SIEMENS

## Data sheet 3SE6415-1AB02


RFID safety switch with tumbler, plastic, open-circuit principle, actuator monitoring, 24 V DC, with auxiliary release, IP69, locking force 1150 N, individually coded multiple teach-in, coding level high according to ISO 14119, diagnostic 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.

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| **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 |
| **locking mechanism design** | open-circuit principle |
| **design of the RFID coding** | individual coding, programmable several times |
| **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** | 30g / 11 ms |
| **vibration resistance according to IEC 60068-2-6** | 10 ... 150 Hz, amplitude 0.35 mm |
| **design of the switching function** | positive switching |
| **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 (Date)** | 07/01/2006 |
| **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 | 93 % |
| ● during operation maximum note | non-condensing, non-icing |
| **Control circuit/ Control** | |
| **current consumption of magnet coil rated value** | 100 mA |
| **locked-rotor current peak of magnet coil** | 250 mA |
| **duration of locked-rotor 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 |
| **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** | solenoid-locked (open-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 |
| **Inputs/ Outputs** | |
| **input voltage at digital input** | |

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| ● with signal <0> at DC | -3 ... +5 V |
| ● for signal <1> at DC | 15 ... 30 |
| **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 | 4 V |
| ● at diagnostic output maximum | 4 V |
| **output current** | 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** | |
| **Safety Integrity Level (SIL)** | |
| ● according to IEC 61508 | 3 |
| ● for position monitoring according to IEC 62061 | 3 |
| **performance level (PL)** | |
| ● according to EN ISO 13849-1 | e |
| ● for position monitoring according to ISO 13849-1 | e |
| **category** | |
| ● according to EN ISO 13849-1 | 4 |
| ● for position monitoring according to ISO 13849-1 | 4 |
| **PFHD with high demand rate** | |
| ● for position monitoring according to IEC 62061 | 5.2E-9 1/h |
| **PFDavg with low demand rate** | |
| ● for position monitoring according to IEC 62061 | 4.5E-4 |
| **T1 value for proof test interval or service life** | |
| ● for position monitoring according to IEC 62061 | 20 a |
| **category according to EN 954-1** | 4 |
| **type of monitoring** | actuator |
| **response delay maximum** | 5 000 ms |
| **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 |

**Certificates/ approvals**

| General Product Approval | EMC | Functional Safety/Safety of Machinery | Declaration of Conformity |
|---|---|---|---|

Confirmation

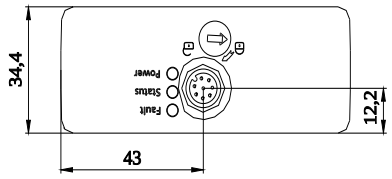
Type Examination Certificate

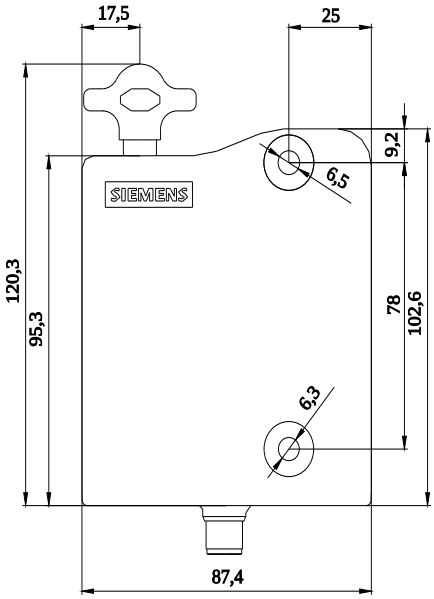
| Declaration of Conformity | other |
|---|---|

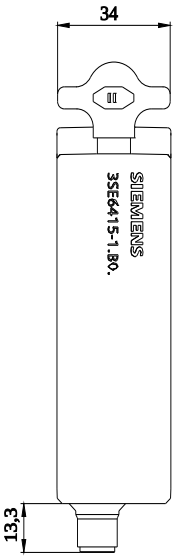
Confirmation

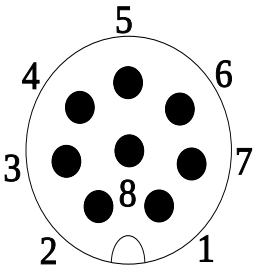
## Further information

**Siemens has decided to exit the Russian market (see here).**
https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business
**Siemens is working on the renewal of the current EAC certificates.**
Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).
**Information on the packaging**
https://support.industry.siemens.com/cs/ww/en/view/109813875
**Information- and Downloadcenter (Catalogs, Brochures,…)**
https://www.siemens.com/ic10
**Industry Mall (Online ordering system)**
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3SE6415-1AB02
**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SE6415-1AB02
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3SE6415-1AB02
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SE6415-1AB02&lang=en



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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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