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## Data sheet 3SE6415-1BB02




RFID safety switch with tumbler, plastic, quiescent current principle, tumbler monitoring, 24 V DC, with auxiliary release, IP69, locking force 1150 N, individually encoded multiple teach-in, coding high according to ISO 14119, diagnostics output M12 plug 8-pole, 3 LEDs for display of the operating states, 3 directions of actuation, latching force with turnstile adjustable: 25 N or 50 N, hygienic design, actuator 3SE6410-1AC01 to be ordered separately

| | |
|---|---|
| **product brand name** | SIRIUS |
| **product category** | Non-contact safety switch |
| **product designation** | RFID safety switch with tumbler |
| **design of the product** | rectangular sensor unit |
| **product type designation** | 3SE64 |
| **Product Function** | |
| **product function** | |
| ● positive opening | No |
| ● control function for downstream devices | No |
| ● cross-circuit/short-circuit recognition | Yes |
| suitability for use safety-related circuits | Yes |
| **General technical data** | |
| **product feature** | individually coded, programmable several times, catch 25N/50N |
| **product feature suitable for series connection** | Yes |
| **locking force** | 1 500 N |
| ● according to EN ISO 14119 | 1 150 N |
| **design of the RFID coding** | individually coded, multiple teach-in capability |
| **insulation voltage rated value** | 32 V |
| **degree of pollution according to EN 60664-1** | 3 |
| **overvoltage category** | Class III |
| **surge voltage resistance rated value** | 0.8 kV |
| **no-load current rated value** | 100 mA |
| **protection class IP** | IP66 in accordance with EN 60529 IP67 in accordance with EN 60529 IP69 in accordance with EN 60529 |
| **shock resistance** | |
| **● according to IEC 60068-2-27** | 30 g / 11 ms |
| **vibration resistance according to IEC 60068-2-6** | 10 ... 150 Hz, amplitude 0.35 mm |
| **switching frequency** | 0.5 Hz |
| **mechanical service life (operating cycles) typical** | 1 000 000 |
| ● note | when used as door stop: ≥ 50,000 switching cycles (door masses ≤ 5 kg and actuating speed ≤ 0.5 m/s) |
| **relative ON period [%] of magnet coil** | 100 % |
| **reference code according to IEC 81346-2** | B |
| **Substance Prohibitance (day/month/year)** | 07/01/2006 |
| **Net Weight** | 0.6 kg |
| **Sensor** | |
| **height of the sensor** | 35 mm |
| **length of the sensor** | 120 mm |
| **width of the sensor** | 87.5 mm |


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| **Ambient conditions** | |
| installation altitude at height above sea level maximum | 2 000 m |
| **ambient temperature** | |
| ● during operation | 0 ... 60 °C |
| ● during storage and transport | -10 ... +90 °C |
| **operating resource protection class according to IEC 61140** | III |
| relative humidity during operation maximum | 93 % |
| ● note | non-condensing, non-icing |
| **Control circuit/ Control** | |
| **current consumption of magnet coil rated value** | 100 mA |
| **pickup current peak of magnet coil** | 250 mA |
| **duration of pickup current peak** | 200 ms |
| **Main circuit** | |
| operating voltage rated value | 24 V |
| **operational current rated value** | 250 mA |
| **Enclosure** | |
| **design of the housing** | special design |
| **material of the enclosure** | plastic, fiberglass reinforced thermoplast, self-extinguishing |
| **Actuator** | |
| ● Product equipment auxiliary release of guard locking | Yes |
| ● product feature latching | Yes |
| **locking mechanism design** | quiescent current principle |
| **detent force adjustable 1** | 25 N |
| **detent force adjustable 2** | 50 N |
| **angular offset between guard locking and actuator maximum** | 2° |
| **Display** | |
| **product function status display** | Yes |
| display version as status display by LED | 3 LEDs |
| **Contact** | |
| **circuit principle** | spring-actuated lock (closed-circuit principle) |
| **operating distance** | 2 mm |
| **assured operating distance OFF** | 20 mm |
| **assured operating distance ON** | 1 mm |
| **Installation/ mounting/ dimensions** | |
| **fastening method** | screw fixing |
| **design of the thread of the screw for securing the equipment** | 2x M6 |
| **tightening torque of fixing screw minimum** | 6 N·m |
| **tightening torque of fixing screw maximum** | 7 N·m |
| **Connections/ Terminals** | |
| **type of electrical connection** | M12 plug, 8-pole, A-coded |
| **wire length maximum** | 200 m |
| **contact assignment** | |
| ● of socket 1 at PIN 1 | A1 supply voltage Ub |
| ● of socket 1 at PIN 2 | X1 safety input 1 |
| ● of socket 1 at PIN 3 | A2 GND |
| ● of socket 1 at PIN 4 | OSSD1 safety output 1 |
| ● of socket 1 at PIN 5 | OUT diagnostic output |
| ● of the bushing 1 at PIN 6 | X2 safety input 2 |
| ● of the bushing 1 at PIN 7 | OSSD2 safety output 2 |
| ● of the bushing 1 at PIN 8 | IN magnet controller |
| **Supply voltage** | |
| **type of voltage of the supply voltage** | DC |
| **supply voltage rated value** | 24 V |
| **supply voltage** | 26.4 ... 20.4 V |
| **fuse protection type for external auxiliary power supply required** | 2 A gG |


