Welcome

keetronics®
(India) Pvt. Ltd.
कीट्रॉनिक्स् (इंडिया) प्रा. लि.

Advance Input Devices, Functional Printed Electronics & Touch Electrical Switches

Since 1994

The Kee to Excellence...

Devgiri Building, Kothrud Industrial Estate, near Karishma Complex, next to Starbucks, Kothrud, Pune, Maharashtra 411038

Smart Surface Solution

❖ Smart surfaces offer functionality on demand into Car interiors.

❖ Innovative operating concepts can be implemented in customizable designs.

❖ The features of RGB LED light source under a fabric-covered decorative textile surface.

❖ Passengers can control the lighting intuitively by a sensor, regulating the light color and intensity by swiping the translucent surface. The lighting area is only visible in an 'on' state.

❖ Printed-electronics techniques are used to apply conductive features such as circuitry, touch controls, as well as decorative features and user-interface graphics. Surface-mounted components and LEDs were added. Then, the assembly was thermoformed into a three-dimensional shape to form a thin, lightweight, functional unit with a smart, touch-sensitive surface and all of the electronics fully encapsulated and embedded used into automotive interior.

Car Interior – Illuminated Dashboard
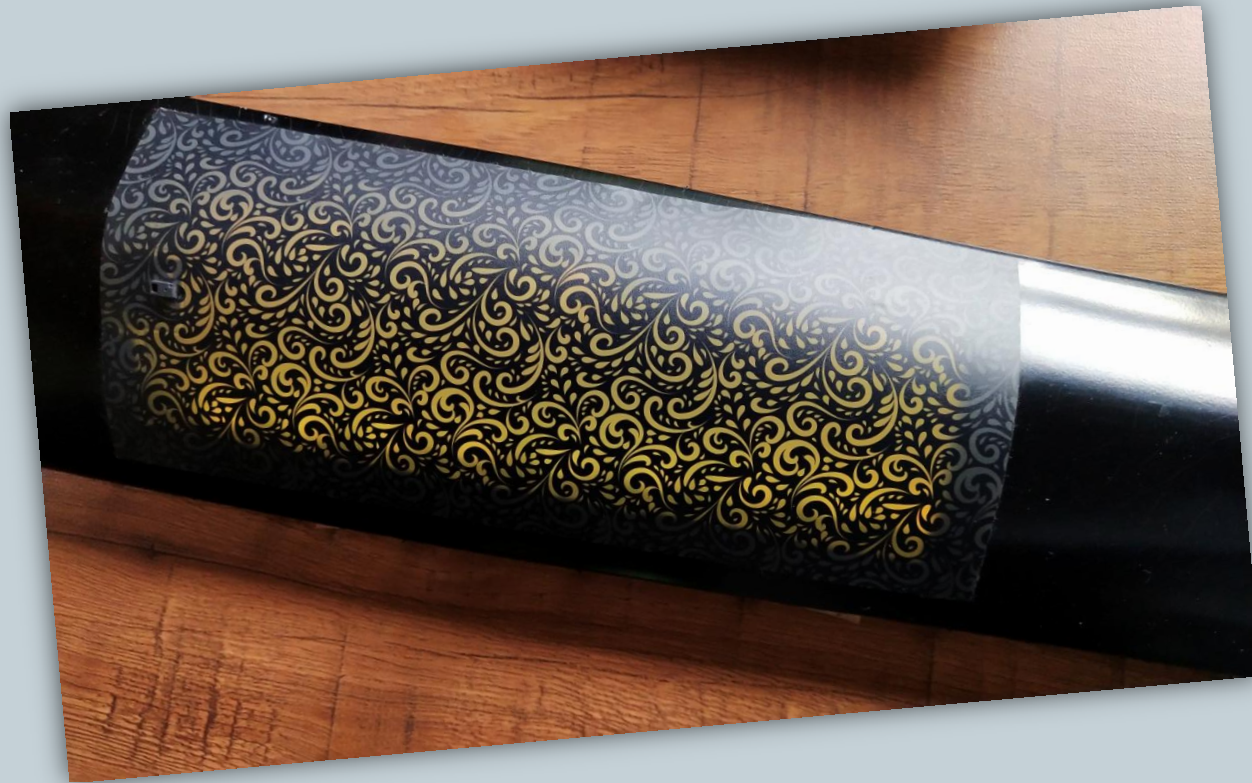
- Car dashboard Illuminated surfaces with mood changing lights

