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› DELight Smart H4 Head Lamp Relay User Manual (Model SDHR80AW)

DELight SDHR80AW

DELight Smart H4 Head Lamp Relay User Manual

Model: SDHR80AW

1. PRODUCT OVERVIEW

The DELight Smart H4 Head Lamp Relay (Model SDHR80AW) is designed to enhance the performance and functionality of vehicle headlamps. This heavy-duty relay system provides advanced features for improved visibility and convenience, ensuring optimal electrical compatibility and high-temperature resistance for lamps up to 130 Watts.



Image 1.1: DELight Smart Dual Head Lamp Relay, showing the device with its wiring diagram and specifications (12V, 80A).

Key Features:

- **Heavy Duty Design:** Suitable for high-power lamps up to 130 Watts.
- **High Temperature Resistance:** Engineered for durability in demanding conditions.
- **Maximum Electrical Compatibility:** Ensures stable and efficient operation.
- **Smart Functions:** Includes O.T.P. Passing, Follow Me/Walk Through, Tunnel Passing, and Battery Saver/Follow Me modes.
- **Automatic Operation:** Designed for ease of use.

- **Compliance:** Manufactured as per IS 2077 standards.



Image 1.2: Diagram illustrating the smart features of the DELight Dual Head Lamp Relay.

2. INSTALLATION AND SETUP

Proper installation is crucial for the safe and effective operation of the DELight Smart H4 Head Lamp Relay. It is recommended that installation be performed by a qualified technician.

Wiring Diagram Overview:

Refer to Image 1.1 for the detailed wiring diagram printed on the relay unit. The relay features quick connect terminals for ease of installation.

1. **Power Input:** Connect the positive ignition wire to the designated '+ Ign' terminal. Connect the negative ground wire to the '- Ve' terminal.
2. **Lamp Connections:** The relay is designed for dual headlamps. Connect the headlamp positive wires to the 'L1' and 'L2' terminals.
3. **Switch Connections:** Connect the headlamp switch signals to the 'S1' and 'S2' terminals.
4. **Output to Lamps:** The 'T1' and 'T2' terminals provide the switched power output to the headlamps.

Caution: Ensure all connections are secure and insulated to prevent short circuits. Incorrect wiring can damage the relay, vehicle electrical system, or cause fire hazards. Verify voltage compatibility (12V) before installation.

3. OPERATING INSTRUCTIONS

The DELight Smart H4 Head Lamp Relay offers several intelligent operating modes:

3.1. O.T.P. Passing (Over Take Pass)

- **Activation:** Pull the passing lever for approximately 1 second.
- **Function:** The high beam will activate for one second.
- **Automatic Activation:** If the passing lever is pulled 6 times consecutively, the high beam will activate automatically.
- **Reset:** The ON/OFF function can be reset by pulling the lever one more time.

3.2. FOLLOW ME / WALK THROUGH

- **Activation:** After the ignition is turned OFF, turn the high beam ON.
- **Function:** The headlamps will remain ON for 30 seconds.
- **Deactivation:** The 30-second timer can be stopped by turning the ignition ON again.

3.3. TUNNEL PASSING

- **Activation:** Pull the passing lever for approximately 2 seconds.

- **Function:** The high beam will light for 120 seconds. At the end of 120 seconds, the high beam will flash ON/OFF 6 times to indicate the end of the timed period.
- **Extension:** The 120-second duration can be extended by pulling the lever for more than 2 seconds. This is an Over Time Pass (OTP) function.
- **Deactivation:** The 120-second timer can be manually turned OFF by using the "Lamp Switch".

3.4. BATTERY SAVER / FOLLOW ME

- **Function:** If the "Lamp Switch" is ON and the ignition is OFF, the high beam will light for 30 seconds only. The battery will not discharge because the lamp is OFF after this period.
- **Reactivation:** After the ignition is turned ON next time, the high beam will not light (even if the lamp switch is ON). For first use, turn the "Lamp Switch" OFF and then ON.
- **Deactivation:** The 30-second timer can be stopped by turning the ignition ON again.

