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 - The herein specified product properties and technical data do not represent any warranty.
 as of 09 February 2012, V3.3



1 About Safety

- 1.1 Safety Regulations:** These operating & mounting instructions must be provided to the person who installs the emergency stop/switch-off device. Please read them carefully and keep them for future reference
- 1.2 Application:** Schlegel E-stops /emergency switch-off devices are electromechanical switch components serving to protect persons working with machinery or close to it. They are used to stop or switch off machinery and equipments in order to avert impending or minimise existing dangers to persons or damages on machines / material.

The following (inter)national statutory provisions apply to installation, commissioning and regular technical inspections:

- Directive 2006/42/EG
- Low-Voltage Directive 2006/95/EG
- Safety Regulations as well as
- Regulations of the Accident Prevention / Safety Rules.

Manufacturers and operators of machines using E-stops or emergency switch-off devices should retain the responsibility for the adherence of these instructions as well as for compliance with the relevant Safety Regulations and Rules.

For the application of E-stops /emergency switch-off devices as directed the respective requirements for installation and operation must be observed:

- EN60204-1
- EN13849-1
- EN ISO 13850

- (!)** Disconnect equipment and device from the mains before installation!
- (!)** E-stops /emergency switch-off devices fulfil the function of personal protection. Improper installation or unauthorised modifications may lead to severe personal injuries!
- (!)** E-stops /emergency switch-off devices should not be bypassed, removed or otherwise disabled!
- (!)** The switching operation should only be triggered by means of appropriate actuators which are securely connected to the contact block!
- (!)** Improper installation or tampering may result in machine and material damages!
- (!)** The E-stop / emergency switch-off function should not replace the applicable safety precautions or other safety functions but should rather be used as a back-up safeguarding measure.
- (!)** The E-stop /emergency switch-off function should not impair the effectiveness of other safety devices or equipment with other safety functions.
- (!)** Based on his hazard analysis the design engineer must ensure that in combination with the control system the E-stop / emergency switch-off device meets the required safety category.

- 1.3 Approvals and Technical Data:** Refer to the catalogue information of the respective actuators and contact blocks or to the product configurator under www.schlegel.biz.

2 Product Description

2.1 Construction: E-stops /emergency switch-off devices consist of variants of actuators and one or several contact elements. They are available for front panel mounting or base-plate mounting in an enclosure. They are operated by pressing the button.

Features: The actuators differ in

- their mode of release: rotation in both directions or to the right; key release by rotation to the right; pull release, twist/pull release.
- the shape of the protective shroud/antilock collar (some can be illuminated)
- illumination: illuminated / non-illuminated
- the protection system: Actuators for standard applications and for hygienic areas according to DIN EN 1672-2 and GS-FW

The contact blocks are of the modular or monoblock design and can be supplied with different connection types (screw type, spring cage, push-in connection, Faston and PCB-mounted terminals).

2.1 Actuators and Contact Blocks

| Actuators | Ø | Contact Blocks |
|-----------------------------------|-------------|--|
| OKJ(B)UV | 23,1 x 23,1 | AZOSOI(_AU), AZ2N(_AU) |
| RKUJ(28)(GB) | 16 | AZSOSO(_AU) |
| OKUVGB | | BZ(L)O(5)(K)(_AU) |
| RKUJ(32)(40) [496] | | BZ(L)OO(5)(K)(_AU) |
| RKVGB | | BZ(L)OI(5)(K)(_AU) |
| XFV32 | | BZ(L)OS(5)(K)(_AU) |
| RRJUV | 22 | PTPOO(_AU) |
| RXB(L)UV(SE) | 16 | PTPOI(_AU) |
| RXUV(P) | | PTFOO(_AU) |
| XFV32 | | PTFOI(_AU) |
| QXJ(B)UV | 24x24 | PTFPOO(_AU) |
| RXJ(B)UV | 22 | PTFPOI(_AU) |
| DXRV(G)(S)40(S) (SS)(S3) *1)*2) | 22 | AT(_AU) |
| DXRV39(MRT) (GRT)(SRT)(PF) *1)*2) | | AZ011(_AU) |
| DXRV52(M)(G)(S) RT *1)*2) | | AZ00(_AU) |
| QRUV(P) | | AZ(L)2(_AU), AZ2N(_AU) |
| QR(B)(SK)(L)UV(SE) | | AZOSOI(_AU) |
| QRV *2) | | AZSOSO(_AU) |
| RV *2) | | ETR; |
| RUV | | MTO, MTI, MTO_545, MTI_545, MTOSE, MTOSFE; |
| QRJUV | | DTO* ¹⁾ , DTI* ¹⁾ , DSTO* ¹⁾ , DSTI* ¹⁾ , DMTOSF* ¹⁾ , DMSTOSF* ¹⁾ |
| KRV *2) | | - MT... DT...and DS... modules can be combined within their own type series, see 3.7 |
| FRUV(L) FRVK(L) | 22 | Accessories: MAL, MHR_3, MHR_5, DMR* ¹⁾ |
| | | PTOO(_AU) |

