

MANUFACTURER OF SAFETY MATERIAL ZI des Richardets 34 allée du Closeau 93160 Noisy le Grand - France Tel : 00 (33) 01 43 03 03 03 Web : www.comitronic.net





## EC DECLARATION OF CONFORMITY

This document is the conformity declaration concerning safety switches and relays, conform to the Machine Directive 2006/42/CE and the Directive 2004/108/CE.

## INTERLOCKING SAFETY SWITCHES

#### Name of products :

Range	Safety Standards	Conformity
VIGILGUARD SFR serie	ISO 13849-1 / EN 62061 ISO 14119	CE



PL=c acc. ISO 13849-1 Up to PL e/SIL 3 with safety relay Checking period=1/year Time Machine=20 a dop=365 j hop=24 h F=1/h B10d=1.000.000 Coding level : low acc. ISO 14119 Medium level on demand Holding force data : safe FZh = 150 daN



#### Description :

Coded safety interlock device with process Acotom<sub>3</sub>® principle in combination with the AWAX serie of safety-monitoring modules from COMITRONIC-BTI or an equivalent safety-oriented control system fulfilling the requirements.

Person authorized for the compilation of the technical documentation : Christophe PAYS

34 Allée du Closeau 93160 Noisy le Grand



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Authorised signature Michel Conte Managing Director



Launch year 2013

# Technical manual of VIGILGUARD-SFR

You have just acquired a BTI, we thank you for your confidence. In order to guarantee high reliability, this new technology has been developed and manufactured with the utmost care.

1. Description

The VIGILGUARD-SF-R allows for the non-contact door of dangerous machinery. This innovative product uses technology to monitor the strike and the door sensor eliminates the usual door. The VIGILGUARD-SF-R associated with its controller discrepancy ensures the main machine safety. The electromagnetic part of the product is controlled by a circuit which increases ENERGY BOOST the tear strength of the bolt in the unlocking phase. Then the system enters ECONOMY mode for low power consumption. VIGILGUARD the-SF-R has an electronic control that enables the realization of a series arrangement with automatic recognition. This system "SMART CONSUMPTION" assures that the installation will be the lowest energy consumption possible. The VIGILGUARD-SFR consists of an interlocking block, coded with a striker and a beveled to hold any type of door (pulling, pushing). The electrical connection is provided by a cable reinforced with a 5m gland PG13, 5. This product is compatible with 45mm groove profiles.

### 2. Mounting (VDI 2230)

Position of authorized product: vertical bolt downwardly or + / -90°. The VIGILGUARD-SF-R and its keeper is set by 2 M6 screws class 12.9 (max 16 Nm clamping flat washer). The slots allow you to adjust the best alignment: set the power interlocking. Adjust the position of the striker by advancing to the contact bolt / bottom latch, set the lock. Do not wash with a pressure washer and inject fluid through the inlet of the bolt. Check that the power supply is well 24Vdc, adjust if necessary. Put under voltage and check that the indicator lights green. Implement the screw covers. If the cable must be extended, the minimum section of 0,5 mm<sup>2</sup> son is and do not exceed 30m in total.

### 3. Operation VIGILGUARD-SF-R

a) The bolt is the strike (door locked)

- switch LOCK (green) = open
- switch 1 : black / red = closed
- switch 2 : yellow / gray = closed

- switch DOOR (pink and violet): 24V (indicates "closed door") - LED on GREEN

- . . . . . . .
- b) Unlock the doorswitch LOCK (green) = closed
- switch 1 : black / red = open
- switch 2 : vellow / grav = open
- switches DOOR (pink and violet): 24V (indicates "closed door")

- LED on RED

- c) The door is open
- LOCK switch (green) = open
- switch 1: red / black = open
- switch 2: yellow / gray = open

- switch DÓOR (pink and violet) : 0V (indicates "open door") - LED off

- d) The door is open but LOCK activated
- LOCK switch (green) = closed
- switch 1: red / black = open
- switch 2: yellow / gray = open

- AUX contact (pink and purple): 0V (indicates "open door") - LED on RED

### 4. Outside emergency unlocking

If the electric release does not operate (case of power failure), from the outside, use a triangle and inserrer key into the slot and rotate counter-clockwise until it stops. To use "Lockout", a handle is available as an option that mounts rear side of the product.

5. Specifications		
Supply PELV/SELV	20 VDC to 30 VDC	
Consumption	BOOST: 35~79 W ECO: 3~5 W	
Power calculation	* Ptotal=79+(N-1)x5 (en W)	
Interlock contacts	Switch 1/switch 2 : 2A / 50V	
Door contacts	switch 3/switch 4 : PNP / 0,5 A	
Lock control	PNP/12~30 VDC-2~5mA	
Protection	IP 65	
Permanent temperature	-15°C / +45°C	
Internal temperature limits	release : +72°C reset : +65°C	
Strocke bolt	14 mm	
Gap door	2 mm to 4 mm	
Time LOCK-ECO	~ 63 ms	
Risk duration Response time	5 ms 5 ms	
Shear	2000 N	

\* Note : N is the number of VIGILGUARD-SFR in series

### 6. LED display

LED	Indication
GREEN	Lock the keeper and flawless
RED	Unlocked the latch bolt and flawless
OFF	Open door and latch output
RED or ORANGE CLIGNOTANT 1 time every 1s	The supply voltage is out of specification: <20 V or > 30 V
RED or ORANGE CLIGNOTANT 2 time every 1s	Internal temperature > 72 ° C. The restart is done when the internal temperature descends below 65 ° C
RED or ORANGE 2 pulses every 2s	Electromagnet default
RED or ORANGE 4 pulses every 4s	Default sequential control
RED or ORANGE 8 pulses every 8s	Stuck bolt

### 7. Wiring Diagram





#### CALE T - - - for mounting type T and assembly "pulling"