KeWheel

The adaptive Rotary-Push Button

KeWheel – Combine overrides and handwheels in one device. Use case improvements for „trial NC program runs" are easy and efficient to create.

Due to the magnetorheological fluid used in the KeWheel, several sensory effects and holding torques can be generated instantly.

Adaptive hand wheel
- Different haptic elements
- Force feedback function
- Blocking at critical positions
- Combinable with push functions

Dynamic override function
- Change rapid traverse / forward feed / spindle
- Set override position
- Reset of end stops
- Combinable with push function

Wide range of haptic feedback through MRFtechnology

The use of magnetorheological fluid (MRF) allows the implementation of improved use cases on the HMI. The response speed of the MRF technology makes various feedback patterns, such as ripples, blocking or torque levels possible. As a result, different mechanical properties can be combined in just one operating element.

The opportunities of this new patented technology comprise KeWheel modes such as overrides for rapid traverse, forward feed, spindle, different handwheels, user interface input options, hold to run buttons, and many more. The KeWheel and all its functions can be easily integrated via a real-time fieldbus, such as PROFINET.

Haptic feedback for intuitive control

With the fully adaptive Rotary-Push Button KeWheel as the main operating element, input devices, such as overrides, handwheels, mode-selection switches, axis travel buttons and the user interface, can be combined in a single device.

The KeWheel provides the operator with additional information about the condition of the machine through wide-ranging haptic feedback. Blind operation and staying focused on the process is therefore supported.

Anyway, to cut a long story short – you need to feel this!

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Technical Data
KeWheel

General
- Rated supply voltage: 24 V DC
- Power consumption: max. 40 W
- Protection class: IP65 front side

Electrical properties
- Push function specification:
  Durability >1.000.000 switching cycles @ 20 N force
- Sensor specification:
  Encoder resolution 4096 increments / revolution
  Durability >1.000.000 revolutions

Interface option
- Modbus RTU
- Profinet/EtherCAT with optional EP500

Mechanical properties

KeWheel dimensions above mounting plate
(without knob)
- Diameter: 43 mm
- Height: 35 mm

Dimensions under mounting plate
- Width: 85 mm
- Length: 85 mm
- Depth: 45 mm
- Weight: 440 g

Knob design
- Outer diameter: 48 mm
- Height: 39 mm

AP524 with KeWheel

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