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| **Inputs/ Outputs** | |
| **input voltage at safety-related digital input** | |
| ● for signal <0> at DC | -3 ... +5 V |
| ● for signal <1> at DC | 15 ... 30 V |
| input current at digital input for signal <1> typical | 10 mA |
| **input current at safety-related digital input for signal <1> typical** | 5 mA |
| **number of semiconductor outputs** | |
| ● for signaling function | 1 |
| ● safety-related | 2 |
| **design of the contactless switching element safety-related** | short-circuit proof, sourcing output |
| **type of diagnostic output** | short-circuit proof, sourcing output |
| **dark period at safety-related digital output maximum** | 0.5 ms |
| **dark period test duration** | |
| ● at digital input maximum | 5 ms |
| ● at safety-related digital input maximum | 1 ms |
| **dark period test interval** | |
| ● at digital input minimum | 40 ms |
| ● at safety-related digital input minimum | 100 ms |
| ● at safety-related digital output maximum | 1 000 ms |
| residual current at digital output with signal <0> maximum | 0.5 mA |
| **voltage drop** | |
| ● at safety-related output maximum | 2 V |
| ● at diagnostic output maximum | 2 V |
| **output current minimum** | 0.5 mA |
| **output current at safety-related output maximum** | 0.25 A |
| **output current at diagnostic output maximum** | 0.05 A |
| **Communication/ Protocol** | |
| design of the interface for safety-related communication | connector M12 |
| **transmission frequency rated value** | 125 kHz |
| **Safety related data** | |
| product function suitable for safety function | Yes |
| category according to EN 954-1 | 4 |
| IEC 62061 | |
| **Safety Integrity Level (SIL)** | |
| ● for position monitoring according to IEC 62061 | 3 |
| ● for guard locking according to IEC 62061 | 2 |
| **PFHD with high demand rate** | |
| ● for position monitoring according to IEC 62061 | 5.2E-9 1/h |
| ● for guard locking according to IEC 62061 | 2E-9 1/h |
| ISO 13849 | |
| performance level (PL) according to EN ISO 13849-1 | e |
| category according to EN ISO 13849-1 | 4 |
| **performance level (PL)** | |
| ● for position monitoring according to ISO 13849-1 | e |
| ● for guard locking according to ISO 13849-1 | d |
| **category** | |
| ● for position monitoring according to ISO 13849-1 | 4 |
| ● for guard locking according to ISO 13849-1 | 2 |
| IEC 61508 | |
| Safety Integrity Level (SIL) according to IEC 61508 | 3 |
| **PFDavg with low demand rate** | |
| ● for position monitoring according to IEC 62061 | 4.5E-4 |
| ● for guard locking according to IEC 62061 | 0.0018 |
| **T1 value for proof test interval or service life** | |
| ● for position monitoring according to IEC 61508 | 20 a |
| ● for guard locking according to IEC 61508 | 20 a |
| **type of monitoring** | guard locking |
| **response delay maximum** | 5 000 ms |


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| **OFF-delay time with safety-related request** | |
| ● when switched off via control inputs maximum | 1.5 ms |
| ● for safety-related shutdown via actuator maximum | 100 ms |
| conditional short-circuit current (Iq) at 400 V according to IEC 60947-4-1 rated value | 100 A |

## Approvals Certificates

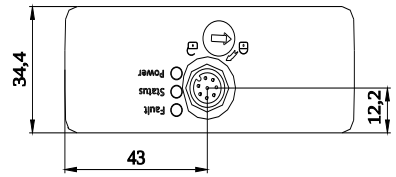
| General Product Approval | EMV | Functional Saftey |
|---|---|---|
| UL, EAC, CE EG-Konf., UKCA, RCM | | Type Examination Certificate |

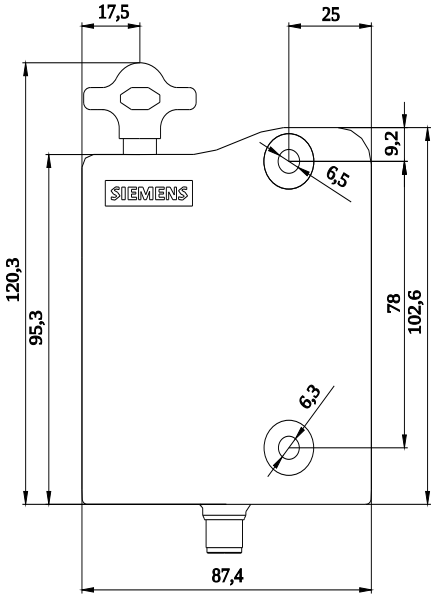
| other | Environment |
|---|---|
| Confirmation, 产品合格 QC PASS | Environmental Confirmations |

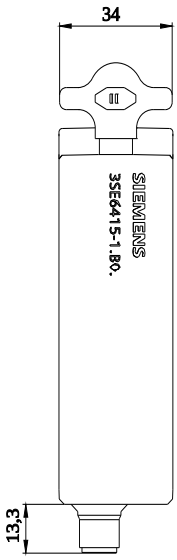
## Further information

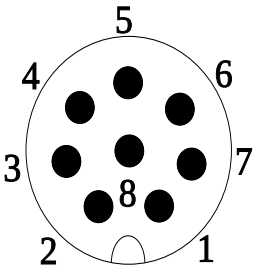
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|---|---|---|---|---|
| 1 | WH = White | → | A1 | supply voltage Ue |
| 2 | BN = Brown | → | X1 | safety input 1 |
| 3 | GN = Green | → | A2 | GND |
| 4 | YE = Yellow | → | OSSD1 | safety output 1 |
| 5 | GY = Grey | → | OUT | diagnostics output |
| 6 | PK = Pink | → | X2 | safety input 2 |
| 7 | BU = Blue | → | OSSD2 | safety output 2 |
| 8 | RD = Red | → | IN | solenoid control |


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