COMITRONIC - BTI

MANUFACTURER OF SAFETY MATERIAL
ZI des Richardets
34 allée du Closeau
F93160 Noisy le Grand - France
Tel : 00 (33) 01 43 03 03 03
Web : www.comitronic.net

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 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-MKT	**IEC 60947-5-2** **IEC 60947-5-3** **EN 62061 / ISO 13849-1** **UL508 NKCR/C22.2 14M91**	**CE**
AMX5-MKT		
AMX5-OX-MKT		
AMX3-OX-MKT		

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
Locking device :
Type 4 acc. ISO 14119
average level on request

Unofficial Photo

Description :
Coded safety switch with process Acotom$_3$® 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®
BTI
SECURITE MACHINE

Launching year 2000

AMX5-MKT sensors : technical data sheet

V4.0

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

AMX5-MKT 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 (AMX5-MKT-OX) transmitting and receiving parts. The receiver supplies two potential-free NO safety lines and an NC PNP 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 PUR multicore 50cm cable that is 6mm in diameter and comes in a standard M12 connector. 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 (1-6 or 2-7) be checked, in order to ensure that there is no short-circuit.

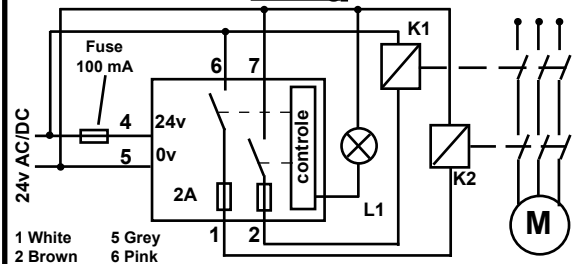
3. Functioning

Supply: 24 VAC/DC. If the two targets of the transmitter 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 AMX5-MKT auxiliary line (3) 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.

5. Technical characteristics

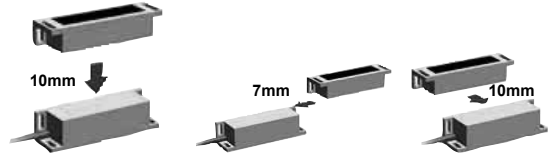
Supply voltage PELV/SELV IEC 60204-1	24 VAC -15% / +10% 50/60Hz (compliant) 24 VDC -15% / +10% (certified)
Rated operating current	40 mA (DC) / 50 mA (AC)
Protection class	II
Degree of pollution	3
Ambient temperature	-25 °C / +60 °C
Protection class	PA6:IP 67/68 (EN60529) / 316L:IP 69K
Resistance to 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 System protection	Short-circuit proof (internal fuse) Short-circuit protection (internal fuse)
Détection distance emitter/receiver (IEC 60947-5-3)	Sn=12 mm (rated switching distance) Sao=10 mm (assured switching-on distance) Sar=15 mm (assured switching-off distance) Hysteresis 2 mm Repeat accuracy < 5%

6. Wiring



1 White 5 Grey
2 Brown 6 Pink
3 Green 7 Blue
4 Yellow 8 Red (nc)

7. Activation distance in the air



8. Size (mm)