## **O/E/N India Limited**

\*We make electronics work

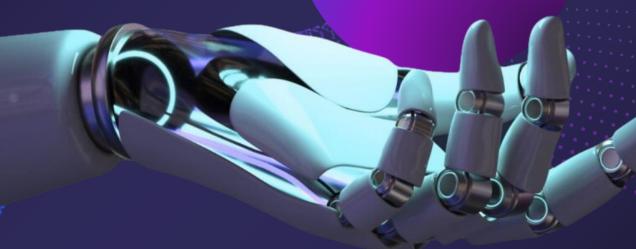
# AUTOMOTIVE PRODUCT PRESENTATION







CELEBRATING 'FUTURE'





**RELAYS** 

**SWITCHES** 

CUSTOM-BUILT ASSEMBLIES

ELECTRONIC MODULES

**BUS BARS** 

# Market Leaders in India for Relays & Switches





Established in **1968** with technical collaboration of OAK Industries



**50+** years of manufacturing experience in relays, switches & custombuilt assemblies



State of art production facilities: Two each in Kochi & Pune



Manufacturing area of **31,000 sq.** Meters.



O/E/N brand known for quality, reliability & innovation



Strong presence in automotive, industrial & other strategic market segments



ISO 9001, IATF 16949, ISO 45001, OHSAS 18001, AS9100D certifications





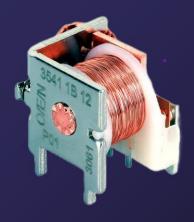
### Series 35 Relay



- Direct PCB Mountable
- Miniature Size
- Max Switching Current 50A



Direction Indicators, Wiper Controls, Lamp Controls, Rear Window Heating, Horn Controls, Starter Motors, Security Systems



Rated for 30A@12VDC or 10A@24VDC. Available in 1 Form A, 1 Form B, 1 Form C configurations

### Series 35HT Relay



- Direct PCB Mountable
- High Performance
- Heavy Duty
- Extra Braided Wire for enhanced current rating
- Max Switching Current 300A-Make/70A-Break Condition



Glow Plug Timers, Engine Cooling Fans, Heating Elements, Starter Solenoid Switches



Rated for 70/50A Glow Plug load @ 12VDC. Available in 1 Form A configuration

### Series 3572 Relay



- Direct PCB Mountable
- High Performance
- Heavy Duty
- IP 67 Protection
- Max Switching Current 100A

#### Applications:

Direction Indicators, Air Conditioning Systems, Body Controllers, Head Lamp Control, Ventilation Motors, Security Systems



Rated for 45/30A@12VDC or 20/10A@24 VDC. Available in 1 Form A, 1 Form C configurations

### Series 45 Relay



- Compact in Size
- Single and Dual Versions
- IP 67 Protection
- Max Switching Current 30A



Window Motors, Seatbelt Pre-Tensioner, Sunroof Motors, Seat Adjustment Motors, Door Locking System, Immobilizers





Rated for 20A@12VDC. Available in 1 Form A, 1 Form C configurations

### Series 53 Relay



- High Performance
- Limiting Continuous Current 70A
- 6.3mm Terminals
- PC Version Available
- Max Switching Current 240A



A/C Compressor, A/C Blower, Engine Cooling Fan, Starter Motor, Rear Window Defogger, Battery Disconnection, Radiator Fan



Rated for 70A@12VDC or 35A@24VDC. Available in 1 Form A configuration

## Series 53-PT Relay



- High Performance
- Limiting Continuous Current 100A
- 9.5mm Power Terminals
- PC Version Available
- Max Switching Current 300A

#### Applications:

Starter Relay, Radiator Fan, A/C Compressor, A/C Blower, Rear Window Defogger, Battery Disconnection



Rated for 100A@12VDC or 50A@24VDC. Available in 1 Form A configuration

### Series 53H Relay



- High Performance
- High Voltage Switching 145VDC
- 9.5mm Power Terminals
- Max Switching Current 150A