Wheel Speed Sensor

Bearing Outer Diameter

Sensor Reading Diameter

Bearing Inner Diameter

Slot
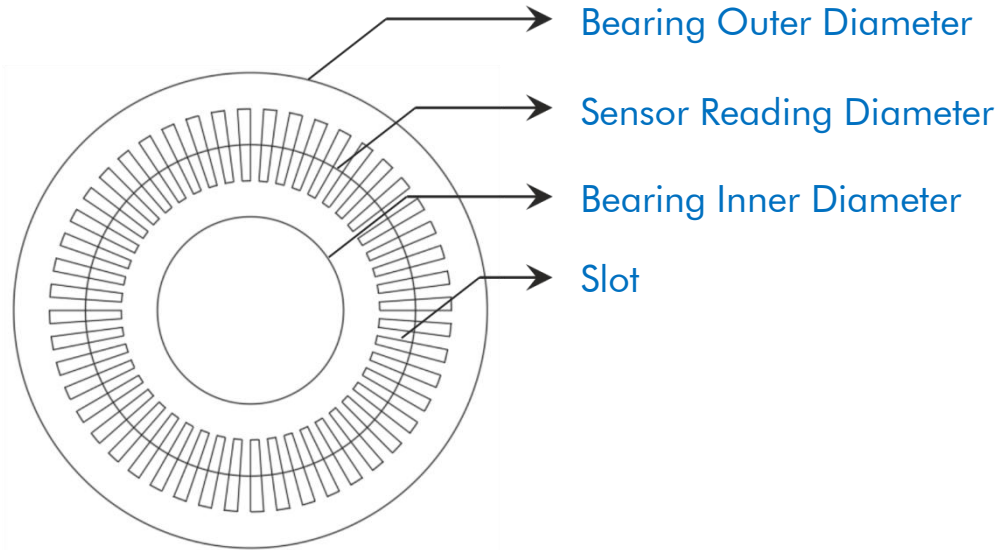
Specifications:

|		
No of pulses per rotation	:	48/24 (2 Types)
RPM	:	2000 max
Output Signal Type	:	Square (Digital)

Function of the Wheel Speed Sensor Bearing

❖ Wheel speed sensing using Hall Effect Sensor.

❖ Hall Effect sensor detects direction and magnitude of a wheel.

❖ Hall sensors are capable of measuring wide range of magnetic fields and are sensitive to both the magnitude and the orientation of the fields.

❖ Wheel speed sensors (WSS) provide essential wheel speed information not only for anti-lock brake systems (ABS), but also for traction control and stability control systems. Some vehicles even compare the wheel speed sensor readings against the vehicle speed sensor (VSS) to make sure all of these sensors are accurate and working correctly.
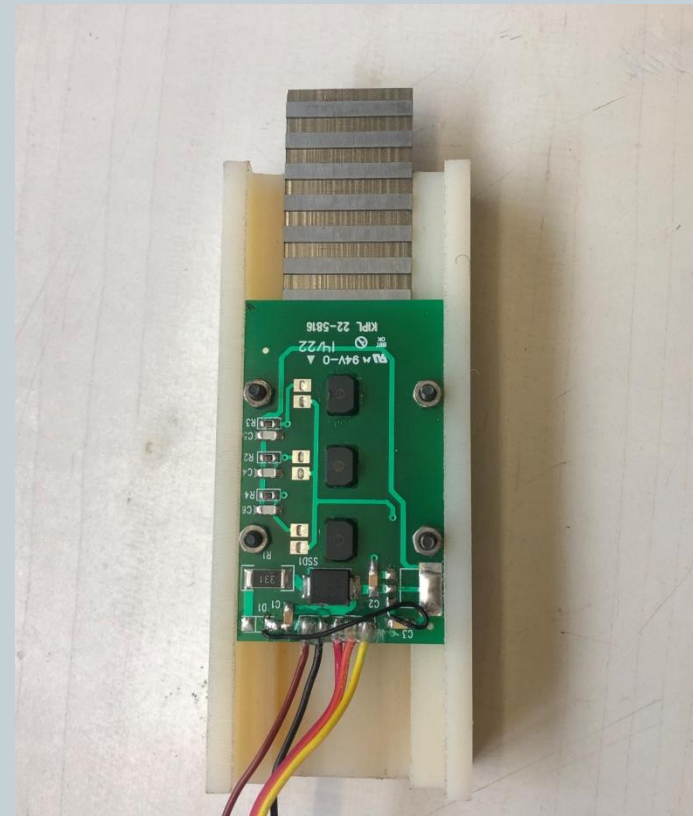
Wheel Speed Sensor Bearing

