



# MARQUARDT INNOVATIONS

➤ SWITCHING SYSTEMS FOR ELECTRIC POWER TOOLS



MARQUARDT

## ➤ AC APPLICATIONS



## ➤ BECAUSE ONLY ROBUST SOLUTIONS MEET THE TOUGHEST DEMANDS.



### Electronic switch 2508

- Full-wave speed control with current feedback (micro controller)
- Rating up to 10.5 A 127 V AC
- Soft start and overload cutoff
- End-programmable at the device manufacturer on the line
- Additional programmable inputs/outputs
- Integrated reversing switch

### Mechatronic switch 2267 for large angle grinders

- Double-pole contact system for safe switch-off
- Integrated full-wave electronics (micro controller)
- Restart protection through zero voltage detection
- For tools with input power up to 2.7 kW
- Overload and blocking protection
- High dust protection



### Reversible brush ring 2015

- Carbon brush holder with changeover function for optimum brush/collector positioning during left/right rotation
- Long life endurance of the carbon, minimum radio interference even in the left rotation, low system costs due to reduced cabling expenditure
- Definite end position due to snapping actuation
- High dust protection due to narrow part tolerances



## ➤ WHEN THE SWITCH BECOMES THE CENTRAL UNIT.

### High power switch for electric tools with Li-ion battery

- ➔ Rating up to 36 V/25 A
- ➔ With integrated battery management
- ➔ Current and temperature monitoring for battery/motor
- ➔ Dust and vibration protection



### Module 2711

- ➔ With control panel, working LED and battery adapter



### Electronic switch 2717

- ➔ Extreme vibration resistance, ideal for impact wrench applications
- ➔ Communication with battery pack ("switch me off" function)



### Electronic switch 2711

- ➔ Programmable at the customer site on the line

## ➤ EC AND AC ELECTRONIC MODULES



### ➤ WHERE HIGH QUALITY FACILITATES PROFESSIONALISM.

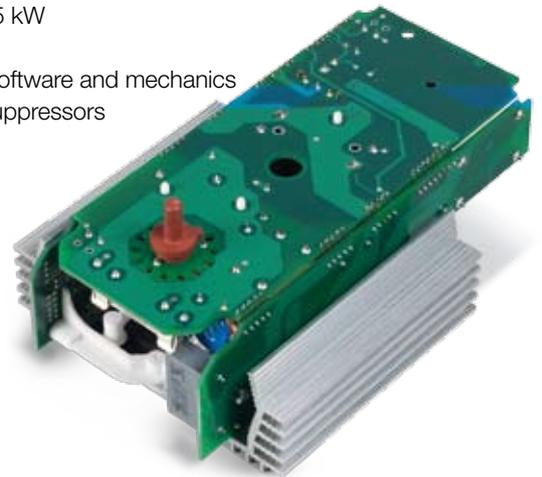
#### AC module 2074

- Full-wave speed control (micro controller)
- Speed setting via potentiometer
- Integrated mains slide switch
- Compact design



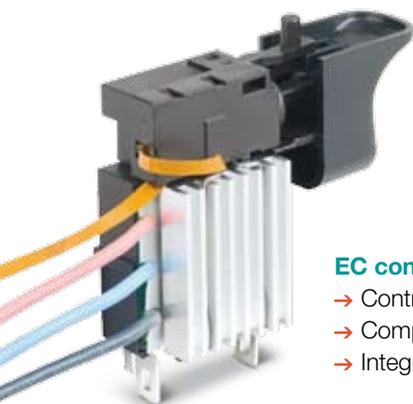
#### EC control 2810

- For applications up to 1.5 kW
- Variable speed setting
- Individual adaptation of software and mechanics
- Integrated interference suppressors



#### EC control 2810

- For truck fan motors
- Overload and temperature cutoff



#### EC control 2800 for cordless power tools

- Control electronics for brushless motors
- Compact design
- Integrated reversing switch



# BECAUSE CUTTING-EDGE TECHNOLOGY IS BASED ON KNOWLEDGE AND INGENUITY.

The Marquardt group was established in 1925 and, in spite of becoming a Global Player, has remained an independent family enterprise. With its two business areas – Automotive and Switches, Sensors & Controls, the Marquardt group of companies is active all over the world in all the important markets and has offices at 11 locations with more than 4500 employees in all.

Every year, we invest more than seven percent of our turnover in research and development – not to mention the use of modern development tools, simultaneous engineering and an efficient testing system. Moreover, our corporate culture offers ample scope for unfolding the inventive genius of our employees. As a result, new ideas come up time and again, which are materialized into marketable cutting edge technologies.

The Switches, Sensors & Controls division develops, produces and sells its products in a number of industries and applications. Apart from industrial applications, our products are used in power tools, household appliances, cleaning systems, drive technology, heating and air-conditioning technology as well as off-road vehicles. We have the necessary technical know-how, innovative strength, long-term experience and comprehensive manufacturing expertise required in these fields.

This yields innovative and reliable products that feature promising designs tuned to individual requirements. Our products range from the standard switch to complex customer-specific systems. They are suitable for small-scale and large-scale production. With distinct production engineering, worldwide manufacturing options, high quality standards and durability of our products, we achieve customer satisfaction and thereby ensure our competitive ability.

These customer- and market-specific solutions have made Marquardt a strong partner of the power tool and electrical industry and a technology leader. We are at your service in all the international markets.

Electric power tools make tough demands on the quality, performance, life endurance, robustness as well as dust and vibration protection of the integrated switching systems. Apart from standard products, there is a growing need for tailored, customer-specific solutions.

Marquardt offers a broad spectrum of standard products. This range is supplemented by mechanical ON/OFF switches and AC and DC switches with integrated electronic controls. The modular structure of many of the series allows a lot of flexibility, thus enabling us to fulfill varied customer wishes. For example, our switching systems offer highly-integrated, mechatronic solutions which can take up the complete management of the lithium-ion batteries.

We maintain a holistic approach and operate in the market for the market. Based on our decade-long experience and vast know-how, we manufacture top-level products, which prove our position as the world market leader time and again.

# MARQUARDT INTERNATIONAL.



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