| | | |
|--|----|---|
| FRVK(L)(O)(OO) ^{*3)} (OI)(OO)(P)(L_AU) | 22 | Actuators with integrated contact unit (monobloc) |
|--|----|---|

*1) DUX components

*2) ensure to have a yellow background, e.g. by using a yellow nameplate NAS... (see accessories)

*3) Versions with Faston terminals: use partially or all-insulated Faston clamps; illuminated versions (24 V-LED) or versions with three contacts: overvoltage category II (2.5kV), pollution degree 2

| Actuators | Ø | ASI-Safety at Work |
|--|-------------|---------------------------------------|
| OKJ(B)UV | 23,1 x 23,1 | |
| QXJ(B)UV | 24x24 | |
| RKUV(28)(GB) RXB(L)UV(SE) RKUV(32)(40) (L496) RXUV(P) XFV32 RKVGB | 16 | ASI_SAW16A ASI_SAW16E ASI_SAW16 |
| RXJ(B)UV RRJUV | 22 | |
| DXRV(G)(S)40(S) (SS)(S3) ^{*1)*2)} | 22 | ASI_SAW22A ASI_SAW22E ASI_SAW22 |
| DXRV39(MRT) (GRT)(SRT)(PF) ^{*1)*2)} | | |
| DXRV52(M)(G)(S) RT ^{*1)*2)} | | |
| QR(B)(SK)(L)UV(SE) QRUV(P) | | |
| QRV ^{*2)} | | |
| RV ^{*2)} | | |
| RUV ^{*2)} | | |
| QRJUV | | |
| KRV ^{*2)} | | |
| ASI_SAW16A, ASI_SAW22A, with failure switch-off and digital output for actuator lighting | | |

3 Assembly and Commissioning

3.1 Assembly Instructions Front-panel mounted

- 1) Provide the required mounting hole in an appropriate mounting plate (refer to the relative catalogue drawings). In order to ensure full tightness of the unit, make sure to have a smooth surface, particularly in case of hygienic areas and actuators with protective shroud.
- 2) For actuators with illuminated protective shroud provide a second hole following the relative assembly drawings in the catalogue (Fig.2).
- 3) Insert actuator in the cutout.
- 4) Fasten actuator with plastic nut. (Observe the max. tightening torque: actuators with 16mm thread = 1.5Nm, actuators with 22mm thread = 2.5Nm)
- 5) Snap-fit contact block to actuator neck by rotary motion (MT..., DT..., DST..., DMS..., DMT..., ET...) or by pressing (AT..., BT..., PTF...).

Exception: The contact blocks of the type series PTP... are set onto the actuator and fixed by a small locking bolt through a hole in the PCB. The contact unit PT(L)OO is plugged into the neck of the actuator type FRUV(L); spacer sleeves ensure correct distance between PCB and mounting plate (Fig. 4).

- 6) (!) Check whether contact block and actuator are snap-fitted correctly.
- 7) Modular contact blocks (MT... DT..., DST...) must first be correctly aligned and snapped into a module holder before snap-fitting them to the actuator. (Fig.1)).

In order to ensure the foolproof and safe function of the switch, do not insert more than 3 contact modules into the holder MHR_5. (Note: The type MTOSF counts as one single module)

Exception 1:

using the types MT...545, 4 contact modules can be combined with one actuator (does not apply to DXRV...)

