

GSS Series (Global Safety Switch)

FEATURES

- EN 50041 and EN 50047 mounting and characteristics
- Designed to IEC electrical standard for world-wide use in guarding applications
- Positive opening operation of Normally Closed contacts conforming to IEC /EN 60947-5-1-3
- Available with a wide range of positive opening contacts
- Rugged housing (Zinc Die-cast)
- Full range of actuator heads and levers suitable for safety applications
- Sealing up to IP 67 (NEMA 1, 4, 12 & 13)
- Snap action and slow action basic switches
- International conduit sizes
- Galvanically isolated contacts
- UL listed; CSA and CE certified, BG approved (unless indicated)
- Red body colour for easy safety recognition

BENEFITS

- Immediately recognisable in the application as a safety component
- Standard mounting and characteristics
- Globally available and accepted
- Welded NC contacts will separate – vital security in safety applications
- Range of actuation methods for detecting safety conditions in guarding and machine status applications
- Wiring and body flexibility
- Suitable for inductive switching and safety relay interfaces
- Signalling and power/safety circuits may be different polarities or voltages



(Pending)



GSS Series products may be used alone as Category 1 safety components. In conjunction with other safety switches and our complete range of safety relays, it is possible to construct comprehensive protection schemes with Category 2, 3 or 4 compliance.

Honeywell's design experience has resulted in a brand new patented concept in safety switching techniques. The sequential safety switch incorporates positive opening on the downward stroke of each NC sequence point. This allows the user to have both a warning signal and a stop signal. With this information a door can be closed before it stops a machine or settings adjusted to stop excessive movement thus avoiding down time.

LOW ENERGY SWITCHING

In today's demanding age of low energy controls, electromechanical switches are frequently used to interface directly with safety relays, PLCs and other low energy devices. To accommodate this requirement GSS offers a new gold plated contact version of the standard basic switch. This improves reliability of switching at low currents and voltages, by protecting the contact surfaces from contamination during operation or storage prior to use.

Standard silver contacts have a disadvantage in that the contact surface may tarnish under certain environmental conditions e.g. in the presence of moisture.

Low energy basic switches are rated as follows:

Operating Voltage U_e	1 to 50Vac or Vdc
Operating Current I_e	1 microamp to 100mA

Example of catalog listing using a low energy basic switch - GSAB07A1B

▲ WARNING

MISUSE OF DOCUMENTATION

- The information presented in this product sheet (or catalogue) is for reference only. DO NOT USE this document as system installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

GSA EN 50041 Safety Metal Standard

Technical Data

Mechanical life up to 15 million operations

Degree of protection IP 67
NEMA/UL type 1, 4, 12, 13

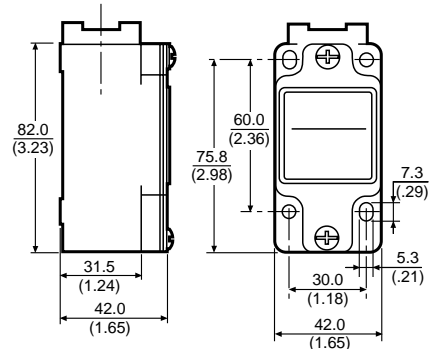
Temperature range Operating:
-25 to +85°C
-13 to +185°F
Storage:
-40 to +85°C
-40 to +185°F

Approvals* IEC 60947-5-1
EN 60947-5-1
AC15 A300/A600
DC13 Q300
UL & CSA

Vibration 10 g conforming to IEC 68-2-6

Shock 50 g conforming to IEC 68-2-27
Terminal marking to EN 50013

*See Standards (page 161)



Conduit Thread

- A** = 1/2" NPT
- B** = PG 13.5
- C** = 20 mm
- D** = PF 1/2"

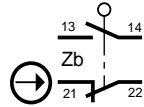
Ordering:

GSA

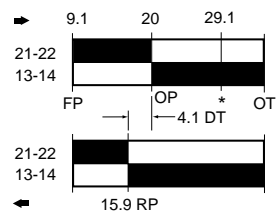
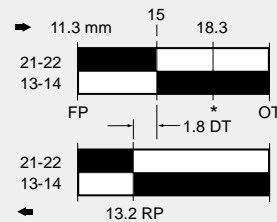
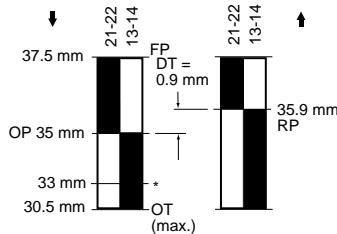
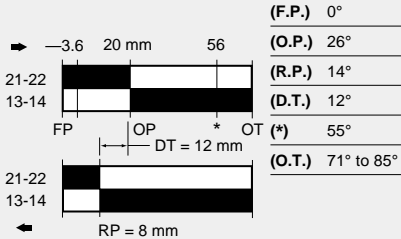
X

Example: GSA B 01 B

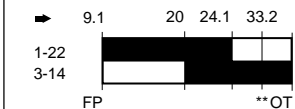
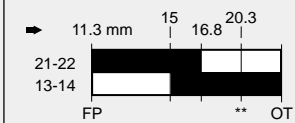
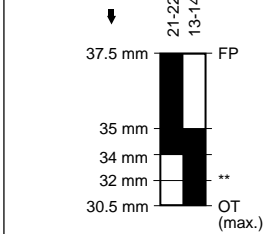
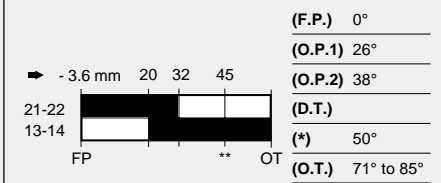
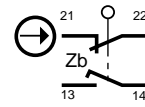
Snap-Action Contacts 1 NORMALLY CLOSED/ 1 NORMALLY OPEN



■ Circuit closed
*Positive opening to IEC/EN 60947-5-1-3



Slow-Action Contacts MAKE BEFORE BREAK 1 NORMALLY CLOSED/ 1 NORMALLY OPEN



* Point from which the positive opening is assured

** Positive opening occurs at operating position. But to meet IEC/EN 60947-5-3 which requires a dielectric gap of 2.5 kV, positive opening is assured at*.

