

Rigid-flex printed circuit board proves its reliability in every curve

Motorcycle sport is notorious for complex technology and the highest material requirements: rapid pace, extreme load changes in corners, high summer heat, mud, dust, dirt - all this has a significant influence on the machine and especially on its highly sensitive electronics. Together with GCD-PCB-Design in Erlangen, Würth Elektronik has developed a rigid-flex PCB, which meets these requirements.

“Small and reliable: The control electronics in high class motorcycles must master these two requirements,” explains Jürgen Kintopp, Managing Director of GCD-PCB-Design. “And they must also remain affordable.” Together with his team, he was looking for an appropriate solution and found his solution at Würth Elektronik: rigid-flex printed circuit boards met the requirements.

In electronic systems, joints are particularly vulnerable to the effects of impacts or load changes. Soldered wire connections break easily, which leads to contact failure or even the entire loss of function. “This is where our rigid-flex printed circuit boards succeed,” explains Andreas Schilpp, Product Manager at Würth Elektronik. “Instead of complex wiring that need lots of space and are prone to failure, a flexible sheet of polyimide is used as the connection between the rigid parts.” For GCD-PCB-Design, this flexibility was the right approach on two fronts.

<http://www.we-online.com>

Publication free of charge
Sample copy requested

Image files:
2014_WE_GCD_a

26/06/2014
Page 1 of 4

26.06.2014
Seite 1 von 4

Press release



“We were able to simultaneously exploit the available space for our optimal control element and ensure the reliability of the technology.”

An important element for success is the communication between end customer, developer and the PCB manufacturer. For detailed discussions, the interdisciplinary team met on site at Würth Elektronik. “The sooner the exchange begins, the more conducive it is for success. Especially in complex systems, the dialogue can not begin soon enough,” explains Andreas Schilpp.

Getting products ready for series production depends on a crucial early stage: the joint development of new products with the end customer and developer. A transfer from prototypes into series is not always guaranteed. That is why Jürgen Kintopp must also have an eye on costs during new developments. “In the development phase, we only require only a small number of these specific boards. Large numbers do not come into play.” This is why Würth Elektronik is the perfect partner. “At first, it seems as if rigid-flex printed circuit boards are more expensive than the classic version with cable or connectors. However the initial investment in the new technology pays for itself quickly, as system costs are reduced for small parts such as connectors and cables. Perhaps, more importantly, the improved testability, high reliability and functional safety further help to outweigh the start costs,” says Jürgen Kintopp.

In the end, it was worth it. After three months of design work, numerous meetings and demanding pre-testing, the controller had kept its prom-

<http://www.we-online.com>

Publication free of charge
Sample copy requested

Image files:
2014_WE_GCD_a

26/06/2014
Page 2 of 4

26.06.2014
Seite 2 von 4

Press release



ises and the designers at GCD-PCB-Design in Erlangen as well as the specialists at Würth Elektronik were considerably pleased by the result.

<http://www.we-online.com>

Publication free of charge
Sample copy requested

Possible caption for picture 2014_WE_GCD_a:

Image files:
2014_WE_GCD_a

26/06/2014
Page 3 of 4

Reliable at a top speed, in extreme load changes in curves, heat, mud, dust and dirt - the rigid-flex printed circuit board overcomes all these challenges.

26.06.2014
Seite 3 von 4

About GCD-PCB-Design

GCD-PCB-Design in Erlangen with its 15 employees, has specialized its services around the board to offer an all in one solution from design to the finished printed board assembly. Furthermore, the GCD-PCB-Design also supply sample and series circuit boards, hybrid and LTCC circuits in many variations. The assembly of the printed circuit boards, procurement of components and testing the finished modules can be undertaken in the shortest possible time when required. The company GCD-PCB-Design serves customers in the automotive and motorsport, industrial automation, rail and traffic engineering, medical, white goods, radio and telecommunication, sensors and defense sectors.

More information: www.gcd-pcb.de

About Würth Elektronik Circuit Board Technology (CBT):

Würth Elektronik Circuit Board Technology was founded in 1971 and has established itself as one of the leading PCB manufacturers in Eu-

Press release



rope. Developers are able get standard circuit boards, new and innovative technologies and even complete system solutions all from one source. Würth Elektronik covers the entire product life cycle, from the initial idea for a design, for example during early R&D projects, to the production of prototypes on the online shop WEdirekt and finally, manufacturing of medium and large volumes. Knowledgeable specialists are not just located at our German plants. Internationalization is an important strategic aspect for Würth. We have numerous sales teams set up across many European countries.

Every day more than 120 new PCB designs enter our production. We have over 4,000 customers, ranging from large corporations to one-man designers. In addition to the personal care provided through our dense network of over 100 internal and external sales people, customers also have the option to purchase printed circuit boards online through the easy to use online shop, WEdirekt.

For more information, visit www.we-online.de/pcb

Visit us also here:

www.we-online.com/youtube

www.we-online.com/twitter

www.we-online.de/facebook

<http://www.we-online.com>

Publication free of charge
Sample copy requested

Image files:
2014_WE_GCD_a

26/06/2014
Page 4 of 4

26.06.2014
Seite 4 von 4