Global Relay Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 120 pages | Mordor Intelligence

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Report description:

The relay market is expected to register a CAGR of 4.6% during the forecast period (2023 - 2028). The relay market is projected to witness significant growth owing to the acceptance of different relays across various end-user applications, including aerospace, defense & military, automotive, communications, energy and power, industrial, and others.

Key Highlights
The rise in power consumption, growing adoption of electric vehicles, implementation of smart power grids, and increasing adoption of vehicular safety technology are some major factors expected to drive the relay market. However, volatility in raw material prices is one of the major factors that may hamper the growth of the relay market during the forecast period.
Developing and developed countries worldwide are significantly investing in the construction of smart power grids, which is anticipated to propel the market for relays in the future. For instance, in July 2021, GridWise Alliance announced a USD 5 billion funding to revamp the US's transmission and distribution infrastructure with smart sensors, controls, and storage.
Smart grids are advanced electric power grid infrastructures for enhanced reliability and efficiency and work with automated control, modern communications infrastructure, high-power converters, modern energy management techniques, and sensing and metering technologies.
The demand for relays in an automated power grid is huge as they can support monitoring transformers and protect from transformer overload, overexcitation, and through-fault, as well as standard protection functions including overcurrent, differential, and earth faults.
The emergence of COVID-19 adversely impacted the global relay market. The massive downturn in the industries that have been major end-users of the different types of relays impacted the decline in the relay market at a global level. Also, the pandemic brought key projects in the renewable resources sector to a standstill due to the lockdowns imposed in many countries to control the spread of the disease in 2020 and early 2021.
Although, the industries across various parts of the world are opening back, easing the supply chain constraints. However, the disruptions caused by the pandemic are expected to have their impact felt at least for a short period.

Relay Market Trends

Growing Adoption of Relays in Automotive Industry

The automotive industry is transitioning from hardware- to software-enabled vehicles, and the average software and electronics content per vehicle is increasing rapidly. Electronics often enable the integration of new functions and features into the car. Thus, electronics is increasing penetration into major applications, including powertrain, safety management, body, and convenience or infotainment.
In addition, passenger safety is another factor driving the adoption of automated automobile systems. The installation of safety features and systems in vehicles has greatly aided in reducing the number of accidents and fatalities on the road over the past few decades.
The rapidly growing use of electric components in current and upcoming vehicles is consistently propelling the need for manufacturing reliable and standardized components for efficient, safe, and secure switching of electric loads. These factors are currently driving the market growth.
The relays for automotive applications are engineered for direct current (DC) voltages in passenger comfort and infotainment systems and managing power levels in harsh environments. The relays are utilized in almost all harnesses and box modules throughout a vehicle, comprising the car's rear and front area, body control, passenger and engine areas, powertrain, and door, seat, roof, and fan modules.
Additionally, the demand for advanced relays with lightweight and high-performance characteristics is compelling manufacturers to invest in producing more solid-state relays, compared to traditional heavy electromechanical relays, owing to the growing demand for hybrid and electric vehicles around the world. This, in turn, will boost market growth in the future.

Asia-Pacific to Register a Significant Market Share During the Forecast Period

Asia-Pacific is anticipated to hold a substantial market share during the forecast period. The growth of the relay market in the Asia Pacific is owing to the rising renewable energy capacity addition. Also, the increased grid infrastructure activities and emphasis on substation automation under IEC 61850 standard are anticipated to propel the market in the Asia Pacific during the forecast period.
The advent of renewable energy generation across the region provides opportunities for relay manufacturers as it is utilized for many applications, such as offering a very big contact gap, powerful switching competencies, and many others in this sector. Apart from this, the government and various regional companies have invested strongly in developing this sector.
Further, the Chinese government's programs, such as the Made in China 2025 plan, promote the use of R&D in factory automation and technologies and its investments. Also, as most of the automation equipment is imported from Germany and Japan, the 'Made in China' initiative aims to expand the country's domestic production of automation hardware and equipment. ?Initiatives by the government in the automation sector will drive the studied market.
Moreover, increasing investments, manufacturing capacity, and sales of automotive vehicles considerably will drive the relay market shortly. In addition, stricter emission regulations by governments are propelling automakers across the region to invest in electric vehicles. Various automakers are therefore significantly investing in developing and launching new electric vehicles. For instance, in December 2021, South Korea's Hyundai Motor Co unveiled its plan to invest 40 billion rupees (USD 530 million) in launching six electric vehicles in India by 2028. The rising investment in electric vehicles is expected to further boost the demand for relays.
Furthermore, in February 2022, Hyundai Mobis, the auto parts producing unit of Hyundai Motor Group, unveiled its plan to spend up to USD 6.72 billion in the next three years to strengthen auto chips, mobility, and other fields as its future growth drivers.

Thus, owing to the factors mentioned above, the revenue share from the Asia Pacific is anticipated to grow faster than the other geographical regions during the forecast period.

Relay Market Competitor Analysis

The Global Relay Market is moderately competitive and consists of several major players such as TE Connectivity, American Zettler, Churod Electronics, Omron, Panasonic, etc. In terms of market share, few major players currently dominate the market. However, with innovations and technological advancements, many companies are increasing their market presence through organic and inorganic growth strategies and tapping new markets. Some of the recent developments in the market are:

In December 2021, TE Connectivity acquired narrow safety relay (NSR) technology from Phoenix Contact. TE Connectivity will be involved in manufacturing and marketing NSR relays through this technology acquisition.
In November 2021, Pickering Electronics Ltd. presented high voltage reed relays comprising the newly released Series 100HV at Productronica 2021. Pickering's reed relays can stand off from 1kVto 15kV and facilitate switching from 500V to 12.5kV at up to 50W. The relays are best suitable for mixed-signal semiconductor testers, backplane testers, high-end cable testers, electric vehicles, medical electronics, big physics, solar energy, in-circuit test equipment, and high voltage instrumentation.

Additional Benefits:

The market estimate (ME) sheet in Excel format
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