▲ Low Energy Contacts

Note: See page 179

01

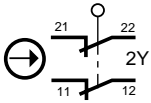
07[▲]

04

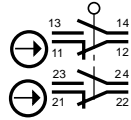
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XX

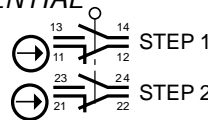
Slow-Action Contacts 2 NORMALLY CLOSED



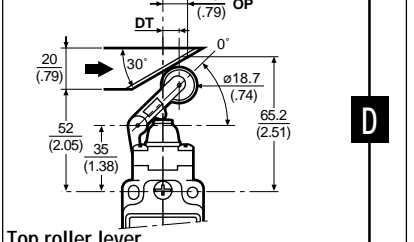
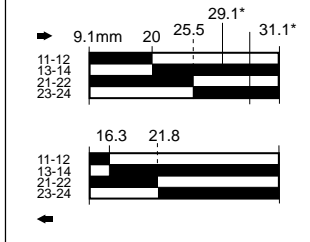
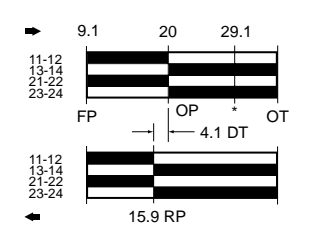
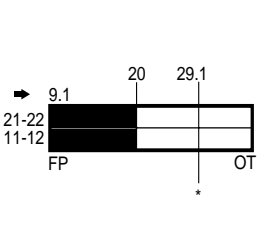
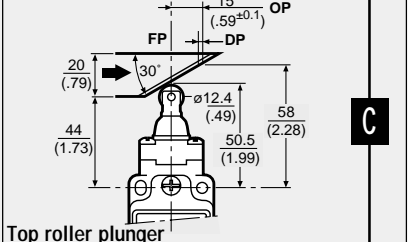
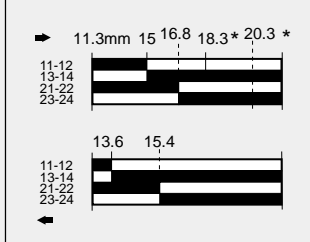
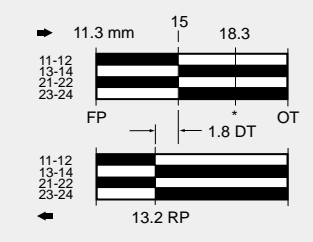
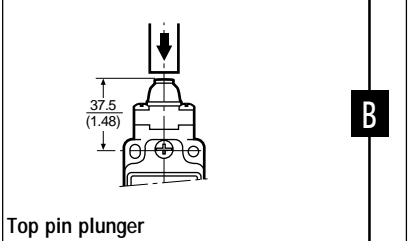
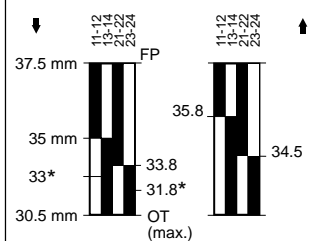
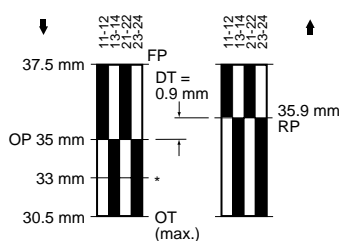
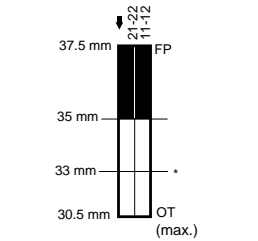
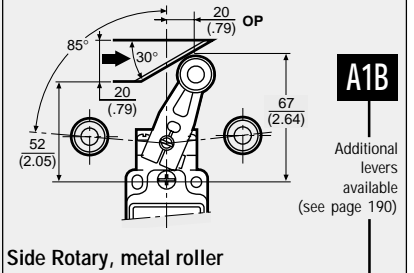
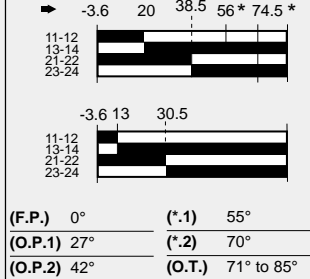
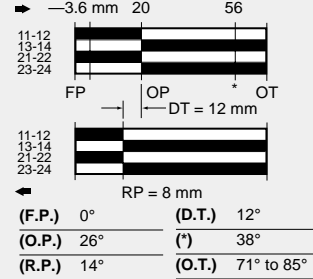
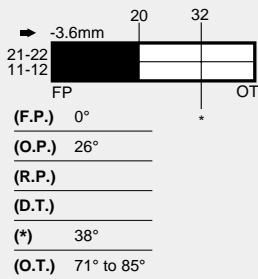
Snap-Action Contacts DOUBLE POLE 2 NORMALLY CLOSED/ 2 NORMALLY OPEN



