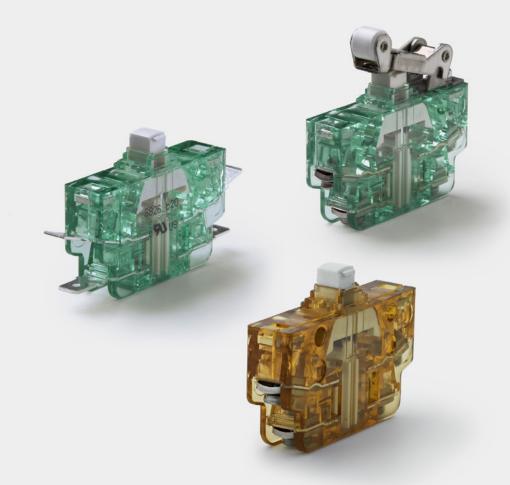


Snap-Action Switches

S826, S926 series

Dual changeover switches with positive opening operation and wiping contacts

Catalogue D26.en





schaltbau.com

Snap-action switches, S826 and S926 series

Dual changeover switches with positive opening operation and wiping, double-break contacts

Schaltbau S826 and S926 series dual changeover switches feature positive opening operation which guarantees the forced disconnection of contacts even when they have become welded together due to a short-circuit.

The contact bridges of the snap-action switches are galvanically isolated allowing two separate load circuits with independent voltage levels to be controlled simultaneously. Wiping, double-break contacts ensure

Features



Variants for extreme conditions: Ruggedized housing made from polyetherimide (PEI). Designed for use in harsh environments. Improved resistance to chemicals, impact and extremes of temperature.



Positive opening operation: Reliable breaking of the normally closed (NC) circuit even if the contacts have become welded together, in compliance with IEC 60947-5-1, Annex K.



Dual changeover switch: Changeover switch with galvanically isolated contact bridges for double-break NC and NO contacts. Thus two separate load circuits can be controlled simultaneously. high reliability even at low electrical loads. Versions with optional gold contacts are particularly suitable for handling low currents and voltages. A defined and repeatable switching action is possible thanks to the snap mechanism whose switching speed is virtually independent of the speed of the button or actuator. That is why snap-action switches are preferred in applications with slow actuation speeds in which they are used, for instance, as motor switches, position switches, or gear limit switches.

Ingress protection rating (IP code): Degrees of protection against dust, humidity, contaminants, or access to hazardous parts to IEC 60529: Contacts: IP40 / Terminals: IP00

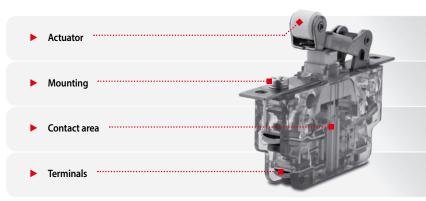
Wiping, double-break contacts: Continuous low contact resistance ensures high contact reliability over the life of the switch.

Contact material: Silver or gold



S826/S926 series

Design and function



- S826/S926 series
- Standard: push button
- Auxiliary actuator: roller lever
- Front mount
- Side mount (ganging)
- Dual changeover switch, galvanically isolated
- Positive opening operation and self-cleaning contacts
- Contact material: silver or gold
- M3 screws with saddle clamp
- Flat tabs 6.3 x 0.8
- M3 screws with spring washer

S926 Better

Resistance to

- temperature
- chemicals
- impact

Variants for extreme conditions

Schaltbau has developed special variants for use in harsh environments. The S926 series has a ruggedized housing made from polyetherimide (PEI) that stands for improved resistance to:

- temperatures from –55 °C to +85 °C*
- chemicals (e.g. acids and alkalis)
- impact (PEI more resistant than PC)

The amber, transparent switches are ideally suited for applications where impact forces are high and/or frequent as well as for use in products that are exposed to strong chemicals or extremes of temperature. The S9xx series switches have the same design, dimen-

sions and technical features as the switches of the standard S8xx series, allowing for easy replacement and upgrade from a standard switch without additional implementation effort.

Applications

Schaltbau snap-action switches are typically used with systems and components that require a high degree of safety and reliability, such as

- Limit switches for machine, door and plant control systems
- Control switches for the driver's desk of rail vehicles or crane consoles
- Switching elements for automation
- Safety limit switches for control systems and plant controls

Ordering code

| | | Example: | S826 b | o10/20 | 0/40 L |
|--------------|--|---|--------|--------|------------|
| Series, cont | act configuration — | | 1 | | Ţ Ē |
| S826 | | tch, wiping double-brea ening operation, galvan ges | | | |
| S926 | Same as S826 with in chemicals, impact an | nproved resistance to d extremes of temperat | ure | | |
| | | | | | |

Actuator styles

| | Actuator | Mounting |
|----|--------------|--------------------------------|
| b | Push button | no mounting plates |
| с | Push button | mounting plates |
| CS | Push button | mounting plates, slotted |
| е | Roller lever | no mounting plates |
| а | Roller lever | mounting plates |
| as | Roller lever | mounting plates, slotted |
| d | Roller lever | mounting plates, one angled |

Contact material

Parameter

M3 screws with spring washer

* Silver

10 Gold

| Magnetic blowout | L |
|-------------------------------|--------------|
| Actuating and r | elease force |
| standard | * |
| reinforced | 40 |
| | Terminals |
| M3 screws with saddle clamp | * |
| Flat tabs 6.3x0.8 | 20 |
| Flat tabs 6.3x0.8, angled 90° | 24 |
| M3 screws with spring washer | 30 |
| | |
| | |

Special design, optional

Note: (i)

This product catalogue comprises only stock items. For some variants minimum quantities apply. Please ask for conditions.

