

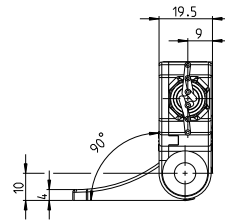
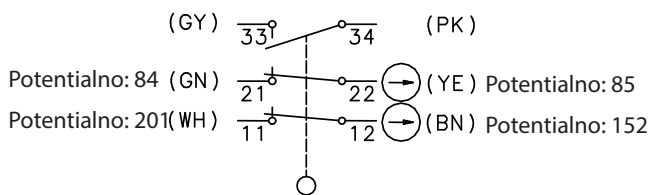
# Safety switch

## Series Safety Hinge Switch SHS3

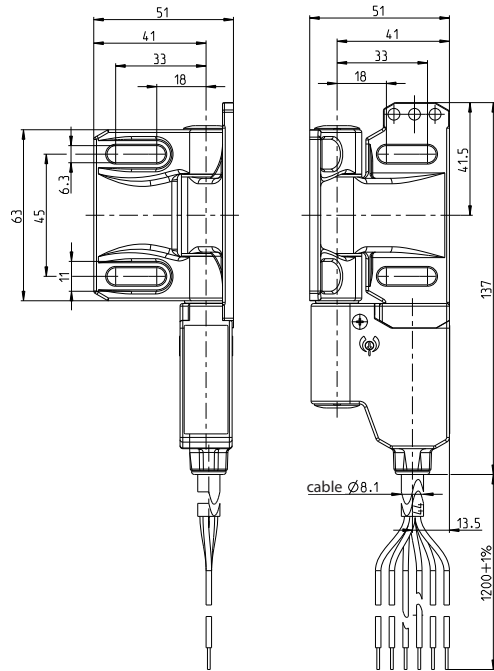
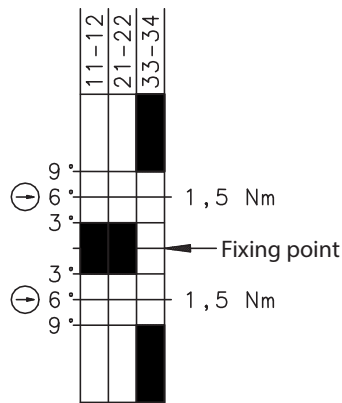
Description **SHS3-U15Z-KA 1.2 R 90**

Article number **6119390028**

### Operating symbol



### Operating diagram

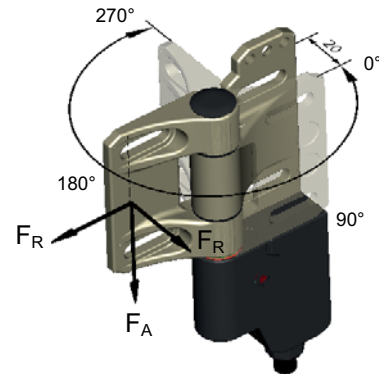


Fixing point preset at  $90^\circ \pm 2^\circ$



Tolerances:  
 switching angle (opening)  $\pm 1,5^\circ$ ,  
 direct opening torque 10%,  
 direct opening angle  $+ 2^\circ$

Swivel angle  $0^\circ$  to  $270^\circ$



| Electrical Data                 |           |  |
|---------------------------------|-----------|--|
| Rated insulation voltage        | $U_i$     | 250 V  |
| Conv. thermal current           | $I_{the}$ | 5 A  |
| Rated operational voltage       | $U_e$     | 230 V AC; 24 V DC  |
| Utilization category            |           | AC-15, $U_e / I_e$ 230 V / 3 A;<br>DC-13, $U_e / I_e$ 24 V / 1 A |
| Direct opening action           | ⊖         | acc. to IEC/EN 60947-5-1, annex K                                |
| Short-circuit protective device |           | Fuse 4 A gG  |
| Protection class                |           | II (totally insulated)   |

| Mechanical data   |   |
|---|---|
| Enclosure   | PBT   |
| Hinge   | Cast stainless steel  |
| Ambient air temperature   | -25 °C to +70 °C<br>(connecting cable permanently mounted; no freezing over / no condensation)                            |
| Contact type  | Slow make and break contacts 2 N.C., 1 N.O.   |
| Mechanical life   | 1 x 10 <sup>6</sup> operating cycles  |
| Switching frequency   | max. 300 switching operations / hour  |
| Attachment  | 4 x M6 screws DIN EN ISO 7984 (on flat and stiff ground)  |
| Wiring  | Fixed connecting cable 6 x 0,75 mm <sup>2</sup> x 1,2 m<br>Bending radius = 60 mm min.                                    |
| Weight  | ≈ 0,43 kg   |
| Installation position   | operator definable  |
| Protection type   | IP 67 in acc. with IEC/EN 60529   |
| Switching angle   | +/- 3 ° from fixing point for the N.C. contacts and 9° for the N.O. contact   |
| Forced disconnect angle   | 6°+2° from fixation point in both directions<br>(for 0°-3° only in Plus-direction, for 267°-270° only in Minus-direction) |
| Forced disconnect torque  | 1,5 Nm  |
| Mechanical load<br>(see dimensioned drawing for the introduction direction of the forces) | $F_{R1}$ = max. 1800 N<br>$F_{R2}$ = max. 750 N<br>$F_A$ = max. 1800 N  |

| ID for safety engineering |                            |
|---------------------------|----------------------------|
| B10d                      | 2 x 10 <sup>6</sup> cycles |

| Standards |  |
|-----------|--|
|           | VDE 0660 T100, DIN EN 60947-1, IEC 60947-1     |
|           | VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1 |
|           | DIN EN ISO 13849-1                             |

| EU Conformity |                              |
|---------------|------------------------------|
|               | acc. to directive 2006/42/EC |

| Approvals |                         |
|-----------|-------------------------|
|           | DGUV                    |
|           | CCC                     |
|           | cCSA <sub>US</sub> B300 |