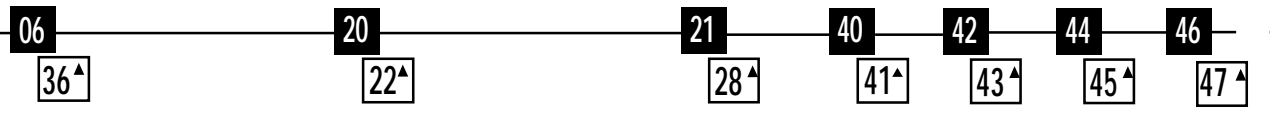
Snap-Action Contacts DOUBLE POLE 2 NORMALLY CLOSED/ 2 NORMALLY OPEN SEQUENTIAL



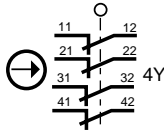
Actuator Types



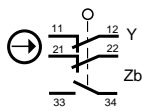
See next page for additional switch types



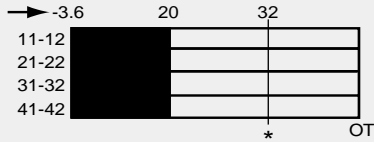
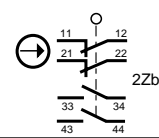
Slow-Action Contacts 4 NORMALLY CLOSED



Slow-Action Contacts 2 NORMALLY CLOSED/ 1 NORMALLY OPEN BREAK BEFORE MAKE



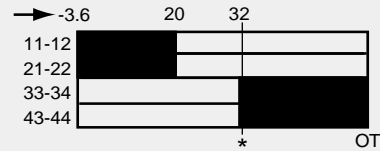
Slow-Action Contacts 2 NORMALLY CLOSED/ 2 NORMALLY OPEN BREAK BEFORE MAKE



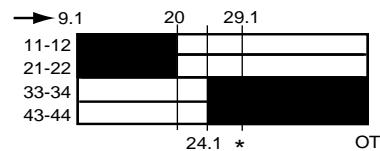
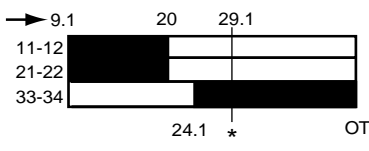
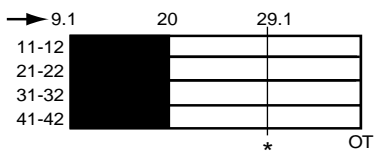
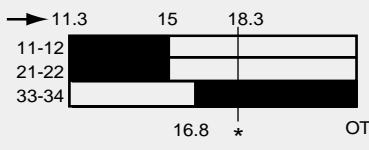
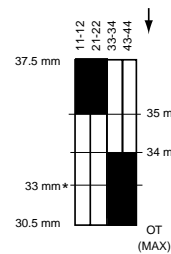
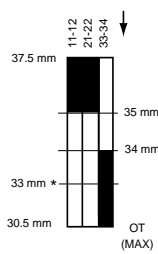
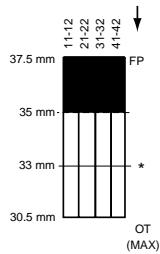
(F.P.) 0°	(D.T.)
(O.P.) 26°	(*) 38°
(R.P.)	(O.T.) 71° to 85°



(F.P.) 0°	(R.P.)
(O.P.1) 26°	(D.T.)
(O.P.2) 32°	(*) 38°
	(O.T.) 71° to 85°



(F.P.) 0°	(R.P.)
(O.P.1) 26°	(D.T.)
(O.P.2) 32°	(*) 38°
	(O.T.) 71° to 85°



40

▲ Low Energy Contacts

41[▲]

42

43[▲]

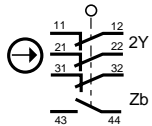
44

45[▲]

Note: See page 179

GS

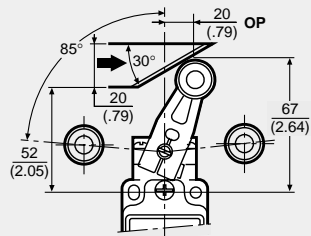
Slow-Action Contacts
**3 NORMALLY CLOSED/
 1 NORMALLY OPEN**
BREAK BEFORE MAKE