Special variants:

If you need a special variant of the switch, please do not hesitate to contact us. Maybe the type of switch you are looking for is among our many special designs. If not, we can also supply customized designs. In this case minimum quantities apply.

* No index

Version IP40/20



S826 c / S926 c

Push button (standard), mount-

ing brackets, silver contacts and

M3 screws with saddle clamp

S826 b20 / S926 b20 Push button (standard), silver contacts and flat tabs 6.3 x 0.8



S826 a / S926 a Roller lever, mounting brackets, silver contacts and M3 screws with saddle clamp



S826 e20 / S926 e20 Roller lever, silver contacts and flat tabs 6.3 x 0.8



S826 a L / S926 a L Roller lever, mounting brackets, silver contacts, M3 screws with saddle clamp, and magnetic blowout

| | R |
|--|---|



S826 / S926

S826 b / S926 b Push button (standard), silver contacts and M3 screws

with saddle clamp

| | łA | | |
|--|----|--|--|
| | | | |
| | | | |

| IP rating: contacts / terminals | | IP40/20 |
|--|--|-------------|
| Actuator styles | | |
| Push button (standard), no mounting plates | b | |
| Push button, mounting plates | C | |
| Push button, mounting plates, slotted | S | |
| Roller lever, no mounting plates | e | |
| Roller lever, mounting plates | a | |
| Roller lever, mounting plates, slotted | as | |
| Roller lever, mounting plates, slotted, one angled | d | |
| Series Contact material Actuating and release force Magnetic blowout (special design) | \$826 / \$926 * / 10 * / 40 L | S826 / 5926 |
| Terminal styles | | |
| M3 screws with saddle clamp | * | |
| Flat tabs 6.3x0.8 | 20 | |
| Flat tabs 6.3x0.8, angled 90° | 24 | |