Exception 2:

| | | |
|-------------------|-------------------|-------------------|
| DXRV(G)(S)40... | DXRV39... | DXRV52... |
| max.3x DT., DST.. | max.2x DT., DST.. | max.2x DT., DST.. |
| max.2x MT... | max.2x MT... | max.2x MT... |

- 8) Connect contact block.
- 9) For actuators with illuminated collar put the plug for lighting through the relative hole in the mounting plate and connect it to the actuator. (Fig. 2 and 3a)

Base-plate mounted in an enclosure

- 1) Mount lower enclosure section on the appropriate surface.
- 2) Compare 3.1, steps 2 to 9.
- 3) Insert wiring cable in the enclosure or rather connect it to the enclosure.
(!) Make sure that the contact blocks used in the enclosure are connected correctly in order to comply with the clearance and creepage distance requirements for insulated enclosures on proper use.
- 4) Close the enclosure.
(!) Make sure to have the enclosure closed tightly (tighten all screws...)

(!) Make sure that the E-stop /emergency switch-off unit is always easily accessible. This particularly applies to such units with high protective shroud!

4 Testing Before First Operation:

Mechanical Test: E-stop/switch-off device latches when operated
Electrical Test: Machine stops / switches off

5 Regular Technical Inspection

- Based on his risk assessment, the machine designer has to determine the inspection interval. It is, however, recommended that the competent safety officer activates and tests the E-stop or switch-off device at least once a year to ensure its proper functioning.
- mechanical and electrical functional testing acc. to paragraph 4
- secure mounting
- no visible unauthorised modifications or damages
- no loose connections

6 Dismounting of E-stop / Switch-off Device:

(!) Before dismounting disconnect equipment and device from the mains!

7 Incident Management:

(!) Mechanical overload or external impact damage may impair the function of the E-stop /switch-off device. Make functional tests as mentioned under paragraph 5.

8 Further Operating Instructions:

For cleaning E-stops /switch-off devices in hygienic areas (QRUVP, RXUVP) only use the suitable cleaning agents.

Note:

- good resistance to acids, alkalis and alcohols
- no/limited resistance to hydrocarbon (petrol, oil, etc.!)
- high ozone and ultraviolet resistance

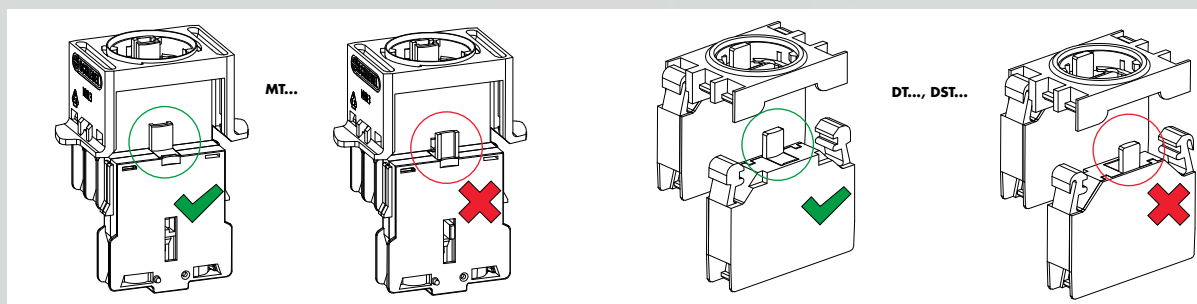


Fig. 1: Correct assembly of the modular contact blocks MT..., DT..., DST...

optional for illumination

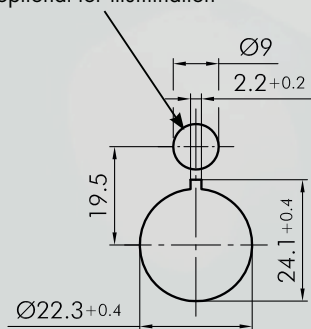


Fig. 2: mounting hole for emergency stop (22mm)

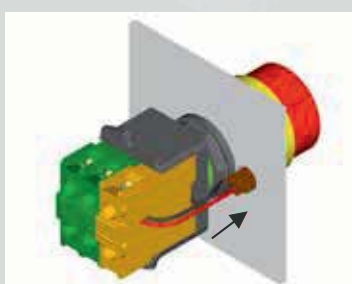
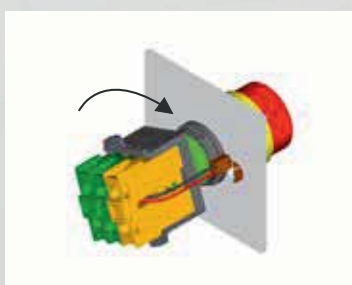
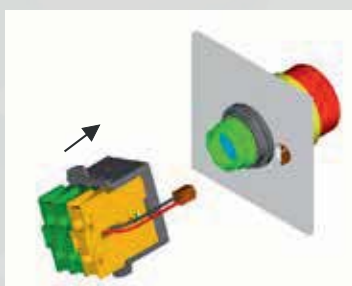


Fig. 3a: assembly drawing MT...

