



Completely protected –  
the Kombitast emergency-stop  
with IP69K is made for mobile  
machines and special vehicles

MACHINE AND SYSTEM SAFETY

# Simple and Safe

Flexible, Safe and Quick to Mount Thanks to M12 Connection



Thanks to the M12 connection technology pushbuttons and switches can be integrated into existing systems without complications. Even in the area of emergency-stops, the demand for M12 solutions continues to rise as here, too, the benefits of M12 are convincing: flexible, safe, and fast to mount. Georg Schlegel, a specialist for emergency-stops, has already developed a broad range of emergency-stop types for M12. The latest among them: an emergency-stop with M12 connection and illuminated protective shroud.

**T**he M12 connection technology enables pushbuttons and switches to be easily connected without great cabling efforts. This does not only save money, but also is much safer: Due to the standardised coding mismatching is no longer an issue. Furthermore, M12 plug connections have established themselves as an international standard. The ready to plug concepts ensure a fast installation, true to the principle of “Plug&Work”: Plug it in, and done.

Schlegel early aligned its development to this trend and established pushbuttons and switches with this connection technology. “Customers do no longer want a complicated wiring that is prone to mistakes. The connection technology needs to be as simple, safe and fast as possible. This is what M12 connections offer,” the product manager of Georg Schlegel, Torsten Singer, says.

In the case of emergency-stops safety is a topic of especially great importance.

From malfunction to faulty operation of a machine – when a dangerous situation appears, pushing an emergency-stop prevents damage to human and machine.

Georg Schlegel is offering a comprehensive range of emergency-stop devices allowing to fulfil the requirements of typical applications of different branches – ranging from the machine building industry, plant engineering up to the lift, vehicle, shipbuilding and crane building industry. Suitable M12 variants are available for the common 22.3 mm and 30.5 mm installation openings. The “connect” series with directly integrated M12 connection are suitable for space-saving installation. If cables are required on the customer side, the “M12” series are suitable.

#### For More Safety

The latest development regarding emergency-stops of the company from Duermentingen is called QRBLUVOOI\_C1190. The illuminated protective shroud is a plus

for safety: In a normal condition the emergency-stop is not illuminated, if the button is activated, the LEDs that are integrated into the shroud light up. This immediately indicates where the emergency occurred. In addition, the illumination function is quite flexible and can be set according to customer’s wishes or used in reverse function.

The emergency-stop of the Quartex connect series can be used for a panel cut-out of 22.3 mm and convinces with its low mounting depth of 27.5 mm which is possible thanks to the integration of the M12 connection in the housing neck of the emergency-stop. The M12 connection has 5 poles and is A coded. The QRBLUVOOI includes 2 NC and 1 NO contacts and has a long life with 50,000 switching cycles being guaranteed. Its degree of protection is IP65 in the front and IP54 on the rear.

Further Quartex connect emergency-stops are already planned: A variation of the QRBLUVOOI\_C1190 with key release and an emergency-stop without illumination.

### IP69K Emergency-Stop

The new Kombitast emergency-stop with M12 or Deutsch plug is made for mobile machines and special vehicles that have to withstand difficult environmental conditions. The emergency-stop has the highest degree of protection of IP69K on the front and is therefore protected against dust as well as water and can also be exposed to high-pressure cleaning. Thanks to the encapsulated design on the rear we guarantee a degree of protection of IP65 if the cable is connected. On its inside a Gore sealing prevents the penetration of moisture, but at the same time allows for air to exit – this is important to ensure the reliable function of the emergency-stop.

Furthermore, the plastic material being used is suitable for outdoor conditions: The emergency-stop is resistant to UV light so it will not pale out in the long term but will keep its bright yellow colour – which can be decisive in the case of an emergency.

The Kombitast M12, a joint development of Georg Schlegel and Data Panel, has 2 NC contacts and can be used for a panel cut-out of 30.5 mm. The M12 connectors with stainless steel screw are 4-pole and

A-coded and have a vibration protection. The emergency-stop has an anti-lock collar, a status indication and is available with a 25 cm or 150 cm cable.

### Small and Compact

The emergency-stops of the Shortron connect and Shortron M12 series are designed for a panel cut-out of 22.3 mm. Shortron connect is characterised by a particularly small and compact design.

Schlegel has also expanded the portfolio for the Shortron series significantly. The latest developments are our FRVKOO\_C111 and FRVKOO\_C1112. The M12 connections of these emergency-stop variants have 5 poles and are A coded, the pin assignment is based on Aida. As usual for this series, the degree of protection in the front is IP65/IP67 and – with connected cable – IP65 on the rear. The FRVKOO\_C111 has 2 NC contacts, the FRVKOO\_C112 has 2 NC and 1 NO contacts.

### 5-Pole Connector

This year Schlegel also developed new emergency-stops with M12 solution for a panel cut-out of 30.5 mm. The two

variants of the Kombitast series have a 5-pole M12 connector. Schlegel offers the KRVKOO\_C111 with 2 NC contacts and the KRVKOO\_C112 with 2 NC and 1 NO contacts. The M12 connections are A coded and the pin assignment is based on Aida.

Both emergency stops have a degree of protection of IP65 in the front and on the rear and a lifetime of 50,000 switching cycles. The voltage and current values of the M12 variants are 35V and 2A AC/DC.

All emergency-stops of the “connect” and “M12” series are in accordance with the standard EN ISO 13850 and have positive opening contacts according to the standard EN 60947-5-1.

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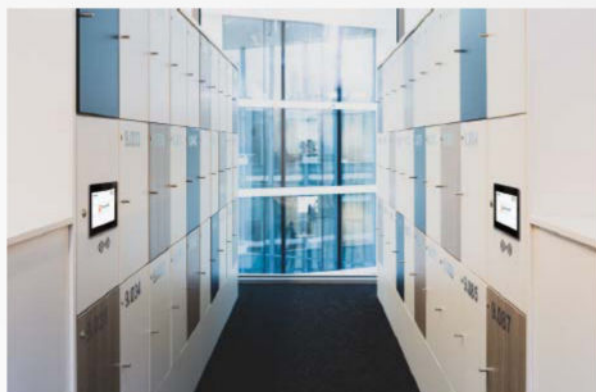
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### LiDAR Sensors

The Qb2 smart LiDAR from Blickfeld makes perimeter protection even easier and more efficient. The Munich-based manufacturer of break-through LiDAR sensor solutions has started delivery of its Qb2 device to customers and partners. This enables the capture and processing of data on a single device, removing the need for additional computers and bringing faster insights, improved response times and better bandwidth availability via edge computing. In perimeter protection, companies benefit from high efficiency gains through enriched, actionable real-time 3D data automatically fed into their IT systems or the cloud. Furthermore, installation and maintenance costs and effort are kept low due to the on-device WiFi connectivity. Qb2 offers an enhanced adaptable field of view (FoV), detection range and scan pattern, plus higher resolution, accuracy and an IP67 rating.

[www.blickfeld.com](http://www.blickfeld.com)