I Identification I

30

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Specifications

S SCHALTBAU

S826/S926 series

| Contact configuation IEC 6987 Conventional themal current lun Conventional themal current lun Conventional themal current lun with lun with lun with lun with lun with lun with lun Conventional themal current lun w | Series | Standard | S826 / S926 | | |
|--|--|---------------|---|--|--|
| Conventional terment is TUL SB0 S A at T = 85° C Rated insolation voltage U, EC 00947 300 V 1 Pallution degree EC 00947 SS256 PD3 1 5926 PD2 Rated insolation voltage U, EC 00947 SS256 PD3 1 5926 PD2 Rated insolation voltage U, EC 00947 AkV Overvoltage category EC 00947 AcC15:230 VAC 10A / DC-13:110 VDC / 05 A Overvoltage category EC 00947 AcC15:230 VAC 10A / DC-13:110 VDC / 05 A Orisital gan, typ. AcC15:230 VAC 10A / DC-13:110 VDC / 05 A Contact gan, typ. AcC15:230 VAC 10A / DC-13:110 VDC / 05 A Contact force, typ. AcA15:230 VAC 10A / DC-13:110 VDC / 05 A Contact force, typ. AcA15:230 VAC 10A / DC-13:110 VDC / 05 A Contact force, typ. AcA15:230 VAC 10A / DC-13:110 VDC / 05 A Contact force, typ. 100 mD Contact gan, typ. 100 mD Actuator travel for positive opening openation EC 60964 100 mD Stockingtance EC 60964 30 g, half sinus Stockingtance EC 60 | Contact configuration | | 2 galvanically isolated contact bridges, | | |
| Rated insulation voltage U. UL 508 300V Pallution degree IEC 60947 P03 ⁻¹ S222: P03 / S22: PD2 Rated impulse withstand voltage Ump IEC 60947 4.W Overvoltage category IEC 60947 0/3 Overvoltage category IEC 60947 0/3 Utilization category for silver contacts ² IEC 60947 AC-15-230V AC / 10.A / DC-13: 110V DC / 05 A Contact gap, typ. 2.085 mm Contact gap, typ. 0.00 mO Contact fore, typ. IEC 60947 2.00 mO Contact fore typ. IEC 60947 2.00 mO Contact fore typ. IEC 60947 3.2 mm Actuator travel for positive opening operation IEC 60947 3.0 g. half sinus Actuator travel for positive opening operation IEC 60947 3.0 g. half sinus Stock resistance, 10s Oth zail directors (without aux, cutator at 01 ms max, opening inform) IEC 60947 3.0 g. half sinus Shock resistance Vibration aux, cutator zithoned inform IEC 60047 Actuator zithoned information Shock resistance Vibration resistance Vibration resistance Vibration resistance Vibration resistance Vibration aux, cutator zithoned information IEC 60947 Actuator zithoned information Shock resistance Vibration resistance Vibration resistance Vibration resistance Vibration resistance Vibration resistance Vibra | Conventional thermal current I _{th} | | | | |
| Pallution degree UL 508 S826/PD3 / 5926/PD2 Rated impulse withstand voltage Umo IEC 60947 OV3 Overvoltage category IEC 60947 OV3 Utilization category IEC 60947 AC-15-230VAC/13A DC-13: 110VDC/05 A Contact gap, typ. Image: Category C | Rated insulation voltage U _i | | | | |
| Overvottage categoryEC 60947 UL 508O'3 O'3Vitrativer contacts ?IC 60947 UL 508 PAC 15: 230 VAC / 10 A / DC 13: 110V DC / 05 A AC 240 V / 1 AContact gap, typ2.0.85 mmContact gap, typ2.0.85 mmContact resistance, typ0.4 N min.Contact resistance, typ.IC 600947100 nDPositive opening force 'IC 6009473.2 mmActuator travel for positive opening operationIC 6009473.2 mmMaximum actuator travel 'IC 60094710's max.Victuator travel for positive opening operationIC 6009473.0 mm/s max.Victuator travel for positive opening operationIC 60094710's max.Victuator travel for positive opening operationIC 6009473.0 g, half sinusVictuator do 11 ms max.IC 6009473.0 g, half sinusVictuator do 11 ms max.IC 6009473.0 g, half sinusNoch resistance, travel for positive contacts 'IC 6009473.0 g, half sinusNoch resistance, travel for positiveIC 6009473.0 g, half sinusNoch resistance, travel for positiveIC 6009473.0 G, Ag RNoch resistance, travel for positiveIC 6009473.0 g, half sinusNoch resistance, travel for positiveIC 6009473.0 G, Ag RNoch resistance, travel for positiveIC 6009473.0 G, Ag RNoch resistance, travel for positiveIC 6009473.0 G, Ag RNoch resistance, travel for positiveIC 6009473.0 G, N / 5.5 NNoch resistance, | Pollution degree | | | | |
| Overvoltage category for silver contact 5 ⁻¹ UL 508 OV3 Utilization category for silver contact 5 ⁻¹ IEC 60947 AC-15:230 VAC/1.0A / DC-13: 110VDC / 05 A A C240 V / 1 A Contact ope, typ. 2x 0.85 mm Contact resistance, typ. 0.41 N min. Contact resistance, typ. iEC 60947 100 m.Q Nation resistance, typ. iEC 60947 20 N Actuator travel for positive opening operation IEC 60947 3.2 mm Actuator travel for positive opening operation IEC 60947 3.2 mm Actuator travel for positive opening operation IEC 60947 3.2 mm Actuator travel for positive opening operation IEC 60947 3.0 g.half sinus Vibration resistance, toring interview IEC 60949 3.0 g.half sinus Vibration resistance, toring memory IEC 60949 3.0 g.half sinus Short-circuit protection IEC 60949 3.0 g.half sinus Short-circuit protection arting iPC ovely IEC 60949 3.0 g.half sinus Short-circuit protection arting iPC ovely IEC 60949 3.0 g.half sinus Contact sige protection arting iPC ovely IEC | Rated impulse withstand voltage U _{imp} | IEC 60947 | 4 kV | | |
| for silver contacts ¹ / ₂ UL 508 ¹⁹ AC 240 V / 1 A Contact gap, typ. 2 x 0.85 mm Contact force, typ. 0.4 N min. Contact force, typ. EC 60947 20 N Positive opening force ¹⁴ EC 60947 32 mm Actuator travel for positive opening operation EC 60947 32 mm Actuator travel for positive opening operation EC 60947 32 mm Actuator travel for positive opening operation EC 60947 32 mm Actuator travel for positive opening operation EC 60947 32 mm Actuator sistance, typ. EC 60947 32 mm Shock resistance without aux. EC 60947 30 g, half sinus Shock resistance without aux. EC 60068- 30 g, half sinus Shock resistance for e ¹⁴ Standard / reinforced EC 60947 Shock resistance for e ¹⁴ Standard / reinforced EC 60947 Shock resistance for e ¹⁴ Standard / reinforced EC 60947 Shock resistance for e ¹⁴ Standard / reinforced EC 60947 Actuator force ¹⁴ Standard / reinforced EC 60947 Release force ¹⁴ Standard | Overvoltage category | | | | |