Actuator Types

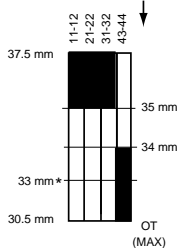


(F.P.) 0°	(R.P.)
(O.P.1) 26°	(D.T.)
(O.P.2) 32°	(*) 38°
	(O.T.) 71° to 85°

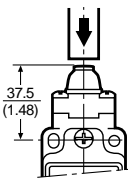


Side Rotary, metal roller

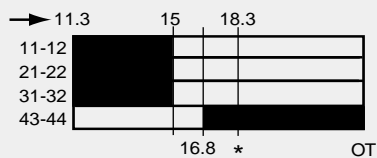
A1B



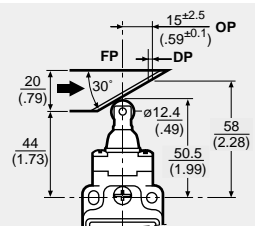
Top pin plunger



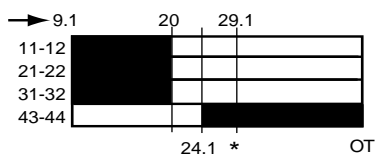
B



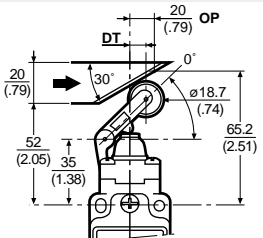
Top roller plunger



C



Top roller lever



D

46

47

XXX

GSS

GSC EN 50047 Safety Metal Standard

Technical Data

Mechanical life up to 15 million operations

Degree of protection IP 66
NEMA/UL type 1, 4, 12, 13

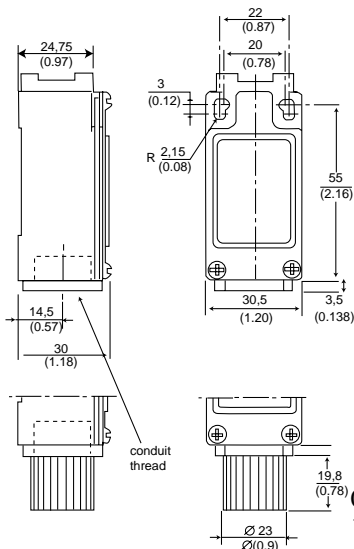
Temperature range Operating:
-25 °C to +85 °C
-13 °F to +185 °F
Storage:
-40 °C to +85 °C
-40 °F to +185 °F

Approvals* IEC 60947-5-1
EN 60947-5-1
AC15 A300
DC13 Q300
BG, UL & CSA

Vibration 10 g conforming to IEC 68-2-6

Shock 50 g conforming to IEC 68-2-27
Terminal marking to EN 50013

*See Standards (page 161)



Note: Incorporates safety screws

Conduit Thread

- A** = 1/2" NPT
- B** = PG 13.5
- C** = 20 mm
- D** = PF 1/2"

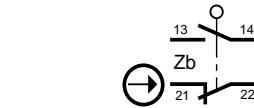
Ordering:

GSC

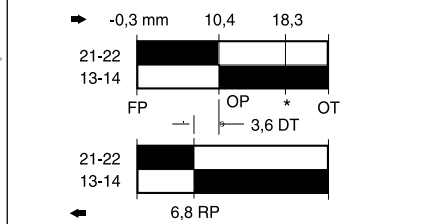
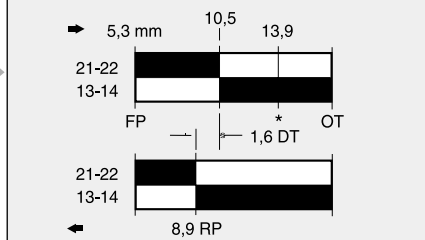
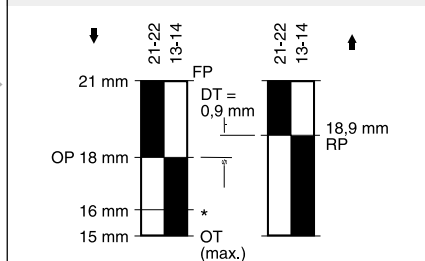
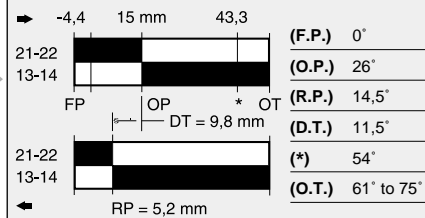
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Example: GSC B 01 B

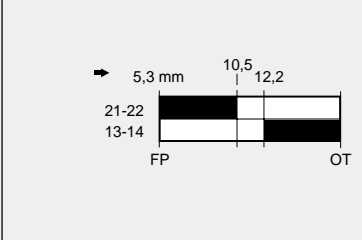
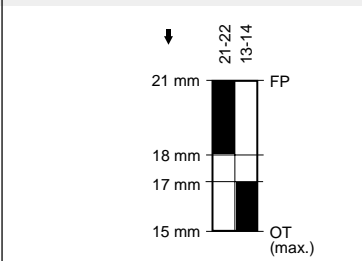
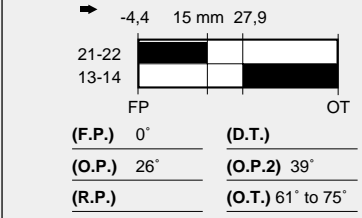
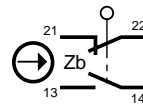
Snap-Action Contacts 1 NORMALLY CLOSED/ 1 NORMALLY OPEN



■ Circuit closed
*Positive opening to IEC/EN 60947-5-1-3



Slow-Action Contacts BREAK BEFORE MAKE 1 NORMALLY CLOSED/ 1 NORMALLY OPEN



* Point from which the positive opening is assured

** Positive opening occurs at operating position. But to meet IEC/EN 60947-5-3 which requires a dielectric gap of 2.5 kV, positive opening is assured at*.