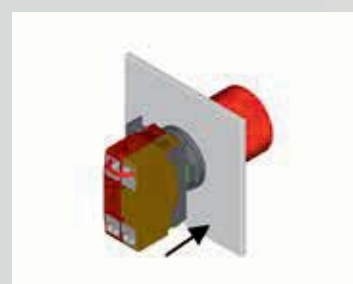
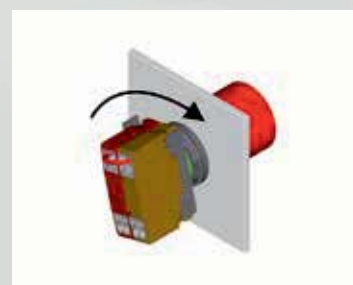
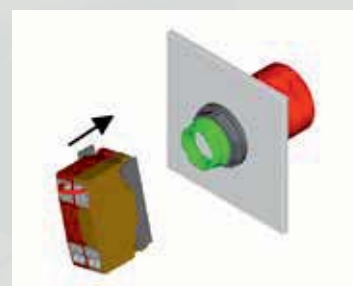


Fig. 3b: assembly drawing DT..., DST..., DM...

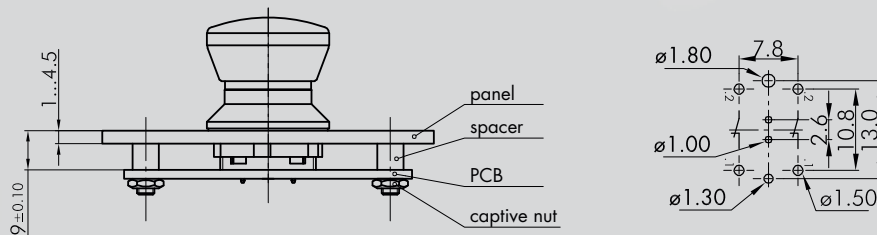


Fig. 4: assembly drawing and hole pattern FRUV(L) with PT(L)OO

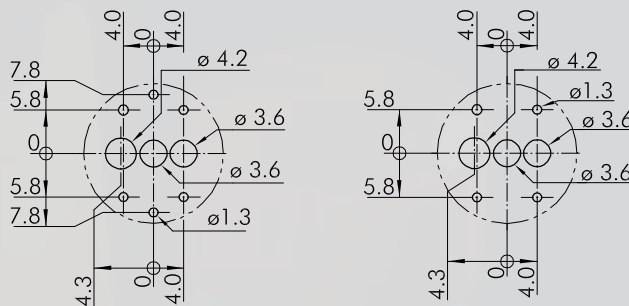


Fig. 5: hole pattern FRVK...

9 Instructions for use as „emergency braking switch“

The following emergency-stop /switch-off buttons can be used as emergency braking switches according to EN 81-2:

- DXRVG40S, DXRVS40S
- DXRVG40SS, DXRVS40SS
- DXRVG40S3, DXRVS40S3
- DXRV39PF

(!) In order that the ON/OFF position can always be clearly recognised from different viewing angles, pay attention to an

adequate lighting at the place of installation.

In case of doubt, the user must assure himself of the switching position!

(!) The following types require the additional marking „STOP“ to be placed next to the emergency braking switch: DXRV39PF, DXRVS40S, DXRVG40S,

Example: DXRV39PF



10 EC Declaration of Conformity:

| | | | |
|--|--|--|---|
| Name/address of issuer: | Georg Schlegel GmbH & Co. KG, Kapellenweg 4, 88525 Dürmentingen | | |
| Responsible for documentation: | T.Gairing, Georg Schlegel GmbH & Co. KG, Kapellenweg 4, 88525 Dürmentingen | | |
| Product description | Emergency Stop / Switch-off Devices | | |
| Type references: | refer to above table 2.1 | | |
| The specified products comply with the provisions of the following directives: | | | |
| Directives: | of: | applied norms: | for: |
| 2006/42/EG | 17.05.2006 | EN 60947-5-5:1997+A1:2005, EN ISO 13850:2008 EN 81-2:2010 Abschnitt 15 | contact blocks, actuators, ASI-Safety Notbremsschalter |
| 2004/108/EG | 12.12.2006 | EN 50295:1998 | ASI-Safety |