EVM Board
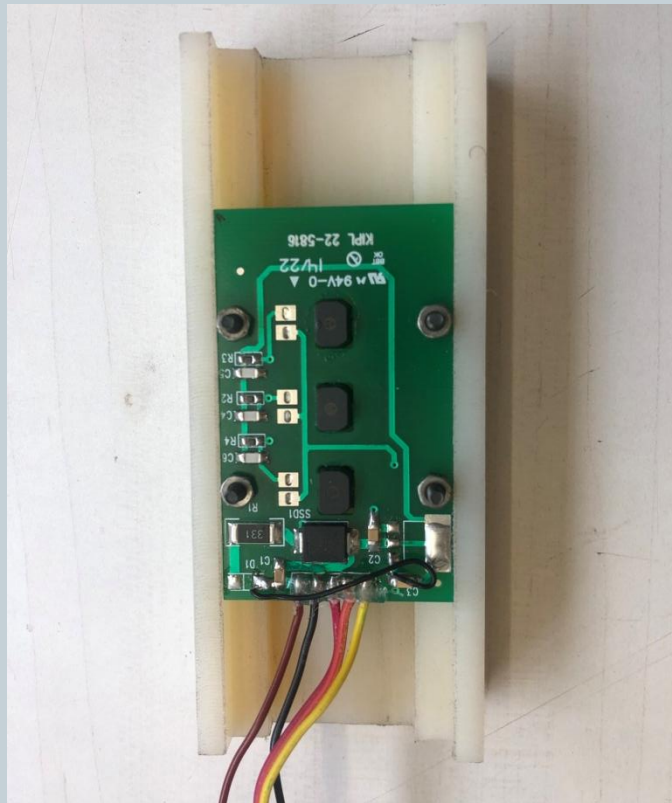
EVM Board with Ferro target

Function of the Motor Encoder Sensor

❖ This is a position sensing coil w.r.t magnet in Brushless DC Motor for commutation.

❖ Without this sensor Brushless DC Motor can not work.

❖ Sensor is placed in a fix angular relationship and position of the magnet w.r.t stator coil structure.

❖ Spider is metallic wheel and it is fix in relationship with rotator magnet.

❖ Inductance of the coil changes based on the 2/3 gap of the spider wheel, this allows us to electrically sense in a rotor position in contactless fashion.

EV- Charging Station Display

- EV car charging station keyboard.

RGB LED Based Digital Clock

- Digital LED based clock with color changing mode

Formed Keypad with colored Illumination

- Illuminated keypad for operations

Decorative Surface

- Illuminated smart decorative surfaces with customize design

Services Offered By Keetronics

❑ Electrical Engineering

- System Architecture
- Electrical Schematics
- Circuit Simulations
- Printed Circuit Boards layout and routing
- Capacitive sensing optimisation
- Design for EMI/ESD certification

❑ Prototyping Services

- Proof of concepts
- Mock-ups for form-fit validation & ergonomic analysis
- Functional Prototypes
- Printed Circuit Board assemblies

❑ Software Engineering

- Integration of embedded OS
- Embedded firmware
- Application development
- Automotive CAN & LIN Protocol

❑ Printing Services

- Overlay Printing
- Value addition by using selective, antiglare, gloss surface of the graphics
- Printed Circuit Films
- Surface finishing technologies like, Surface Epoxy, Embossing, Doming.

Services Offered By Keetronics

❑ **Mechanical Engineering**

- Industrial design & 3D modeling

- Stress calculations & finite element analysis

- Optical simulations and optimisation

- Parts design for injection moulding, sheet metal, machining & low pressure moulding etc.

- Enclosure design and development

- Advanced surface modeling

- Aerospace, Defense, Medical, Industrial and Transportation certifiable designs

Product Testing Facilities

❑ **Mixed Domain Oscilloscopes - 3014**

The MDO3014 Mixed Domain Oscilloscope (MDO) Series is the ultimate 6-in-1 integrated oscilloscope that includes an integrated spectrum analyzer, arbitrary function generator, logic analyzer, protocol analyzer, and digital voltmeter/counter. The MDO3000 is completely customizable and fully upgradable.

❑ **Digital Multimeter - DMM7510**

The DMM7510 combines a precision, high-resolution digital multimeter (DMM), graphical touchscreen display, and high-speed, high-resolution digitizer to create the first graphical sampling multimeter. With pA-level sensitivity and 1Msample/s sampling, it accurately measures ultra-low sleep mode currents and transmit drain currents from wireless devices..

Our Strength

❑ **Design & Development**

Product development is at the core of our company. Our product development team consists of industrial designers, electrical engineers, software engineers, graphic designers and CAD specialists. This team is committed to a common goal: turn your ideas into a successful product by designing, engineering and manufacturing customised membrane switches, control panel and user interfaces.

❑ **Embedded Engineering**

Highly motivated and strong headed Embedded engineers team is involved & resulted Various 100+ projects successfully executed by developing the protocol, analyzing the software code for test box & implementing rapid prototyping on the hardware to make conversion of programmed logics into feasible reality.