#### Applications:

Hybrid & Electric Vehicle, Pre-Charge Relay, Charger Interlock Relay



Rated for 40A@60VDC, 5A@145 VDC. Available in 1 Form A configuration

### Series 54 Relay



- Limiting Continuous Current 70A
- Dual Contact Design for enhanced rating
- Direct PCB Mountable
- Max Switching Current
- 300A Make / 70A Break condition

#### Applications:

Glow Plug Timers, Start-Stop, Starter Safety, Engine Cooling Fans, Heating Elements, Heavy Duty Direction Indicators



Rated for 70A@12VDC or 35A@24VDC. Available in 1 Form A configuration

## Series 61 Relay



- High Performance
- Direct PCB Mountable
- Compact in Size
- IP67 Protection
- Max Switching Current 50A

#### Applications:

Power Door Locks, Ventilation Motors, Security Systems, Seat Adjustment, Body Control



Rated for 20/10A@12VDC. Available in 1 Form A and 1 Form C configurations

### Series 73 Relay



- High Performance Micro ISO Relay
- Standard (20A) and High Current versions (35A)
- 4.8 & 6.3mm Terminals
- IP 67 Protection optional
- Max Switching Current 120A

#### Applications:

Head Lamp Control, Starter Motors, Defogger, Radiator Fan, A/C Controls



Rated for 35/20A@12VDC or 20/10A@24VDC. Available in 1 Form A and 1 Form C configurations

### Series 74 Relay



- High Performance Mini ISO Relay
- 6.3mm Terminals
- Current Rating 40A
- IP 67 Protection optional
- Multiple Contact Configuration

#### Applications:

Horn Control, Starter Motors, Gear Neutral Safety, Defogger, Radiator Fan, A/C Controls, Security Systems



Rated for 40/30A@12VDC or 20/15A@24VDC.

Available in 1 Form A, 1 Form B, 1 Form C, 1 Form U & 1 Form T configurations

### Series 74H Relay



- High Performance Mini ISO Relay
- 6.3mm Terminals
- Max Switching Current 120A

Applications:
Hybrid & Electric Vehicle, Battery Chargers



Rated for 25A@36VDC, 20A@48VDC, 15A@72 VDC, 7A@110VDC.

Available in 1 Form A & 1 Form C configurations

### Series 74EV Relay



- Suitable for voltage levels up to 450VDC
- Pre-Charge currents up to 20A
- Limiting Break currents up to 20A
- Bracket Mounting, PCB Mounting and Plug in type available

Applications:
Capacitor Pre-Charge



Rated for 20A@450VDC. Available in 1 Form X configuration

### Series 79 Relay



- Universal Footprint
- Base shroud for terminal protection & locking
- Dust Protected
- Max Switching Current 120A

#### Applications:

Starter Motor, Start-Stop Application, Fan Controls, AC Controls, Heater Controls



Rated for 50A/30A@12VDC & 25/15A@24VDC. Available in 1 Form A & 1 Form C configurations

## Series 82 Relay



- Ultra Small High Voltage Relay
- PCB Mountable
- Low Coil Power 0.6W
- IP 67 Protection
- Max Switching Voltage 450VDC
- Magnetic Blowout feature eliminates the risk of Arc induced contact damage

#### Applications:

Capacitor Pre-Charge Relay for Electric Vehicle

Rated for 10A@450VDC. Available in 2 Form A configuration



### Series 83 Relay



- Low Profile
- Low Coil Power 0.72W
- IP 67 Protection
- Max Switching Current 100A



ECU Controls, Electronic Fuel Pump, Lamp Controls, A/C Controls, Fan Controls, Tail Lamp



Rated for 20A@12VDC. Available in 1 Form A configuration

### **Series 84 Relay**



- Limiting Continuous Current 100A
- IP67 Protection
- Screw Type terminations for contacts
- Shrouded Coil Terminals ensures total isolation from Contact Terminals



Engine Pre-heating, Radiator Cooling Fan, Exhaust Control, Oil Pump, Heater Control, Battery Disconnection, Starter Motor, Braking System(Electromagnetic Retarder)



