New Radio Remote Control Switching System with LED Indicator Light in Remote Control

1. Product

1.1 New radio remote control switching system – new version with LED indicator light in remote control

Reset van het system is niet mogelijk

1.2 Reason for Development

We have continued to advance our radio remote control switching system. Following introduction of the 12V and 24V versions, we have now given the remote control a comprehensive facelift. Moreover a number of components have been optimised technically. The previous versions will continue to be offered under the familiar part numbers, however will be discontinued in the short-term. The new versions will be introduced with new part numbers.

The previous versions can still be offered with minor limitations. The new version should be offered for wiring front fog lamps, because a switch-on indicator is required in various countries. When the control unit is installed in extreme attachment locations or in an area where it is subject to splashing water, it is also preferable to use the new version.
1.4 Vehicle Application

The radio remote control switching unit is designed as a universal unit for 12V and 24V electrical systems and is available as a complete set with our Micro-DE Fog Lamps. The Micro DE Set is available as a universal set for 12V systems and in the form of vehicle-adapted sets together with the Micro DE.

1.5 Product Features and Advantages

This universal radio remote control switching system consists of the following components:

- Central control unit with radio receiver module
- Radio remote control for switching on and off with indicator LED
- Prefabricated, professional wiring harness for connection of two fog lamps or other electrical equipment.

Function

The radio remote control sends a control pulse to the central control module with integrated relay circuit for switching the electrical equipment on and off.

Remote Control

The remote control has a green LED to indicate the switching state. The control buttons are self-illuminating. They store ambient light and can therefore be found easily in dark surroundings. The surface texture of the ON and OFF buttons provides a different "feel" to prevent mix-up. The remote control can be fastened to the dashboard with a piece of double-sided tape or held in the hand for mobile use.
Optimisation in comparison to previous systems

- Radio remote control with indicator LED
- Modern design
- Improved ergonomic features on remote control
- Optimised seal for five-pin central connector

Range of Application

For switching following types of equipment on and off:

- Auxiliary fog lamps
- Work lamps
- Entry and exit lights on trailers and campers
- Optical warning systems
- Rotating beacons
- Search lamps
- And other electrical equipment
- Also suited for xenon headlamps

Primary product advantages in comparison to conventional wiring

- Elimination of cable through firewall into passenger compartment.
- Elimination of wiring below dashboard to switch.
- No holes required in dashboard (important for returning leased vehicles to original condition before returning).
- Reduction of installation costs in garage by 1 ½ to 2 hours.
- Simplified "Do-it-Yourself" installation.
- Switch can be positioned in accordance with individual preferences on dashboard regardless of wiring considerations.
- The radio remote control can be fastened to the dashboard with double-sided tape.
- Equipment such as work lamps can also be switched on and off outside the vehicle. For this purpose the radio remote control can be used as a mobile remote control.

1.6 Type Approval

The systems are approved in conformance with CE and ECE. This means that it is not necessary to have them inspected by inspection authorities and entered in the vehicle papers. Operation is approved for all EU countries as well as Switzerland, Norway and Iceland. A printed copy of the approval certificate is included with the sets.

- CE Symbol
- Type Approval (ECE Type Approval for electronic components)
- The basic regulations are 72/245/EWG and 95/54/EG
Type approval number 12V e1 021814 / 24V e1 022219

Radio frequency approval symbol (approved for all EU countries, as well as Switzerland, Norway and Iceland)

The 12V Version is also approved by the FCC for the USA under FCC No. P30K4678

1.7 Significant Technical Data

- Rated voltage: 12V or 24V
- Maximum load: 100W per output, meaning 2 x 100W
- Fuse (in wiring harness): 25 A at 12V and 15 A at 24V
- Temperature ranges: Remote control - 40°C - + 90°C (Battery 0°C - 55°C)
  Receiver - 40°C - + 105°C
- Frequency range: 433 MHz
- Battery for remote control: Lithium 3Volt 2 x CR 2020
- Battery for diode: Lithium 3Volt 2 x CR 2032

Alternating code (to prevent erroneous switching, interference or influence from other remote controlled equipment)
1.8 Batteries Used and Replacement

The remote control has separate power supplies for the remote control function and operation of the indicator LED. This ensures that the equipment can still be switched on even when the batteries for the indicator light are run down.

If required a replacement remote control can be obtained from our technical service department. For this purpose it is necessary to specify the code number on the enclosed card, because the remote control must be programmed for the specific system.

A maximum of one additional remote control can be coded for the system. For this purpose it is also necessary to specify the code number.

1.9 Set Includes
- Radio remote control with indicator LED
- Code card (for ordering replacement remote control)
- Central control module
  - Prefabricated professional wiring harness for two appliances including flat fuse
- Pinch terminals
- Snap-lock connectors
- Cable straps
- Screws

### 1.10 EAN Codes

The EAN codes for the sets with radio remote control switching systems are as follows:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>EAN Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6ZN 160 705-001</td>
<td>Universal radio remote control switching system 12V</td>
<td>40 82300 16642 2</td>
</tr>
<tr>
<td>6ZN 160 705-011</td>
<td>Universal radio remote control switching system 24V</td>
<td>40 82300 16643 9</td>
</tr>
</tbody>
</table>

### 1.12 Installation Instructions

Easy-to-understand installation instructions are included with the set. The wiring for the fog lamps as well the wiring for other types of equipment is described.
4. Competition

Competition systems for 12V applications are offered from the Far East, e.g. by the companies: Sirrius, PIAA and Raybrig. However these do not have E type approval.

This equipment does not satisfy the CE and type testing requirements for Europe, or they use a different frequency band not approved for Europe.

Failure to fulfil the EMC tests represents a particular hazard potential in vehicles. This could seriously interfere with the function of other safety-relevant electronic systems such as ABS, ESP or the engine control in the vehicle. It is not permissible to offer or use such systems in Europe.

Our system fulfils all standards valid for Europe (see also Point 1.6 Type Approval). Moreover our 12V system also satisfies the standards for the US market. This is confirmed by an FCC document from an American testing institute.

The electronic circuitry in our systems is also completely potted and therefore approved for installation in moist areas such as engine compartments. The competition systems, with which we are familiar are not resistant to moisture and therefore require installation in the interior. This means that the actual product advantage of radio remote control switching is no longer applicable.

To date we have not found any 24V systems on the market.