

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.

SAFETY SWITCHES

We hereby certify that the hereafter described safety components both in its basic design and construction conforms to the applicable European Directives.

Name of products :

Range	Safety Standards	Conformity
AMX3	IEC 60947-5-2	CE/UL/CSA
AMX4	IEC 60947-5-3	
AMX5	EN 62061 / ISO 13849-1	
AMX5-OX	UL508 NKCR/C22.2 14M91	
AMX3-OX		

PL=d acc. EN ISO 13849-1
 SIL 2 acc. EN 62061
 Classification=PDF-S
 acc. EN 60947-5-3
 Input Power Supply = 24VDC
 Checking period=1/year
 PFH=1,42 E-08
 PFD=1,24 E-03
 PROOF TEST=20 a
 dop=365 j
 hop=24 h
 F=1/h
 B10d=2.000.000
 Supply : 24 VDC PELV/SELV
 Type 4 acc. ISO 14119
 average level on request



Description :

Coded safety switch with process Acotom[®] for detects the position of the doors. It can used without safety relay.

Person authorized for the compilation of the technical documentation :

Christophe PAYS

34 Allée du Closeau

93160 Noisy le Grand



Place and date of issue : Noisy, 18 dec. 2014

Authorised signature

Michel Conte

Director

PROCESS ACOTOM[®]



FURTIF AMX3 technical data sheet V5.0

You have just purchased a BTI product – thank you for your confidence in BTI products.
This high-tech product has been developed and manufactured to the highest quality standards to ensure maximum reliability.

1. Scope of application

AMX3 devices are coded electronic autonomous sensors using our ACOTOM3® process, allowing the opening of mobile protectors on dangerous machines to be detected. It is able to detect its own failure and lock itself, preventing the safety line from closing. A sensor consists of two PA6 or 316L stainless steel (AMX3OX) transmitting and receiving parts. The receiver supplies one potential-free NO safety lines and an NC auxiliary contact. This safety product must be checked at least once a year.

2. Fixing and wiring

Equipped with two square lugs, the two components can be easily fixed using a 4 mm diameter screw (stainless steel washers provided). The device is to be safely installed in such a way that the transmitter or receiver cannot be dismounted. Special stainless steel anti-tamper screws are available as an option (BH4). The receiver is fitted with a PVC multicore cable that is 5.5 mm in diameter and comes in a standard length of 3, 6 or 12 m (other lengths available on request). The sensor cable has to be wired in such a way that it is protected against external damage by using, for example, mechanical armouring. Once the sensor is wired, it is advised that the safety line (Red-Black or Orange-Grey) be checked, in order to ensure that there is no short-circuit.

3. Functioning

Supply: 24 VAC/DC. If the two targets of the transmitter AMX and receiver are facing one other, and the code is recognised, the NO lines close and the auxiliary line opens. The yellow LED lights up. If the code is not recognised, if there is a misalignment or if the sensor detects the failure of one of its safety contacts, the functional line opens. Please ensure that the sensor and receiver do not have mechanical contact when the door is closed and keep a distance of 1 mm between the two parts. Detection is carried out up to a distance of 10 mm. When a material is located between the transmitter and the receiver, a test should be performed to determine the distance of detection. The AMX3 auxiliary line (orange/white) is open when the switch is not supplied. The device is to be installed in such a way that it is not possible to insert parts of the body such as fingers or hands through the door in dangerous areas.

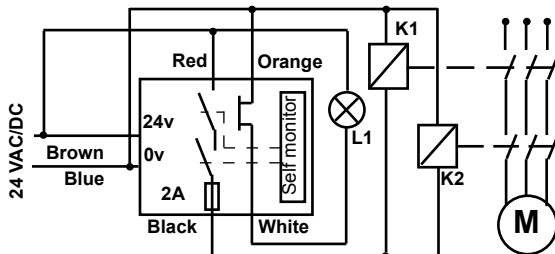
4. UL508-conformity information

Wiring	60/75°C copper only
Wire size	24AWG
Tension force	0,68Nm
Enclosure type 1/70°C ambient	UL supply of 4 A max. listed 24 V class 2 or transformer protected by UL fuse

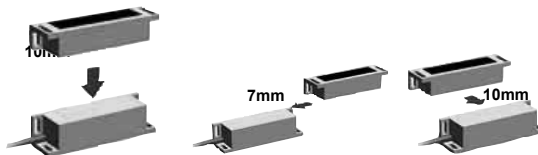
5. Technical characteristics

Supply voltage	24 VAC -15% / +10% 50/60Hz (compliant)
PELV/SELV IEC 60204-1	24 VDC -15% / +10% (certified)
Rated operating current	40 mA (DC) / 50 mA (AC)
Protection class	II
Degree of pollution	3
Ambient temperature	-25 °C / +60 °C
Protection class	PA6:IP 67/68 (EN60529) / 316L:IP 69K
Resistance to vibration	10~55 Hz, 1.5 mm double amplitude
Resistance to shock	10 g
Switching frequency	< 2 Hz
Response time	< 400 ms (Ton)
Duration of risk	< 15 ms (Toff)
Safety line	AC1-AC15-DC13 : 50 VAC/DC / 2 A pilot duty & general use (5 VDC/10 mA mini)
Auxiliary output	NF : 24 V / 250 mA general use
Diagnostic output	Short-circuit proof (internal fuse)
System protection	Short-circuit protection (internal fuse)
Detection distance	Sn=12 mm (rated switching distance)
emitter/receiver	Sao=10 mm (assured switching-on distance) Sar=15 mm (assured switching-off distance) Hysteresis 2 mm Repeat accuracy < 5%

6. Wiring



7. Activation distance in the air



8. Size (mm)