▲ Low Energy Contacts

Note: See page 179

01

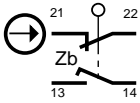
07▲

03

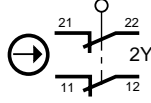
33▲

XX

Slow-Action Contacts
MAKE BEFORE BREAK
1 NORMALLY CLOSED/
1 NORMALLY OPEN



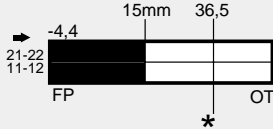
Slow-Action Contacts
2 NORMALLY CLOSED



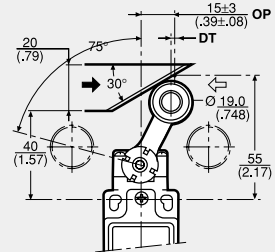
Actuator Types



(F.P.) 0°	(D.T.)
(O.P.) 26°	(O.P.2) 39°
(R.P.)	(O.T.) 61° to 75°



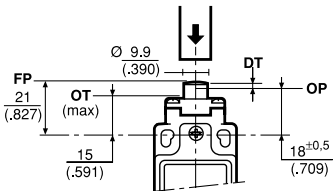
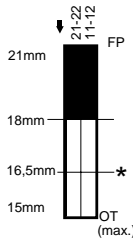
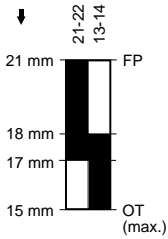
(F.P.) 0°	(D.T.)
(O.P.) 26°	(*) 46.5°
(R.P.)	(O.T.) 61° to 75°



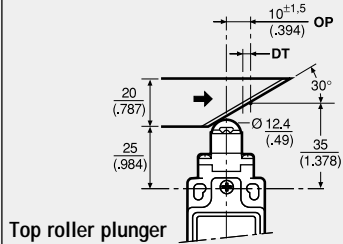
A1B

Additional levers available (see page 190)

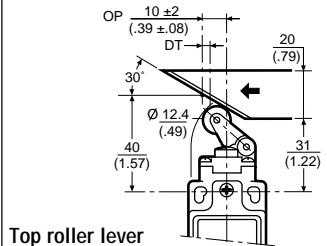
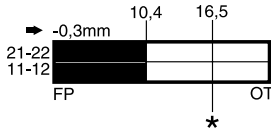
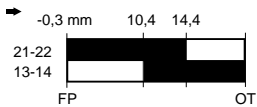
Side Rotary, metal roller



Top pin plunger



Top roller plunger



Top roller lever

B

C

D

04

34[▲]

06

36[▲]

XXX

GSD EN 50047 Safety Double Insulated Standard

Technical Data

Mechanical life up to 15 million operations

Degree of protection IP66
NEMA/UL type 1, 12, 13

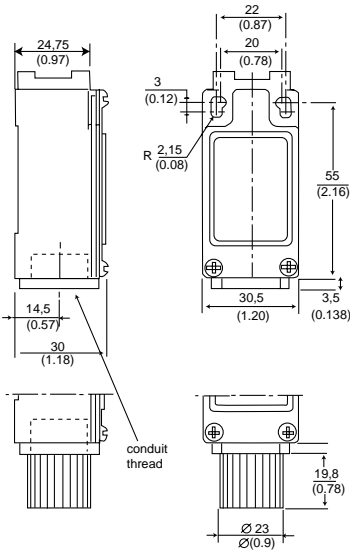
Temperature range Operating:
-25 °C to +85 °C
-13 °F to +185 °F
Storage:
-40 °C to +85 °C
-40 °F to +185 °F

Approvals* IEC 60947-5-1
EN 60947-5-1
AC15 A600
DC13 Q300
BG, UL & CSA

Vibration 10 g conforming to IEC 68-2-6

Shock 50 g conforming to IEC 68-2-27
Terminal marking to EN 50013

*See Standards (page 161)



Note: Incorporates safety screws

Conduit Thread

- A** = 1/2" NPT
- B** = PG 13.5
- C** = 20 mm
- D** = PF 1/2"

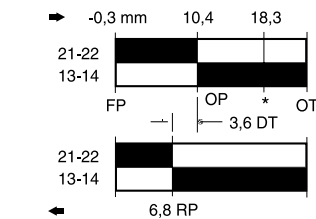
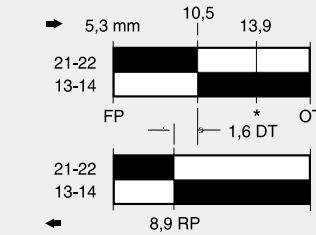
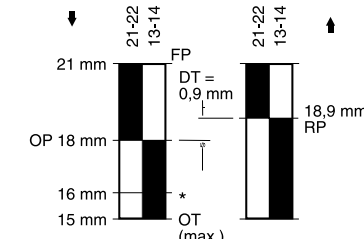
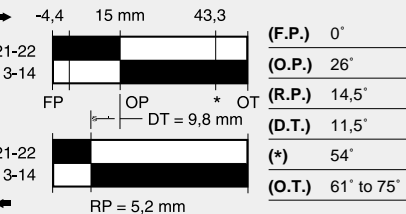
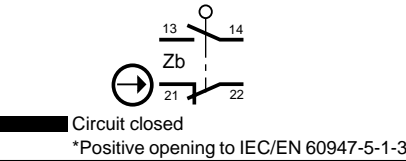
Ordering:

GSD

X

Example: GSD B 01 B

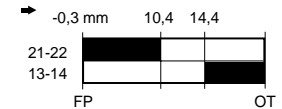
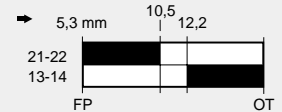
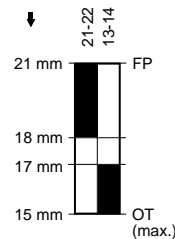
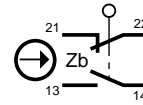
Snap-Action Contacts 1 NORMALLY CLOSED/ 1 NORMALLY OPEN



* Point from which the positive opening is assured

** Positive opening occurs at operating position. But to meet IEC/EN 60947-5-3 which requires a dielectric gap of 2.5 kV, positive opening is assured at*.