| Contact force, typ. 0.4 N min. Contact resistance, typ. 100 mQ Positive opening force '4 IEC 60947 20 N Actuator travel for positive opening operation IEC 60947 See page 5 Maximum actuator travel '4 IEC 60947 3.2 mm Actuating speed IEC 60064-2 10 g Vibration resistance, '10.1 ms max | | | | | |
| Number of the set of th | Contact gap, typ. | | 2x 0.85 mm | | |
| without leads connected IC ID ID Positive opening force * IEC 60947 20 N Actuator travel for positive opening operation IEC 60947 32 mn Aximum actuator travel * IEC 60947 32 mn Actuating speed IEC 60947 32 mn Vibration resistance. IEC 60947 0.5 mm/s min. Vibration resistance. IEC 60068-26 30 g. half sinus Shock resistance IEC 60068-2 30 g. half sinus Shock resistance IEC 60068-2 30 g. half sinus Shock resistance IEC 60069-2 30 g. half sinus Shock resistance IEC 60047 465 cycles/minute Actuating force * Standard / reinforced IEC 60059 Release force * Standard / reinforced IEC 60059 Press protection rating IP codel IEC 60059 IP40 Indenial enduranze IEC 600597 State code code size in the size | Contact force, typ. | | 0.4 N min. | | |
| Actuator travel for positive opening operationIEC 60947see page 5Maximum actuator travel '4IEC 609473.2 mmActuating speedIEC 609473.2 mmActuating speedIEC 609471 m/s max. 0.5 mm/s min.Vibration resistance, actuator at 0.1 ms max. opening time)IEC 60068-2610 gShock resistance without aux. actuator at 0.1 ms max. opening time)IEC 60068-2630 g, half sinusShock resistance without aux. actuator at 0.1 ms max. opening time)IEC 60068-2630 g, half sinusShock resistance without aux. actuator at 0.1 ms max. opening time)IEC 60068-2630 g, half sinusShock resistance without aux. actuator at 0.1 ms max. opening time)IEC 60068-2630 g, half sinusShock resistance without aux. actuator at 0.1 ms max. opening time)IEC 60068-2630 g, half sinusShock resistance without aux. actuator at 0.1 ms max. opening time)IEC 60068-2630 g, half sinusShock resistance without aux.IEC 60047465 cycles/minuteActuating forequeryIEC 600473.6 N / 5.5 NRelease fore '4Standard / reinforcedIEC 6004710 million cycles, min.Ingress protection rativel?IEC 6004710 million cycles, min.Anbient temperature rayIEC 6004710 million cycles, min.Anbient temperature rayIEC 6004710 million cycles, min.Goritacts TerminalsIEC 60047Staber Cyclean, transparentMaterial ContactsIEC 6004710 million cycles, min.Ma | | | 100 mΩ | | |
| Maximum actuator travel * IEC 60947 3.2 mm Actuating speed IEC 60947 3.2 mm Vibration resistance, 10 500 Hz all directions (without aux. actuator at 0.1 ms max. opening time) IEC 60068-26 10 g Shock resistance without aux. actuator at 0.1 ms max. opening time) IEC 60068-26 3.0 g, half sinus Shock resistance without aux. actuator at 0.1 ms max. opening time) IEC 60068-26 3.0 g, half sinus Shock resistance without aux. actuator at 0.1 ms max. opening time) IEC 60269-2 6.A g.R Shock resistance mitting toreetion IEC 60147 4.6 G.S.P.G.S.N.G.S.S.N.G.S. | Positive opening force *4 | IEC 60947 | 20 N | | |
| Actuating speedIEC 60947Inv's max. 0.5 mm/s min.Vibration resistance, 10 sm max. opening time)IEC 60068-2610 gShock resistance (without aux. actuator at 0.1 ms max. opening time)IEC 60068- 2.2730 g, half sinusShock resistance (without aux. actuator at 0.1 ms max. opening time)IEC 60068- 2.2730 g, half sinusShock resistance (without aux. actuator at 0.1 ms max. opening time)IEC 60269-26 A gRNax. opening frequeryIEC 60947465 cycles/minuteActuating force *4Standard / reinforceIEC 609473.6 N / 5.5 NActuating force *4Standard / reinforceIEC 609473.6 N / 5.5 NRelease force *4Standard / reinforceIEC 609473.6 N / 5.5 NMechanical enduranceIEC 60947Standard / 2.0 N / 2.0 NMechanical enduranceIEC 60947Static * 4.0 °C. M. / 2.0 NMechanical enduranceIEC 60947Static * 4.0 °C. M. / 2.0 NMechanical enduranceIEC 60947Static * 4.0 °C. M. / 2.0 NMechanical enduranceIEC 60947Static * 4.0 °C. M. / 2.0 NMechanical enduranceIEC 60947Static * 4.0 °C. M. / 2.0 NMechanical enduranceIEC 60947Static * 4.0 °C. M. / 2.0 NMiterial StoricattisIEC 60947Static * 4.0 °C. M. / 2.0 NMiterial HousingIEC 60947Static * 4.0 °C. M. / 2.0 NMiterial HousingIEC 60947Static * 4.0 °C. M. / 2.0 NMiterial HousingIEC 60947Static * 4.0 °C. M. / 2.0 NMiterial Ho | Actuator travel for positive opening operation | IEC 60947 | see page 5 | | |
| Actuating speedIEC 609470.5 mm/s min.Vibration resistance, 10500 Hz all directions (without aux, actuator at 0.1 ms max, opening time)IEC 60068-2-610 gShock resistance (without aux, actuator at 0.1 ms max, opening time)IEC 60068-2-630 g, half sinusShock resistance (without aux, actuator at 0.1 ms max, opening time)IEC 60269-26 A gRShort-circuit protection for silver contacts '2'IEC 60269-26 A gRMax, operating frequencyIEC 60947465 cycles/minuteActuating force '4Standard / reinforcedIEC 609473.6 N / 5.5 NRelease force '4Standard / reinforcedIEC 6094710 million cycles, min.Ingress protection rating (IP code) ContactsIEC 6094710 million cycles, min.Machanical enduranceIEC 60947Standard / reinforcedIEC 60947Material ContactsIEC 60947Standard / reinforcedStandard / reinforcedMaterial ContactsIEC 6094710 million cycles, min.Material ContactsIEC 60947Standard / reinforcedStandard / reinforcedMaterial ContactsIEC 6094710 million cycles, min.Material ContactsIEC 60947Standard / reinforcedStandard / reinforcedMaterial ContactsIEC 60947Standard / reinforcedStandard / reinforcedMaterial ContactsIEC 60947Standard / reinforcedStandard / reinforcedMaterial ContactsIEC 60947Standard / reinforcedStandard / reinforcedMaterial Housing <td>Maximum actuator travel *4</td> <td>IEC 60947</td> <td colspan="2">3.2 mm</td> | Maximum actuator travel *4 | IEC 60947 | 3.2 mm | | |
