



RFID safety switch with tumbler, plastic, quiescent current principle, tumbler monitoring, 24 V DC, with auxiliary release, IP69, locking force 1150 N, family-encoded, 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	family-coded, 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	universal coding
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
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 Prohibition (Date)	07/01/2006
Weight	0.6 kg
Sensor	
height of the sensor	35 mm
length of the sensor	120 mm
width of the sensor	87.5 mm
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
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
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
Inputs/ Outputs	
input voltage at digital input	
• with signal <0> at DC	-3 ... +5 V

<ul style="list-style-type: none"> for signal <1> at DC 	15 ... 30
input voltage at safety-related digital input	
<ul style="list-style-type: none"> for signal <0> at DC 	-3 ... +5 V
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> for signaling function 	1
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> at digital input maximum 	5 ms
<ul style="list-style-type: none"> at safety-related digital input maximum 	1 ms
dark period test interval	
<ul style="list-style-type: none"> at digital input minimum 	40 ms
<ul style="list-style-type: none"> at safety-related digital input minimum 	100 ms
<ul style="list-style-type: none"> at safety-related digital output maximum 	1 000 ms
residual current at digital output with signal <0> maximum	0.5 mA
voltage drop	
<ul style="list-style-type: none"> at safety-related output maximum 	2 V
<ul style="list-style-type: none"> 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)	
<ul style="list-style-type: none"> for position monitoring according to IEC 62061 	3
<ul style="list-style-type: none"> for guard locking according to IEC 62061 	2
PFHD with high demand rate	
<ul style="list-style-type: none"> for position monitoring according to IEC 62061 	5.2E-9 1/h
<ul style="list-style-type: none"> 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)	
<ul style="list-style-type: none"> for position monitoring according to ISO 13849-1 	e
<ul style="list-style-type: none"> for guard locking according to ISO 13849-1 	d
category	
<ul style="list-style-type: none"> for position monitoring according to ISO 13849-1 	4
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> for position monitoring according to IEC 62061 	4.5E-4
<ul style="list-style-type: none"> for guard locking according to IEC 62061 	0.0018
T1 value for proof test interval or service life	
<ul style="list-style-type: none"> for position monitoring according to IEC 61508 	20 a
<ul style="list-style-type: none"> for guard locking according to IEC 61508 	20 a
type of monitoring	guard locking
response delay maximum	5 000 ms
OFF-delay time with safety-related request	
<ul style="list-style-type: none"> when switched off via control inputs maximum 	1.5 ms

• for safety-related shutdown via actuator maximum 100 ms

conditional short-circuit current (I_q) at 400 V according to IEC 60947-4-1 rated value 100 A

Approvals Certificates

General Product Approval

EMV

Functional Safety



[Type Examination Certificate](#)

other

Environment



[Confirmation](#)

[Environmental Confirmations](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3SE6415-1BB01>

Cax online generator

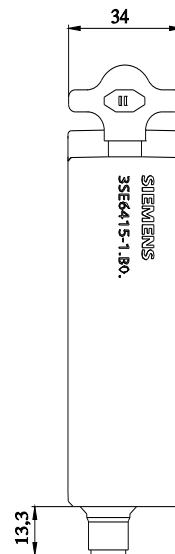
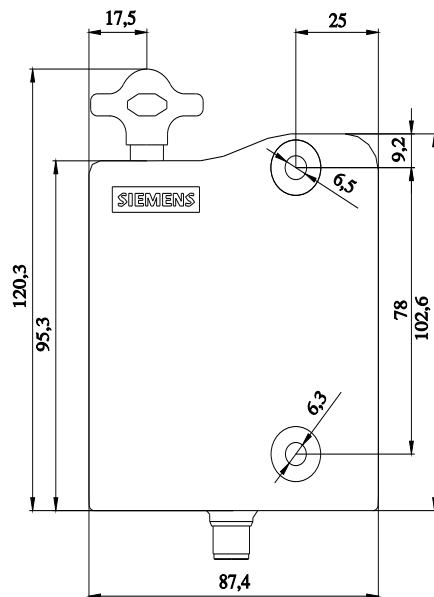
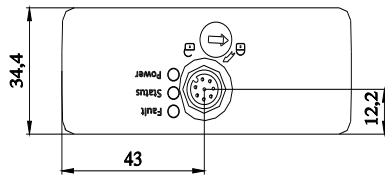
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SE6415-1BB01>

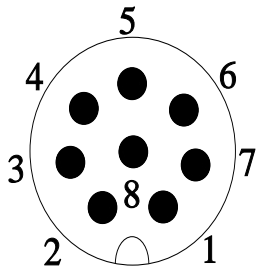
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3SE6415-1BB01>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SE6415-1BB01&lang=en





1	WH = White	→	A1	supply voltage U_e
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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