MANUFACTURER OF SAFETY MATERIAL ZI des Richardets 34 allée du Closeau 93160 Noisy le Grand - France Tel : 00 (33) 0143030303 Web : www.comitronic.net

RoHS
Compliant

## 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 <br> SFR serie | ISO 13849-1 / EN 62061 <br> 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 $=24 \mathrm{~h}$ $F=1 / \mathrm{h}$ $B 10 d=1.000 .000$
Coding level : low acc. ISO 14119 Medium level on demand Holding force data : safe FZh = 150 daN

 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 Allee du Closeau
93160 Noisy le Grand


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Authorised signature
Michel Conte
Managing Director


## 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 dispart 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 contro tic 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 by a cable reinforced with a 5 m gland PG13, 5 . This product is compatible with 45 mm groove profiles.

## 2. Mounting (VDI 2230)

Position of authorized product: vertical bolt downwardly or $+/-$ $90^{\circ}$. 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 class 12.9 (max 16 Nm clamping flat washer). The slots allow you to adjust the best alignment: set the power interiocking. Adjust
the position of the striker by advancing to the contact bolt $l$ ottom latch, set the lock. Do not wash with a pressure washer and inject fluid through the inlet of the bolt. Check that the power nd check that the indicator lights green. Implement the screw overs. If the cable must be extended, the minimum section of $0,5 \mathrm{~mm}^{2}$ son is and do not exceed 30 m 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): 24 V (indicates "closed door") LED on GREEN
b) Unlock the door
switch LOCK $($ green $)=$ closed
switch 1 : black $/$ red $=$ open
switch 2 : yellow / gray = open
switches DOOR
switches DOOR (pink and violet): 24 V (indicates "closed door") on RED
c) The door is open

LOCK switch (green) = open
switch 1: red / black = open
switch 2: yellow / gray =
switch DOOR (pink and violet) : OV (indicates "open door") LED off
d) The door is open but LOCK activated

OCK switch (green) = closed
switch 2: yellow / gray = ope
AUX contact (pink and purple): OV (indicates "open door") ED on RED
4. Outside emergency unlocking

If 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", product.

| 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 / 50 V |
| Door contacts | switch 3/switch 4 : PNP $/ 0,5 \mathrm{~A}$ |
| Lock control | PNP/12~30 VDC-2~5mA |
| Protection | IP 65 |
| Permanent temperature | $-15^{\circ} \mathrm{C} /+45^{\circ} \mathrm{C}$ |
| Internal temperature limits | release : +72 ${ }^{\circ} \mathrm{C}$ reset : +65 ${ }^{\circ} \mathrm{C}$ |
| Strocke bolt | 14 mm |
| Gap door | 2 mm to 4 mm |
| Time | $\sim 63 \mathrm{~ms}$ |
| LOCK-ECO |  |
| Risk duration | 5 ms |
| Response time | 5 ms |
| Shear | 2000 N |

Note : $\mathbf{N}$ 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 <br> CLLGNOTANT <br> 1 time every 1s | The supply voltage is out of specification: <br> <20 V or $>30 \mathrm{~V}$ |
| RED or ORANGE <br> CLIGNOTANT <br> 2 time every 1 s | Internal temperature $>72^{\circ} \mathrm{C}$. The restart is <br> done when the internal temperature descends <br> below $65^{\circ} \mathrm{C}$ |
| RED or ORANGE <br> 2 pulses every 2s | Electromagnet default |
| RED or ORANGE <br> 4 pulses every 4s | Default sequential control |
| RED or ORANGE <br> 8 pulses every 8s | Stuck bolt |

7. Wiring Diagram




Full redundant technology

## 11. Item code

VIGILGUARD $\square \square \square$ - MKT=cable PUR 50 cm straight connector M23 $=$ cable 10 wires lenght 5 m


GACHEi=reverse door encoding
$=$ standard door encoding
L _ - 1=without code doo
$1=$ without code do
$2=$ with code door
$----\underset{\substack{\text { P=pushing } \\ \text { T=pulling }}}{\substack{\text { Pr }}}$
9. Timeline version of MKT


## 10. Advantages of the system

Security 2 in 1 : Association of the redundant control of the position of the door with the locking control also redundant.

- A minimized strictly mechanical.
- The process ACOTOM serving the interlock
- A shear strength of 2000 N .
- Reinforcement steel in the thickness of the case of PA6 glass fiber reinforced
- Ring and sliding bolt 316L
- Seal O-ring in a groove of the bolt
- Draw powerful bolt with minimum consumption
- Manual release by key triangle and emergency handle

This product has been designed and developed by BTI Comitro-nic-France and 70\% of the production is in France.

12. Additional Information

Version VIGILGUARD-SF-R-Tx: pulling door


7x7 handle (optional) panic evacuation

Version VIGILGUARD-SF-R-Px: door push


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