Slow-Action Contacts BREAK BEFORE MAKE 1 NORMALLY CLOSED/ 1 NORMALLY OPEN



▲ Low Energy Contacts

Note: See page 179

01

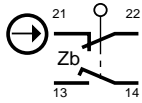
07▲

03

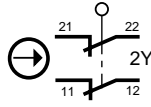
33▲

XX

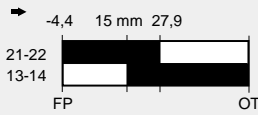
Slow-Action Contacts
MAKE BEFORE BREAK
1 NORMALLY CLOSED/
1 NORMALLY OPEN



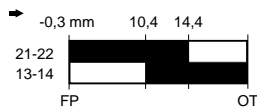
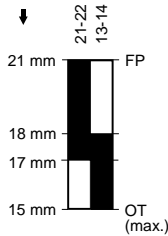
Slow-Action Contacts
2 NORMALLY CLOSED



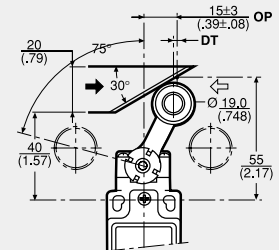
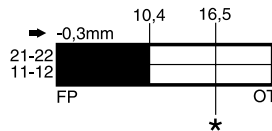
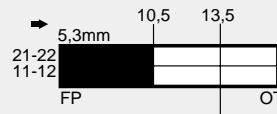
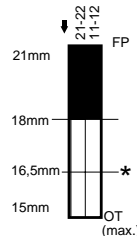
Actuator Types



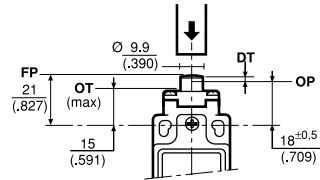
(F.P.)	0°	(D.T.)	
(O.P.)	26°	(O.P.2)	39°
(R.P.)		(O.T.)	61° to 75°



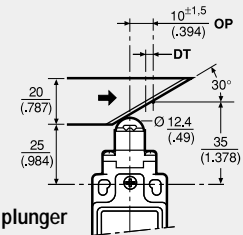
(F.P.)	0°	(D.T.)	
(O.P.)	26°	(*)	46.5°
(R.P.)		(O.T.)	61° to 75°



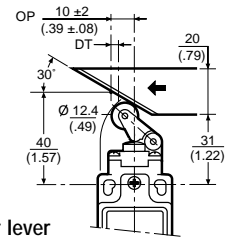
Side Rotary, metal roller



Top pin plunger



Top roller plunger



Top roller lever

A1B

Additional levers available (see page 190)

B

C

D

04

34[▲]

06

36[▲]

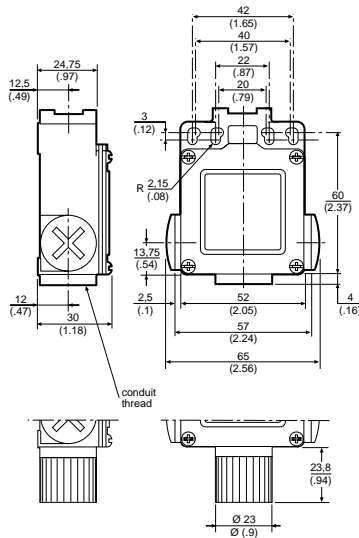
XXX

GSE EN 50047 Compatible Safety 3 Conduit Metal Standard

Technical Data

Mechanical life	up to 15 million operations
Degree of protection	IP66 NEMA/UL type 1, 4, 12, 13
Temperature range	Operating: -25 °C to +85 °C -13 °F to +185 °F Storage: -40 °C to +85 °C -40 °F to +185 °F
Approvals*	IEC 60947-5-1 EN 60947-5-1 AC15 A300 DC13 Q300 BG, UL & CSA
Vibration	10 g conforming to IEC 68-2-6
Shock	50 g conforming to IEC 68-2-27 Terminal marking to EN 50013

*See Standards (page 161)



Note: Incorporates safety screws

Conduit Thread

- A** = 1/2" NPT
- B** = PG 13.5
- C** = 20 mm
- D** = PF 1/2"

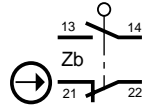
Ordering:

GSE

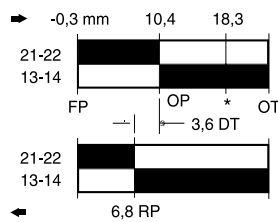
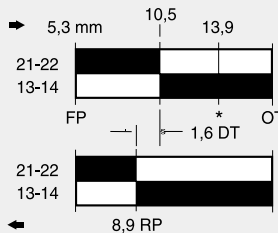
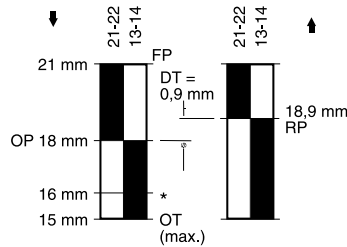
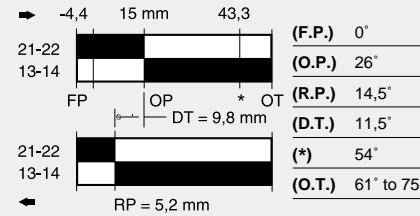
X