| 10500 Hz all directions (without aux. actuator at 0.1 ms max. opening time)EC 60068-2610 gShock resistance (without aux. actuator at 0.1 ms max. opening time)IEC 60068-2730 g, half sinusShork-circuit protection max. opening time)IEC 60269-26 A gRShort-circuit protection for silver contacts *2IEC 600686 A gRMax. operating frequereIEC 60049-6 A gRMax. operating frequereIEC 60947465 cycles/minuteActuating force *4Standard / reinforcedIEC 609473.6 N / 5.5 NRelease force *4Standard / reinforcedIEC 609470.2 N / 2.0 NIngress protection rating frequereIEC 60529IP40 (P00Ingress protection rating frequereIEC 6094710 million cycles, min.Machanical enduranceIEC 60947Sta826: -40 °C +85 °C / 5926: -55 °C +85 °CMachanical enduranceIEC 60947Sta826: -40 °C +85 °C / 5926: -55 °C +85 °CMaterial Contacts TerminalsIEC 60947Sta826: -40 °C +85 °C / 5926: -55 °C +85 °CMunting positionIIanyMunting positionIIapprox.20 gWeightIIapprox.20 gApprovalsIIIApprovalsII | Actuating speed | IEC 60947 | | | |
| Without aux. actuator at 0.1 ms max. opening time)IEC 60068- 2-2730 g, half sinusShort-circuit protection for silver contacts *2IEC 60269-26 A gRMax. operating frequencyIEC 60947465 cycles/minuteActuating force *4Standard / reinforcedIEC 609473.6 N / 5.5 NActuating force *4Standard / reinforcedIEC 609470.2 N / 2.0 NRelease force *4Standard / reinforcedIEC 609470.2 N / 2.0 NIngress protection rating (IP code) Contacts TerminalsIEC 6094710 million cycles, min.Mechanical enduranceIEC 6094710 million cycles, min.Ambient temperature rangeIEC 60947S826: -40 °C +85 °C / 5926: -55 °C +85 °CMaterial Contacts TerminalsHard silver (AgCu3) or gold (AuAg26Ni3) Brass, silver-plated or gold plated S826: PC, green, transparent / S926: PEI, amber, transparentMounting positionWeightApprovals | 10 500 Hz all directions (without aux. | IEC 60068-2-6 | 10 g | | |
| for silver contacts *2IEC 60269-26 A gKMax. operating frequer.vIEC 60947465 cycles/minuteActuating force *4Standard / reinforcedIEC 609473.6 N / 5.5 NRelease force *4Standard / reinforcedIEC 609470.2 N / 2.0 NIngress protection rating (IP code) Contacts TerminalsIEC 60929IP40 IP00Mechanical enduranceIEC 6094710 million cycles, min.Ambient temperature rangeIEC 60947S826: -40 °C +85 °C / S926: -55 °C +85 °CMaterial Contacts Terminals IEC 60947Hard silver (AgCu3) or gold (AuAg26NI3) Brass, silver-plated or gold plated S826: PC, green, transparent / S926: PEI, amber, transparentMounting position Image approx.20 g Approvals Image approx.20 gApprovals Image approx.20 g Image approx.20 g | (without aux. actuator at 0.1 ms | | 30 g, half sinus | | |
| Actuating force *4Standard / reinforcedIEC 609473.6 N / 5.5 NRelease force *4Standard / reinforcedIEC 609470.2 N / 2.0 NIngress protection rating (IP code) Contacts TerminalsIEC 60529IP40 IP40Mechanical enduranceIEC 6094710 million cycles, min.Ambient temperature rageIEC 60947S826: -40 °C +85 °C / 5926: -55 °C +85 °CMaterial Contacts TerminalsHard silver (AgCu3) or gold (AuAg26Ni3) Brass, silver-plated or gold plated S826: PC, green, transparent / S926: PEL, amber, transparentMounting positionanyWeightapprox.20 gApprovalsapprox.20 g | • | IEC 60269-2 | 6 A gR | | |
| Release force 'AStandard / reinforcedIEC 609470.2 N / 2.0 NIngress protection rating (IP code) Contacts TerminalsIEC 60529IP40 IP00Mechanical enduranceIEC 6094710 million cycles, min.Ambient temperature rangeIEC 60947S826: -40 °C +85 °C / S926: -55 °C +85 °CMaterial Contacts TerminalsIEC 60947S826: -40 °C +85 °C / S926: -55 °C +85 °CMaterial Contacts TerminalsIEC 60947S826: PC green, transparent / S926: PEI, amber, transparentMaterial Contacts TerminalsIEC 60947Hard silver (AgCu3) or gold (AuAg26Ni3) Brass, silver-plated or gold plated S826: PC, green, transparent / S926: PEI, amber, transparentMounting positionImage: Provent image: Provent i | Max. operating frequency | IEC 60947 | 465 cycles/minute | | |
| Ingress protection rating (IP code) Contacts TerminalsIEC 60529IP40 IP00Mechanical enduranceIEC 6094710 million cycles, min.Ambient temperature rangeIEC 60947S826: -40 °C +85 °C / S926: -55 °C +85 °CMaterial Contacts Terminals HousingHard silver (AgCu3) or gold (AuAg26Ni3) Brass, silver-plated or gold plated S826: PC, green, transparent / S926: PEI, amber, transparentMounting positionanyWeightapprox.20 gApprovalsImage: Image: Im | Actuating force *4 Standard / reinforced | IEC 60947 | 3.6 N / 5.5 N | | |
| Contacts TerminalsIEC 60529IP40 IP00Mechanical enduranceIEC 6094710 million cycles, min.Ambient temperature rangeIEC 60947S826: -40 °C +85 °C / S926: -55 °C +85 °CMaterial Contacts Terminals HousingHard silver (AgCu3) or gold (AuAg26Ni3) Brass, silver-plated or gold plated S826: PC, green, transparent / S926: PEI, amber, transparentMounting positionanyWeightapprov.20 gApprovalsImage: Contact of the second of the se | Release force *4 Standard / reinforced | IEC 60947 | 0.2 N / 2.0 N | | |
| Ambient temperature rangeIEC 60947S826: -40 °C +85 °C / S926: -55 °C +85 °CMaterial Contacts Terminals Housing Hard silver (AgCu3) or gold (AuAg26Ni3) Brass, silver-plated or gold plated S826: PC, green, transparent / S926: PEI, amber, transparentMounting position anyWeight approx.20 gApprovalsImage: Image: Imag | Contacts | IEC 60529 | | | |
| Material Contacts Terminals Housing Hard silver (AgCu3) or gold (AuAg26Ni3) Brass, silver-plated or gold plated S826: PC, green, transparent / S926: PEI, amber, transparentMounting positionMounting positionWeightApprovalsApprovals | Mechanical endurance | IEC 60947 | 10 million cycles, min. | | |
| Contacts Terminals Housing Hard silver (AgCu3) or gold (AuAg26Ni3) Brass, silver-plated or gold plated S826: PC, green, transparent / S926: PEI, amber, transparentMounting positionWeightApprovalsApprovals | Ambient temperature range | IEC 60947 | \$826: −40 °C +85 °C / \$926: −55 °C +85 °C | | |
| Weight approx.20 g Approvals | Contacts Terminals | | Brass, silver-plated or gold plated | | |
| Approvals CNUS (CHI | Mounting position | | any | | |
| | Weight | | approx. 20 g | | |
| | Approvals | | Schaltbau | | |

