ROTARY ACTUATOR ON A CLOSED DISPLAY SURFACE

Touchscreens offer a lot of flexibility due to their free programmability and a large usable surface. In some cases, however, an accurate selection of functions can require prolonged driver distraction. Because looking at the touchscreen always means looking away from the road, there are numerous critics in the automotive press that distrust operation purely via touchscreens.

The latest HMI solution from automotive supplier Preh favors a combination of haptic control elements and touchscreen, because this allows the strengths of both approaches. Here, for example, a rotary/push actuator is used—designed in such a way that it can be bonded to the surface without penetrating the screen itself. A separate evaluation electronics is not needed, because the system uses the features already existing in the touchscreen. The Ford Mustang Mach-E and Ford F-150 Lightning and Expedition models use the rotary function for volume control as an initial series solution. Other OEMs are following suit.

In addition, this Preh development also offers the potential of a genuine central control element: selecting functions such as media, climate or navigation, for example. It is also possible to place more than one rotary control on a touchscreen. A look at the latest worldwide vehicle launches would clearly indicate that the rotary dial is far from being obsolete, clearly suggesting that it will also be found in the interiors of future cars as an iconic control element in combination with touchscreens.

Preh's pre-development engineers have also been working on the next stage of evolution: a movable or even removable rotary actuator. This can slide over the entire touchscreen surface, whereby the graphic interface would change according to the position of the rotary control. In the removable version, this control element can also be used on the center armrest, in the door area or in the rear.