Example: GSE B 01 B

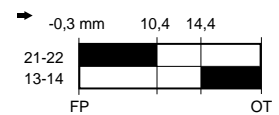
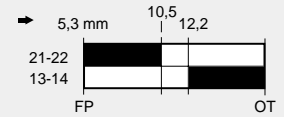
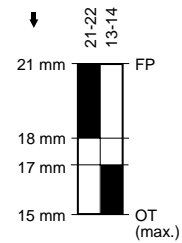
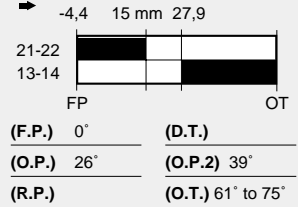
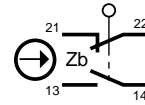
Snap-Action Contacts 1 NORMALLY CLOSED/ 1 NORMALLY OPEN



■ Circuit closed
*Positive opening to IEC/EN 60947-5-1-3



Slow-Action Contacts BREAK BEFORE MAKE 1 NORMALLY CLOSED/ 1 NORMALLY OPEN



* Point from which the positive opening is assured

** Positive opening occurs at operating position. But to meet IEC/EN 60947-5-3 which requires a dielectric gap of 2.5 kV, positive opening is assured at*.

▲ Low Energy Contacts

Note: See page 179

01

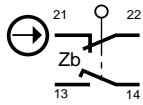
07▲

03

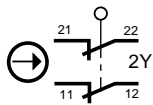
33▲

XX

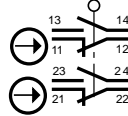
Slow-Action Contacts
MAKE BEFORE BREAK
 1 NORMALLY CLOSED/
 1 NORMALLY OPEN



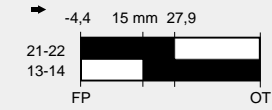
Slow-Action Contacts
 2 NORMALLY CLOSED



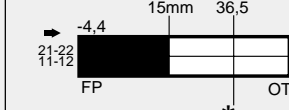
Snap-Action Contacts
DOUBLE POLE
 2 NORMALLY CLOSED/
 2 NORMALLY OPEN



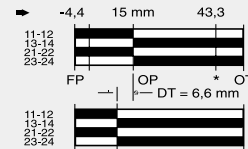
Actuator Types



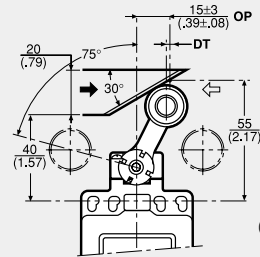
(F.P.) 0° (D.T.)
 (O.P.) 26° (O.P.2) 39°
 (R.P.) (O.T.) 61° to 75°



(F.P.) 0° (D.T.)
 (O.P.) 26° (*) 46.5°
 (R.P.) (O.T.) 61° to 75°



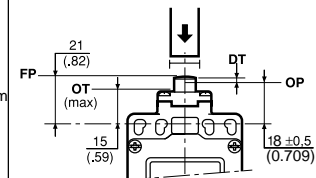
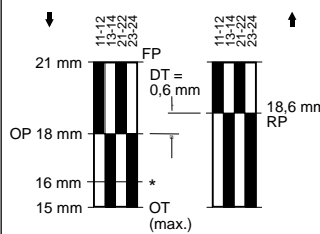
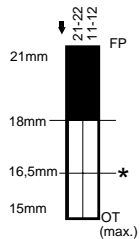
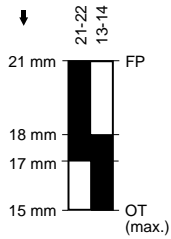
(F.P.) 0° (D.T.) 8°
 (O.P.) 26° (*) 54°
 (R.P.) 180° (O.T.) 61° to 75°



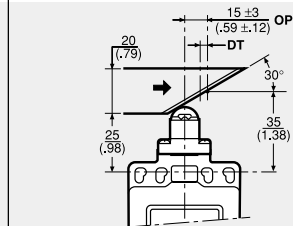
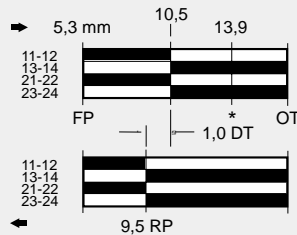
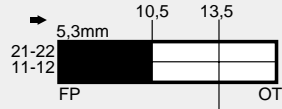
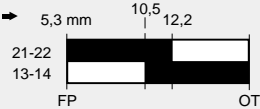
A1B

Additional levers available (see page 190)

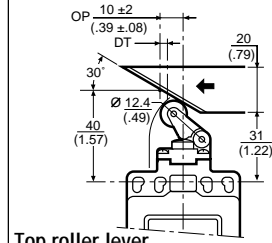
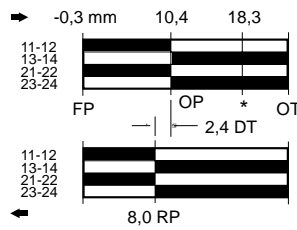
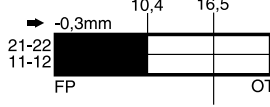
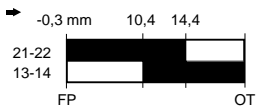
Side Rotary, metal roller



Top pin plunger



Top roller plunger



Top roller lever

04

34^

06

36^

24

32^

XXX

Additional Lever Types

For use with all Side Rotary Head Styles.

Figure 1 illustrates standard lever types which conform to EN 50041.

All dimensions are in mm/(inches).

