COMITRONIC - BTI

*MANUFACTURER OF SAFETY MATERIAL*
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ISO 9001 : 2008

REACH CONFORMITY

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 EMC Directive 2004/108/CE.**

## ELECTROMECHANICAL SAFETY MODULES

| Range | Standards | Approvals | Category ISO 13849-1 |
|---|---|---|---|
| C5SX<br>C4SX | ISO 13849-1 | CE | PL=e<br>B10d to 5A = 100 000<br>DC = 99 %<br>TM= 20 years |

**Test conditions :**
**Switching Current = DC13-5 A / 24 V or AC15-5 A / 250 V**
**Power Supply = 24 V PELV/SELV**
**Ambient Temperature = +25 °C**

**Serial number coding & example**

| YEAR | WEEK | NAME OPERATOR / | NAME TEST MANAGER | POSITION |
|---|---|---|---|---|
| 11 | 36 | AB | CD | 03 |

**Quality Management System : AB CERTIFICATION A879**
**Name of Technical authority : Christophe PAYS from COMITRONIC-BTI**

*photo non contractuelle

**This product range is intended to increase the safety line of the safety relay.**
**The safety modules is designed and manufactured following UL508 / CSA C22.2 regulation.**
**Safety modules must be used following diagram and directives described in our data sheet.**

**Noisy le Grand, 22th sep. 2011**
**For BTI,**
**Mrs Michèle LEFOULON ,**

PROCESS ACOTOM

Launching year 2005

# C5SX/24V technical data sheet

V0.1

**Thank you for your confidence in BTI products.**
**This product has been designed and manufactured according to the highest standards.**

## 1. Application

The C5SX is a module designed to increase the number of safety lines of a device conform to EN954-1 or to adapt the light curtains with solid-state outputs. With the C5SX, you maintain your safety category. This module has 4 NO safety lines with 8A/250VAC switching capacity each, one NC auxiliary line with a switching capacity of 4A/250VAC and a feedback loop.

## 2. Fixing and wiring

22.5 mm wide case with plug-in terminals mountable on a 35 mm symmetrical DIN rail according to DIN 50022.
The maximal tightening couple of the terminals: 0.5 Nm.
The maximal section of the wiring cable: 2.5 mm².

## 3. Functioning

Connect the module on which you want to add safety lines. Starting mode : 13/14, 23/24, 33/34, 43/44 lines are open and Y1/Y2, 51/52 are closed. LED V1 and V2 are lit off.

a) The system is activated by the closing of the two NO lines. One is connected between 24VDC and A1a, and the other one between 24VDC and A1b. A2a and A2b are at 0V. When the lines close, the Led V1 ("a" channel) and V2 ("b" channel) light up. The lines 13/14, 23/24, 33/34, 43/44 close and the lines Y1/Y2, 51/52 open.

b) The system is activated by the closing of the NO lines. One is connected between 24VDC and A1a/A1b and the other one between 0V and A2a/A2b. When the lines close, the Led V1 ("a" channel) and V2 ("b" channel) light up, the lines 13/14, 23/24, 33/34, 43/44 close and the lines Y1/Y2 and 51/52 open.

c) When the lines of the module open, the Led V1 and V2 lights off, the lines 13/14, 23/24, 33/34, 43/44 open and the lines Y1/Y2, 51/52 close.

## 4. Note

All the security installations should be verified perdiodically. Our engineers stay at your disposal if you have any question or a particular request( such as a study,a particular manufacturing ...) Do not hesitate to contact us.

## 5. Technical characteristics

| | |
|---|---|
| Supply voltage (Un) | 24VDC |
| Tolerance | -15 % / +10 % |
| DC Consumption | < 3.5W (DC) |
| Safety lines | AC1 8A-250V/AC15 5A-250V/DC13 5A-24V |
| Auxiliary line | 4A / 250VAC resistive |
| Testing loop | 24VAC/DC |
| Minimal switching power | 50 mW or 10 mA / 5 V |
| Life expectancy | 10 000 000 mechanical operations |
| Response time | < 20ms |
| Temperature | -20 °C / +60 °C |
| Protection class | IP20 |
| Dimensions L x H x P | 22,5 x 100 x 111mm |

## 6. Wiring example cat. 4

Safety lines: 13-14, 23-24, 33-34, 43-44
Auxiliary line: 51-52
Testing loop: Y1-Y2