Rated for 100A@12VDC & 60A@24VDC. Available in 1 Form A configuration

### Series 84EH Relay



- Limiting Continuous Current 200A
- IP67 Protection
- Screw Type terminations for contacts
- Shrouded Coil Terminals ensures total isolation from Contact Terminals



#### Applications:

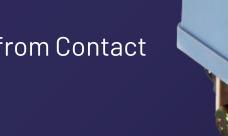
Engine Pre-heating, Radiator Cooling Fan, Exhaust Control, Oil Pump, Heater Control, Starter Motor, Braking System(Electromagnetic Retarder), Battery Disconnection

Rated for 200A@12VDC & 100A@24VDC. Available in 1 Form A configuration

## Series 84EV Relay



- Max Switching Voltage 250VDC
- IP67 Protection
- Screw Type Terminations for Contacts
- Shrouded Coil Terminals ensures total isolation from Contact Terminals



#### Applications:

EV Vehicles-Battery Charger, Braking System(Electromagnetic Retarder)



Rated for 150A@72VDC & 25A@250VDC. Available in 1 Form A configuration

# Series 86 Battery Disconnect Relay



- Contact Configuration: 1 Form X
- DC Coil Versions
- Resistor/Free Wheeling Diode (Optional)
- Limiting making current up to 2000A
- Time Delay feature (Optional)
- Vibration Resistance 10G, Shock Resistance 40G
- IP67 Protection

#### Applications:

Disconnecting Battery to prevent accidental short circuit fires, Dual Battery Swapping, Battery Deactivation when vehicle is not used for an extended period, Pre-Heating Systems



### Series 93 Relay



- Compact Size
- PCB Mountable and requires 50% less builtup area as compared to Series 3572
- Low Coil Power 0.82W
- IP 67 Protection
- Max Switching Current 250A

#### Applications:

Smart Junction Box, Blower Fan, Cooling Fan, Fuel Pump, Glow Plug



Rated for 40A@12VDC. Available in 1 Form A configuration

### Series 94 Relay



- High Performance
- Light Weight -11gms
- Micro 280 Terminal layout
- IP 67 Protection
- Max Switching Current 120A

#### Applications:

Wiper Speed, AC Clutch, Fuel Pump, Fog Lamp, Head Lamp-Low Beam/High Beam, Wash Pump, Horn, Wiper



Rated for 20A@12VDC. Available in 1 Form A configuration

### **Series 160 EV Contactor**



- Contact Rating of 250A at 450VDC
- Gasless Technology for Arc Quenching
- Limiting Continuous Current 250A @ 85 deg C
- Maximum Short Circuit Current of 6000A
- With Economiser

Applications:
Main Contactor, Fast Charging



Rated for 250A@450VDC. Available in 1 Form X configuration

### **Series 161 EV Contactor**



- Contact Rating of 150A at 150VDC
- Gasless Technology for Arc Quenching
- Economiser version available
- IP 67 Protection
- Limiting Continuous Current 200A
- Maximum Short Circuit Current of 3500A

Applications:
Main Contactor, Fast Charging



Rated for 150A@150VDC. Available in 1 Form X configuration

### **Relay Modules**



- Time Delay Modules
- Starter Safety Modules
- LED Flasher
- Glow Plug Timer
- Latching Modules

Application:

Seat Logic, Starter safety, Glow plug etc.



Rated up to 40A@12VDC and available in 5 Pin and 6 Pin configurations

### Why O/E/N





Over five decades of specialized expertise in development and manufacture of electromechanical components & strategic electronic products — A legacy brand



Innovative product design and development team to convert ideas and concepts to customized switching solutions



Multi-locational state-of-the-art manufacturing facilities with fully automated & semi-automated lines



Relentless focus on product quality and reliability



Customer centric approach that has been rewarded with an ever- expanding base of loyal customers in India and abroad

## **O/E/N India Limited**

\*We make electronics work

Backed by over five decades of proven manufacturing and technological excellence, we are continuously striving to match and exceed the expectations of our customers and business associates.

### Connect with Us!!

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