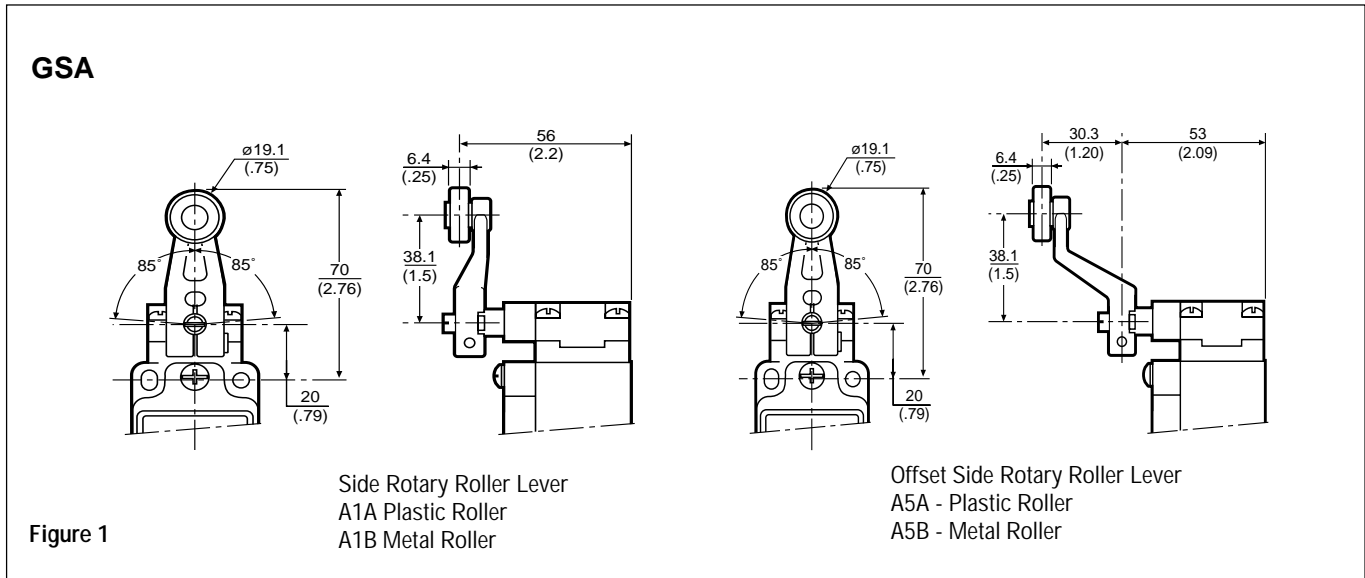
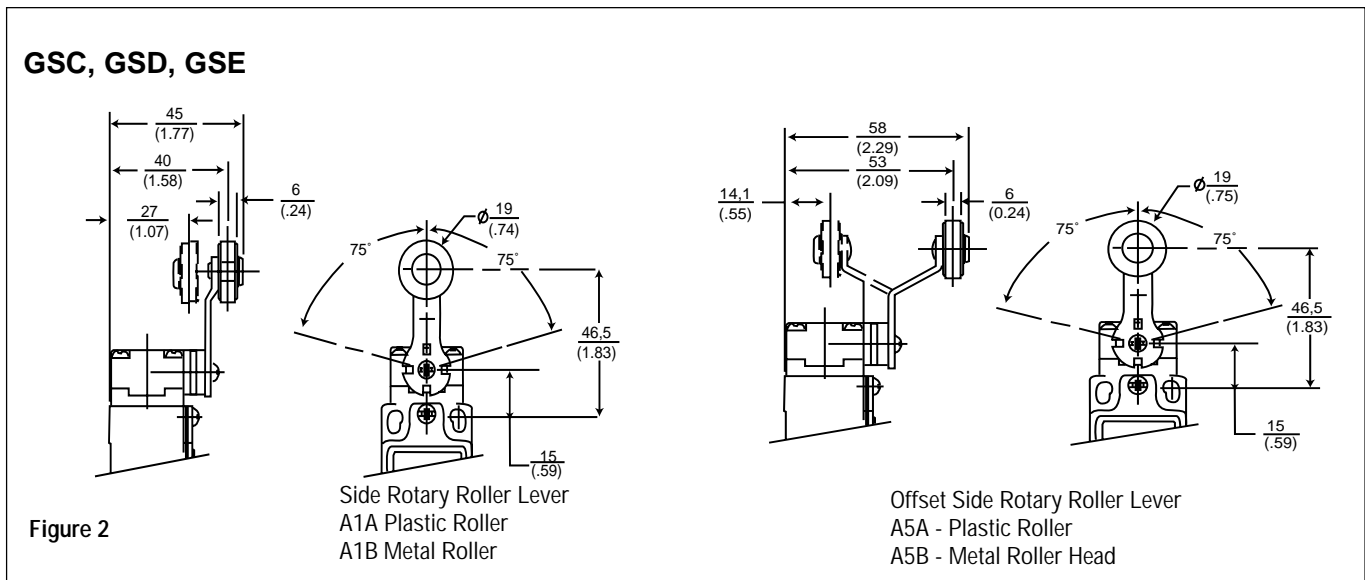


Figure 2 illustrates standard lever types which conform to EN 50047.



Note: When installing all side rotary type levers, care must be taken to ensure that the lever set position is not changed due to forces in the application. To achieve positive lever retention, the lever must be mounted as shown, or in 90° increments, and must be fully seated so as to engage the square on the shaft.

GSS