



Success Story Touchscreens

Technology which sustains life: Reliable HMI solution for respirators based on infrared touch

Quality and safety are indispensable for the technologies involved in intensive care. Respirators with their life-maintaining functions are therefore subject to particularly high expectations. Elektrosil has developed a reliable input solution for the innovative respirator technology of an international market leader in the medical engineering field. For the last two decades, the components have been enhancing the end product, which, since then, has become successfully established in the market.

► The challenge

Maximum safety, chemical resistance, long life – these are the minimum requirements for the respirator's input components. The operating unit is also required to provide a good overview of information for monitoring and treatment functions. At the same time, incorrect or double entries when operating the system manually had to be avoided at all times.

► The solution

Elektrosil implemented an input solution for the respirator based on an infrared touch system. Due to the absence of leakage currents, this technology provides a high degree of safety and reliability while a patient is undergoing artificial respiration during a surgery. By modifying the software appropriately, the engineers eliminated potential spurious inputs due to insects or drops of water.

Double inputs were prevented by using single-touch technology. The customer's software controlled additional operating functions. Infrared technology also provides the advantages of easy cleaning and insensitivity to scratches which are important in daily hospital life. The Elektrosil team developed the input solution, including the printed circuit board design, in close collaboration with a German development partner of many years standing.

► Advantages and benefits

For the customer, the extremely reliable and smart input solution is an important part of his high-quality respiration technology, which has indisputably impressed with its tiptop quality for more than 20 years.

Project information

- Client: Internationally leading company in medical and safety technology
- Sector: Medical technology
- Several thousand items per year for almost 2 decades

Elektrosil's services

- Application advice, development supervision, design-in support
- Quality Assurance
- Engineering and production
- Completely customised applications



“Hundred percent safe and long life – this was the requirement for the input for our respirator.

That’s when I called Elektrosil.”



In addition, inputs based on infrared touch systems have proved to be superior with regard to safety and precision, even compared with newer, resistive or capacitive touch technologies. Elektrosil continues to support the customer in all matters relating to the product.

With its core expertise, Elektrosil contributes significantly to the customer, with his claim of being a premium supplier in the medical care segment, having absolutely reliable technology when it really matters. This is achieved with interdisciplinary engineering expertise and customer-specific solution orientation down to the smallest detail.

Are you looking for a suitable solution for your system and a competent partner? Then give us a call.

+ Elektrosil’s strengths

As one of the first providers of touch screen solutions in Germany, Elektrosil has demonstrated its expertise in this area in implementing the complex input unit. It has also shown itself to be an organised, interdisciplinary solution partner thanks to its profound expertise in hardware and software as well as printed circuit board design and mechanical integration. The team co-ordinated all the processes with effective project management.



HMI solution for respirators based on infrared touch screen

