-position DIP switch is used to configure flash-related options as follows:

<table>
<thead>
<tr>
<th>SWITCH</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Quarter Speed</td>
<td>Full Speed</td>
</tr>
<tr>
<td>2</td>
<td>Wig-Wag+Sync (WW+S) Rapid Pattern</td>
<td>Pattern Set via Switch 3</td>
</tr>
<tr>
<td>3</td>
<td>Standard (2/4-1) Rapid Flash Pattern</td>
<td>Wig-Wag</td>
</tr>
<tr>
<td>4</td>
<td>Night Time Dimming Enabled</td>
<td>Full-Time Bright</td>
</tr>
</tbody>
</table>
FS-2B
DC FLASHER

PIN 1: BLUE..........................................FLASH 1 OUTPUT
PIN 2: ORANGE....................................FLASH 2 OUTPUT
PIN 3: WHITE/RED..................................PHOTOCELL
PIN 4: WHITE/BLACK.............................PHOTOCELL
PIN 5: RED.....................................+11.4 VDC TO +30 VDC
PIN 6: BLACK.......................................DC GROUND
PIN 7: YELLOW.................................CONTROL INPUT
PIN 9: WHITE/YELLOW..........................DC GROUND

Figure 2
LIMITED WARRANTY

Electrotechnics Corporation (d.b.a ELTEC) warrants devices manufactured by ELTEC to be free of defects in material and workmanship for a period of 25 months from the date of purchase.

To determine if the FS-2B is within warranty, locate the serial number (SN) on the white decal. The letter determines the month (A–L = January through December) it was manufactured followed by the year. Example: C12xxxxx = March ’12.

ELTEC will repair or replace any FS-2B flasher returned prepaid within the warranty period as long as there is no evidence that the unit has been misused, abused, damaged by input over-voltage, output overloads, lightning or water or altered in any manner without the express written permission of ELTEC. ELTEC disclaims any warranties expressed or implied, including warranties of merchantability and/or fitness for a particular purpose. In no event shall ELTEC be held liable for incidental or consequential damages. Warranty repairs are handled during normal business hours. Ship flasher to:

ELTEC
1310 Commerce St.
Marshall, TX  75672
U.S.A.

Products requiring warranty service must have a RETURN MATERIAL AUTHORIZATION (RMA) number

1) Before returning any flasher, contact ELTEC’s Technical Support Staff at 903-938-1901, 800-227-1734, or company@elteccorp.com to receive an RMA number.

2) Fill out the Return Material Authorization form in its entirety. The form is available at www.ELTECCORP.com under the Tech Support tab.

3) Place the RMA form in the box with the item(s).

4) Return the authorized item(s) per shipping instructions seen below.

Shipping instructions:

1) Make sure you include all item(s).

2) Pack item(s) carefully to avoid damage in transit.

3) Place the RMA sheet in box; (we recommend you make a copy for your records).

4) Label each box with the valid RMA # on the outside. It must be recognizable.