**Notes**

The safety guard shall always be mounted using two SHS3 at least! See max. load. If the risk assessment of the machine permits a single-channel monitoring a blank hinge can be used as bearing element.

High forces, unfavourable force application as well as dynamic loads can shorten the service life.

In case that the SHS3 is used at an ambient temperature of 70° an accelerated ageing of the connecting cable can occur.

The connecting cable shall be protected against mechanical damages.

The installation of the connecting cable can be done via pipes or cable ducts.

The manufacturer / supplier of the machine / equipment is obliged to take the applicable standards for the calculation of the safety distances of separating safety guards to hazardous areas into account.

Especially these standards apply: DIN EN 349, DIN EN 953, DIN EN ISO 14119, DIN EN ISO 13857, ... .

The switch shall not be used as a mechanical stop.

**EG-Konformitätserklärung / EC-Declaration of Conformity / Déclaration de conformité - CE**

Diese Konformitätserklärung entspricht der europäischen Norm DIN EN ISO/IEC 17050-1: Konformitätsbewertung – Konformitätserklärung von Anbietern – Teil 1: Allgemeine Anforderungen. Die Grundlage der Kriterien sind internationale Dokumente, insbesondere ISO/IEC-Leitfaden 22, 1982, Informations on manufacturer's declaration of conformity with standards or other technical specifications. Die deutsche Sprachfassung ist die Originalkonformitätserklärung. Bei anderen Sprachen handelt es sich um die Übersetzung der Originalkonformitätserklärung.

This Declaration of Conformity is suitable to the European Standard EN ISO/IEC 17050-1: Conformity assessment – Supplier's declaration of conformity – Part 1: General requirements. The basis for the criteria has been found in international documentation, particularly in: ISO/IEC Guide 22, 1982, Informations on manufacturer's declaration of conformity with standards or other technical specifications. The original Declaration of Conformity is the German language version. Other languages are a translation of the original Declaration of Conformity.

Cette déclaration de conformité correspond au Norme Européenne EN ISO/IEC 17050-1: Évaluation de la conformité – Déclaration de conformité du fournisseur – Partie 1: Exigences générales. La base des directives sont des documents internationaux répondant à ISO/IEC-Guide 22, 1982, Informations on manufacturer's declaration of conformity with standards or other technical specifications. La version allemande est la langue d'origine de la déclaration de conformité. Les autres langues ne sont qu'une traduction de la déclaration de conformité en langue allemande.

Wir / We / Nous

**BERNSTEIN AG**

(Name des Anbieters) / (Supplier's name) / (Nom du fournisseur)

**Hans-Bernstein-Straße 1  
D-32457 Porta Westfalica**

(Anschrift) / (Address) / (Adresse)

**erklären in alleiniger Verantwortung, dass das (die) Produkt(e):**  
declare under our sole responsibility that the product(s):  
déclarons sous notre seule responsabilité que le(s) produit(s):

**SHS3-U15Z-KA1.2 R90 Artikelnummer 611.9390.028**

(Bezeichnung, Typ oder Modell, Los-, Chargen- oder Serien-Nr., möglichst Herkunft und Stückzahl)  
(Name, type or model, batch or serial number, possibly sources and number of items)  
(Nom, type ou modèle, n° de lot, d'échantillon ou de série, éventuellement les sources et le nombre d'exemplaires)

**mit folgenden Europäischen Richtlinien übereinstimmt (übereinstimmen):**  
is (are) in conformity with the following directives:  
est (sont) conforme(s) aux directives européennes:

**Maschinenrichtlinie-Nr.: 2006/42/EG**

**Dies wird nachgewiesen durch die Einhaltung folgender Norm(en):**  
This is documented by the accordance with the following standard(s):  
Notre justification est l'observation de la (des) norme(s) suivante(s):

**DIN EN 60947-5-1 : 2010-04  
DIN EN 60947-1 : 2011-10  
DIN EN ISO 13849-1 : 2008-12**

**Name und Anschrift Bevollmächtigter Dokumentation:**  
Name and address of authorized agent documentation:  
Nom et adresse de la documentation autorisée:  
Herr Roland Mönnings  
D-32457 Porta Westfalica, Hans-Bernstein-Straße 1

  
Gisela Bernstein

Vorstandsvorsitzende

Porta Westfalica, 16.09.2015

(Ort und Datum der Ausstellung)  
(Place and date of issue)  
(Date et lieu)(Name, Unterschrift, Position)  
(Name, signature, position)  
(Nom, fonction, signature)