4. MAINTENANCE

The DELight Smart H4 Head Lamp Relay is designed for durability and requires minimal maintenance. However, periodic checks can ensure optimal performance and longevity.

- **Connection Check:** Periodically inspect all wiring connections to ensure they are secure and free from corrosion.
- **Cleanliness:** Keep the relay unit free from excessive dust, dirt, and moisture. Use a dry, soft cloth for cleaning.
- **Environmental Conditions:** Ensure the relay is not exposed to extreme temperatures or direct water spray beyond its intended operating conditions.
- **Professional Inspection:** If any issues arise, or if the vehicle's electrical system is being serviced, have the relay inspected by a qualified automotive electrician.

5. TROUBLESHOOTING

If you experience issues with your DELight Smart H4 Head Lamp Relay, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Headlamps not turning ON	Loose or incorrect wiring connections. Blown fuse in the vehicle's circuit. Faulty relay unit.	Check all wiring connections as per the diagram (Image 1.1). Ensure they are secure. Inspect and replace any blown fuses in the headlamp circuit. If connections and fuses are good, the relay may be faulty and require replacement.

Problem	Possible Cause	Solution
Smart features not working	Incorrect operation sequence. Wiring issue to switch signals. Relay malfunction.	Review the operating instructions (Section 3) to ensure correct activation. Verify connections to 'S1' and 'S2' terminals. If the issue persists, the relay may be faulty.
Intermittent headlamp operation	Loose connections. Corrosion on terminals. Voltage fluctuations.	Tighten all connections. Clean any corrosion from terminals. Ensure the vehicle's electrical system is stable.

If troubleshooting steps do not resolve the issue, contact customer support or a qualified automotive technician.

6. PRODUCT SPECIFICATIONS

Specification	Detail
Brand	DELIGHT
Model Number	SDHR80AW
Connector Type	Quick Connect
Contact Material	Copper
Contact Type	Normally Open
Mounting Type	DIN Rail Mount
Operation Mode	Automatic
Voltage	12V
Current Rating	30A + 30A (Dual Channel) / 80A (Total Capacity)
Max Lamp Wattage	Up to 130 Watt
Manufacturer	DELIGHT
Date First Available	10 October 2020

7. WARRANTY AND SUPPORT

For warranty information, technical support, or any inquiries regarding the DELight Smart H4 Head Lamp Relay, please contact the manufacturer directly.

Manufacturer Contact Information:

Manufacturer: DELIGHT Bulb Industry

Address: W-10 (A) MIDC, Ratnagiri, Maharashtra - 415 639 INDIA

Customer Care No.: 02352-228181

E-mail Id: rajeev@delightautoindustries.com

Website: www.delightautoindustries.com



ISO 9001 : 2015 Certified Company

FEATURES of Smart Dual Head Lamp Relay



Pull 1 Sec.



6 times
ON / OFF

O.T.P. PASSING

Over Take Passing

Pull passing lever for one sec, high beam will ON / OFF 6 times automatically.

ON / OFF can be reset using one time lever pull.

Switch off



Key off



Off in 30 sec

FOLLOW ME / WALK THROUGH

After Lamp and ignition OFF high beam ON for 30 Sec.

30 sec ON time can be stop by ignition ON once again.



Pull 2 Sec.



120 Seconds

TUNNEL PASSING

Pull passing lever nearly 2 sec High beam will light for 120 sec At end of 120 sec High beam will ON / OFF 6 times to indicate end of time.

120 sec can be extended with pulling lever more than 2 sec. OTP can used

120 Sec. on time can be made off by "Lamp Switch" ON and OFF.

Forgot to Switch off "Lamp Switch"



Key off



Off in 30 sec

BATTERY SAVER / FOLLOW ME

If "Lamp Switch" is ON and Ignition OFF High Beam will light for 30 Sec only Battery will not discharge because of Lamp is OFF.

After ignition ON next time, high beam will not light, (though lamp switch is ON) For use first "Lamp Switch" OFF and then Switch ON

30 sec ON time can be stop by ignition ON once again.

Image 7.1: Back of DELight Dual Head Lamp Relay packaging, listing features and manufacturer contact information.