Strong Operational Experience Of..
- PSOC COMPILER
- MP LAB IDE
- Embedded C++
- Various Coding Platforms

❑ Deepa Shaha – Head Operation
25+ Years Experience

Energetic and accomplished leader with over 21 years of Product Design & Development, having wide knowledge and hand on experience of 100+ successful projects delivered in various domain like Defense, Railway, Medical, Industrial & Functional Printed electronics. Leading the team upfront of Electrical Engineers, Embedded Software Engineers, PCB designers and Coordinators for development and sustaining of actual products

Key Doman Area:

- Target Management and Goal settings of projects at initial stages of the product development.

- Design & Simulation of technical requirements in product.

- Incorporation of features with respect to functionality, quality, durability & aesthetical appearance.

- Development and Selection of right raw material which meets requirements of the product.

- Selection of components and defining the hardware for the product.

- Development of communication protocol to perform excellent functionality in product.

- Defining processes and value addition services to develop process friendly work flow for mass production.

- Global sourcing expert.

❑ Anuja Deshpande – Manager, Design & Development
25+ Years Experience

- **Key Doman Area:**

Coordination with all teams involved in development of the product at initial stages.

Planning of execution performed against given targets and time frames.

Technical support to the team for understanding the requirements and desirable results for the processes to meet production feasibility.

Expert in components and hardware development in accordance with functionality of the product.

Responsible for the conversion of ideas into reality by giving support to the team till the successful development of the product .

Development of the documents like JOB CARD & Technical Parameters sheet based on reference of production of prototype .

Support to the sourcing team for procurement of the elements which are newly developed at initial stage.

Working with cross functional teams and follow ups to get work done in pre described schedule of plan.

Handover of the approved job to customer in regards with information, process flow, bill of material and systematic documentation in ERP.

❑ Swati Gokhale – Asst. Manager, Design & Development, QMS
25+ Years Experience

- **Key Doman Area:**

Target based execution of development plan of the product is prime responsibility.

Validation of developed first Product against the Standard, Compliances & Customer Specific requirements given at initial communication.

Demonstration of additional features to incorporate within for ease & value addition in terms of ease of use, aesthetics & performance related enhancements.

Design and Development activity of Tools & Dies from defined vendors based on process demand.

Responsible for validation & approval of the tools against the performance parameters.

Handover of the approved job to customer in regards with information, process flow, bill of material and systematic documentation in ERP.

Solely responsible for the system practices like ISO 9001: 2015 followed in the organisation.

Responsible for Quality Management Systems in organisation.

Management Representative for ISO 9001:2015 of Keetronics.

IT Support.

ERP Technical Support.

❑ Ajit D. Chaudhari
❑Ravindra B. Gaikwad
– Sr. Embedded Engineer
   8+ Years Experience

▪ Key Doman Area:

- Schematic design as per requirement.
- Electronics component selection.
- Communication protocol & Flowchart design.
- Microcontroller programming.
- New Technology studies and implementation.

▪ Technical Skills:

- Schematic design as per requirement.
- Electronics component selection.
- Communication protocol & Flowchart design.
- Microcontroller programming.
- New Technology studies and implementation.

▪ Soft Skills:

- PSoC Designer and Creator IDE for Cypress Controller programming.
- MPLAB IDE for Microchip Controller programming.
- Code Composer Studio IDE for TI Controller programming.
- Arduino IDE for AVR Controller programming.
- Mentor Graphics PADs for PCB Layout Design.
- Orcad Capture for Schematic Design.

❑ Mangesh Ratnakar Puranik – Sr. PCB Designer
10+ Years Experience

▪ Key Doman Area:

- PCB Design using PADS Layout
- Part Creates to IPC standards
- RF Design constraints
- High Speed design
- EMC design best practice
- Design for manufacture
- Gerber Viewing / Editing software knowledge

▪ Technical Skills:

- Professional qualified engineer in Industrial Electronics.

- Responsible for the PCB design up to 4 Layer as per EMI ESD compliance (component placement, signal routing and fabrication data generation).

- Provide ongoing library support engaging with external and internal library groups.

- Keep up with and know industry standards and technologies.

- Knowledge of PCB design requirements to facilitate different product to PCB attachment processes such as Wave Soldering, Reflow oven SMT and Compliant tail Press-fit.

- Execute the new development jobs before release.

- Handle all the documentation related to the departmental process.

Clients

We are proud to have some of the most well-known and respected corporate clients – but we love to help start-ups and new brands too. We aren't just talk. We are in the game, in a big way, and are ready to partner with you.

❖ Navisthaa

❖ Panasonic

❖ Tata Autocomp

❖ Mutual Automation

We enjoy a feeling of satisfaction & happiness serving the nation...!!!

Thank You...