Notes:

Data valid for new switches under laboratory conditions and at room temperature, unless otherwise mentioned.

*1 Valid for flat tab terminal styles. Values for M3 screws terminal styles are: 250 V: PD3 / 400 V: PD2

*2 Data for gold contacts upon request *3 General Purpose *4 Measured next to push button

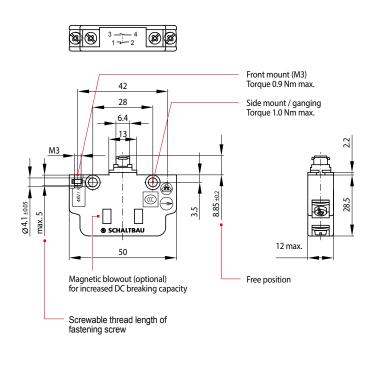


S826/S926 series

S826/S926 series

Dimension diagram, circuit diagram

• Dimension diagram S826 b / S926 b SPDT-DB, Form Zb

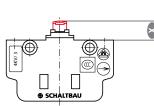




| S826 b / S926 b | |
|-----------------|---|
| S826 b / S926 b | Dual changeover switch, double-break contacts, positive opening operation, 2 galvanically isolated contact bridges and wiping contacts |
| S826 b / S926 b | Push button (standard) |

