

THE COLOUR MAKES THE DIFFERENCE

DOOR HANDLE SYSTEMS SHOULD BE SAFE AND ERGONOMIC. IF THEY ARE ALSO EASY TO INSTALL AND OFFER A HIGH LEVEL OF TRANSPARENCY AT THE HUMAN-MACHINE INTERFACE, THE USER HAS EVERYTHING IN VIEW AND UNDER CONTROL.



Whether a machine can be operated comfortably, ergonomically and safely is decided at the safety gate. Every movement and every command should 'fit' and ideally be intuitive. The operator should be informed of the current (operating) status of the machine at all times, and the safety devices should not interfere with the work processes from the operator's point of view.

The Schmersal range includes various series, systems and solutions that have been developed with this in mind and for this purpose. These include, to name just a few examples, the AZ201 safety switches and AZM201 solenoid interlocks with integrated door handle and the compatible BDF200 series control panels. Another very recent example is the new and comprehensive H range of control devices for hygiene-sensitive applications.

New: Door handles with large RGB illumination

Schmersal is now expanding its portfolio of control and operating devices with the DHS door handle system, which at first glance stands out from all other standard systems on the market for this application. The colour makes the difference: thanks to RGB technology, the robust door handle can be illuminated in seven colours, thus clearly and unmistakably signalling different machine statuses. The user can control these colours individually and assign them to the desired operating status.

The door handle is also equipped with a push button, the colour of which the user can also specify individually using the push button caps supplied. The push button can be used for a reset function, for example, or to release the safety gate's opening function. The programme also includes versions without push buttons and without lighting.

'All inclusive' brings benefits for machine builders and operators

From the manufacturer's perspective, the new DHS door handle system offers the advantage that no separate door handles, indicator lights or control devices need to be installed. This saves time during installation, especially if the enclosure or safety gate is made from standard 40 mm profile systems. The operator benefits from the fact that the machine status can be recognised at a glance and all the necessary operating functions are literally at hand. This is possible because a matching control panel labelled BDF40 has also been developed for the DHS door handle system.

From a single mould: combination of door handle and control panel

The control panel with four operating/display elements is characterised by its flat design, which allows it to be easily integrated into the surrounding structure. It is available with or without an emergency stop function and can be seamlessly combined with the DHS door handle system via a connecting element.



Fig. 1: The combination of door handle, safety switching device and operating/display elements has already proved its worth.



Fig. 2: The new DHS door handle system from Schmersal can be combined with the AZM40 guard locking device and the new BDF40 control panel.

Alternatively, the new BDF module can also be installed as a stand-alone control panel. The 12-pin M12 connection enables quick and error-free installation, and the optional MS mounting kit ensures a high level of tamper protection.

Important system component: position monitoring of the safety gate

This means that the designer can use the DHS door handle system to map all the operating and display functions of a machine that are required at the safety gate. In addition, the DHS door handle system can be combined with safety switching devices – so that in this combination the system can also take over the position monitoring of the safety gate and even its interlocking.

Option 1: Combination with a safety sensor

There are two options for position monitoring. The first is a safety sensor from the RSS260 series. The variable mounting position of the actuator allows the safety sensor to be mounted to the left, right or above the door handle. In the F0 and F1 versions, the RSS260 performs the tasks of a safety relay module. This means that monitoring of the movable guard and the contactors controlled directly by the sensor outputs is carried out by the logic integrated in the sensor.

The advantage: There is no need to use a separate evaluation unit. In the F0 version, the machine is restarted automatically as soon as all the guard doors are closed. However, an additional 'enable' button – without edge monitoring – can be connected in the feedback circuit (EDM – External Device Monitoring).

Option 2: Integration of a compact solenoid interlock

If dangerous overtravel movements are to be expected, or if the guard door should not be opened for process protection reasons, the DHS system also offers a solution: the combination with the world's smallest electronic solenoid interlock, the AZM40. The bistable guard locking principle ensures that the last locking state of the guard locking is maintained in the event of a power failure and the guard remains locked. Options include emergency unlocking (from the outside) and escape release (from the danger zone). The AZM40 can be easily mounted directly onto 40mm profile systems.

Universal mounting plates are available for other profile system widths. This ensures quick and cost-effective installation of the AZM40 for a wide range of profile system widths.

Conclusion: A universal system for the safety gate

With the DHS door handle system and the position monitoring and guard locking options that can be combined with it, the mechanical engineering industry has a new and practical system at its disposal that covers all the functions of the man-machine interface on the safety gate. Accessories such as locking pliers, mounting plate, escape release and emergency unlocking round off the programme, which will be included in the Schmersal Group's production range immediately after the Hanover Fair. The DHS system is expected to be available from summer 2024.



Fig. 3: The door handle is equipped with a pushbutton, the colour of which can be individually defined using pushbutton caps.

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