Actuator styles, actuator positions

• S826 / S926, Push button (standard) **b** / **c** / **cs**

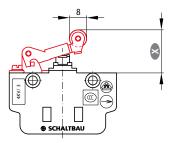




| Actuator position | Push button (standard) b / c / cs Actuator travel 👀 in mm | | |
|--|--|--|--|
| Free position | 8.85 ± 0.20 | | |
| Operating position | 6.60 ± 0.35 | | |
| Release position | 7.80 ± 0.35 | | |
| Total positive opening travel | 5.80 | | |
| Total travel position | 5.65 | | |
| Movement differential (between operating and release position) | 1.2 (typical) | | |

Note: To ensure proper operation of the positive opening function it is necessary to depress the plunger to the point of total positive opening travel. However, it must not be pushed beyond total travel position. Data is valid for new switches.

• \$826 / \$926, Roller lever e / a / as / d



| Actuator position | Roller lever e / a / as / d Actuator travel in mm |
|--|--|
| Free position | 20.25 ± 0.35 |
| Operating position | 16.60 ± 0.50 |
| Release position | 18.40 ± 0.50 |
| Total positive opening travel | 13.60 |
| Total travel position | 13.30 min. |
| Movement differential (between operating and release position) | 1.8 (typical) |



/!\

Circuit diagram

4

• 2

Note: To ensure proper operation of the positive opening function it is necessary to depress the plunger to the point of total positive opening travel. However, it must not be pushed beyond total travel position. Data is valid for new switches.

D2064/2312/0 | Subject to change / Dimensions in mm

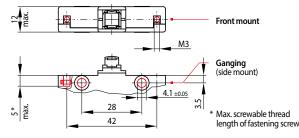
S SCHALTBAU

S826/S926 series

Mounting Front mount, Ganging

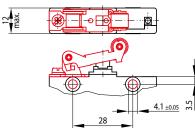
Front mount

- No mounting brackets (standard): Fastening by way of the retainer nuts (M3) which are fixed in the housing of the switch. Tightening torque 0.9 Nm max.
- With mounting brackets: Mounting brackets are available for all actuator options. Tightening torque 0.9 Nm max.
- Push button (standard) no mounting brackets style b

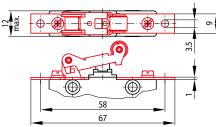


Ganging (side mount)

- Through the two transversal holes in the body of the switch by means of a collar screw or threaded bolt. Tightening torque 1.0 Nm max.
- Alternatively, DUO-Clips or retaining rings can be used.
- Roller lever without mounting brackets style e

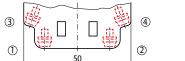


• Roller lever and mounting brackets style a



Terminals M3 scews, flat tabs 6,3x0,8

M3 Screws with saddle clamp (standard) style *





No ferrules AWG 18 ... ¹2 (0.75 mm²... 2.5 mm²), with ferrules: AWG 14 (1.5 mm² max.). Max. 2 conductors with the same wire gauge can be clamped per terminal.

M3 Screws with spring washer style 30

i) Note:

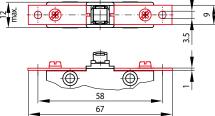


Screw terminals for single and multiple-wire conductors:

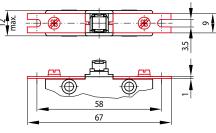


* No index

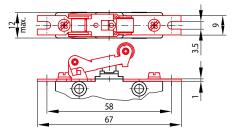
• Push button and mounting brackets style c



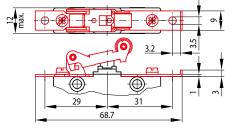
• Push button and mounting brackets, slotted style cs



• Roller lever and mounting brackets, slotted style as

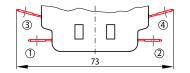


• Roller lever and mounting bracket, angled style d



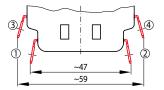
S826/S926 series

• Flat tab 6.3x0.8 style 20





• Flat tab 6.3x0.8, angled 90° style 24





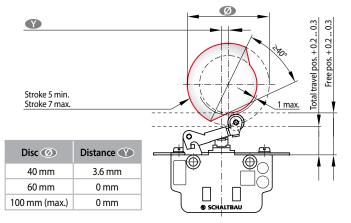
Tightening torque of terminal screws should be 0.9 Nm max. Ingress protection rating (IP code): contacts IP40 / terminals IP00

S826/S926 series

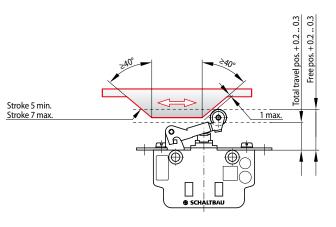
Mounting Use of roller levers

Snap-action switches are designed for actuation with and without a roller lever. A roller lever is required if the direction of actuation deviates more than $\pm 15^{\circ}$ from the plunger axis.

• Switch with roller lever actuated by cam disc



Switch with roller lever actuated by linear cam



Mounting and safety instructions, environmental conditions, standards

S826/S926 series

Mounting instructions:

- Snap-action switches should be mounted by qualified professional staff only.
- Observe the required clearance and creepage distances. This is also applicable for connected wires.
- It is necessary to use insulating plates when ganging or mounting switches on uninsulated surfaces.
- The switches can be mounted in any orientation.
- When mounting the switches make sure to use 2 fastening elements (e.g. screws).
- Only use adequate fastening elements such as cylinder head or collar screws or DUO-clips, including washers. When fastening make sure not to exceed the maximum tightening torque.
- When affixing switches with mounting brackets make sure that the mounting surface is level.
- Avoid tilting the screw when mounting to prevent mechanical tension on the housing.
- The actuator should not be pre-tensioned when in the free position. When actuated, the actuator should travel beyond the operating position, for at least 50% of the predefined overtravel, all the way to total travel position.
- To ensure the proper function of the positive opening operation it is necessary to depress the plunger to the total travel position.
- To prevent mechanical destruction of the switch, make sure that actuation of the switch does not exceed the specified total travel position. Avoid using the switch as a mechanical end stop.
- High-impact actuation of the switch can have a negative effect on its mechanical life.
- When securing stripped wire ends in the terminal clamp, make sure the wire insulation is flush with the clamp.
- Prevent a transfer of forces to the switch terminals, and ensure that connected leads have a functioning strain relief.
- When using versions with blowout magnets observe the right polarity, see circuit diagram on the bottom of the switch.

Non-permissible environmental conditions:

- Cleaning agents, adhesives, solvents, or screw-retaining varnish must be compatible with polycarbonate (S826) or polyetherimide (S926) respectively. Never use chemicals not compatible with polycarbonate for S826 series switches or not compatible with polyetherimide for S926 series snap-action switches.
- Using such chemicals can result in cracks, deformation, breakage and dissolution of the housing or complete destruction of the respective switch.

Safety instructions:

- Be sure to make regular visual inspections.
- Improper handling of the switch, e. g. when hitting the floor with some impact, can result in breakage, visible cracks and deformation.
- The switch suitability has to be confirmed by the customer for the specific application, and under application conditions.



Defective parts must be replaced immediately!

For detailed maintenance, safety and mounting instructions please refer to our operating manuals: <u>schaltbau.info/safety2en!</u>

Standards:

- IEC 60947-1: Low-voltage switchgear and controlgear, Part 1: General rules
- IEC 60947-5-1, Annex K: Special requirements for control switches with direct opening action
- UL508: Industrial control equipment
- IEC 60529: Degrees of protection provided by enclosures (IP Code)
- UL 94V-0: Flammability Standard
- Dimensions according to DIN 41636-6, type F
- ISO 13849-1: Safety of machinery Safety-related parts of control systems Part 1: General principles for design
- IEC 60068-2-6: Environmental testing Part 2-6: Tests Test Fc: Vibration (sinusoidal)
- IEC 60068-2-27: Environmental testing Part 2-27: Tests Test Ea and guidance: Shock

Schaltbau GmbH

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Find your worldwide contact person. We are here for you, personally!





Certification

The production facilities of Schaltbau GmbH have been IRIS

certified since 2008.

with compliments:



since 2002. For the most

recent certificate visit

our website.



Certified to DIN EN ISO 9001 since 1994. For the most recent certificate visit our website.

Electrical Components and Systems for Railway Engineering and Industrial Applications

| Connectors | - Comparison many forst und to induct a star dand. |
|-------------------------------|--|
| Connectors | Connectors manufactured to industry standards |
| | Connectors to suit the special requirements of communications engineering (MIL connectors) |
| | Charging connectors for battery-powered machines and systems |
| | Connectors for railway engineering, including UIC connectors |
| | Special connectors to suit customer requirements |
| Snap-action switches | Snap-action switches with positive opening operation |
| | Snap-action switches with self-cleaning contacts |
| | Snap-action switch made of robust polyetherimide (PEI) |
| | Snap-action switch with two galvanically isolated contact bridges |
| | Special switches to suit customer requirements |
| Contactors | Single and multi-pole DC contactors |
| Emergency disconnect switches | High-voltage AC/DC contactors |
| | Contactors for battery powered vehicles and power supplies |
| | Contactors for railway applications |
| | Terminal bolts and fuse holders |
| | DC emergency disconnect switches |
| | Special contactors to suit customer requirements |
| Electrics for rolling stock | Equipment for driver's cab |
| | Equipment for passenger use |
| | High-voltage switchgear |
| | High-voltage heaters |
| | High-voltage roof equipment |
| | Equipment for electric brakes |
| | |
| | Design and engineering of train electrics to customer requirements |
| | |

