



MANUFACTURER OF SAFETY MATERIAL
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REACH CONFORMITY



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 RELAYS

Range	Standards	Approvals	Category ISO 13849-1
AWAX27XXL	ISO 13849-1 / EN 60947-5-1 EN 61326-3-1 / EN 62061 UL508 NRNT NRNT7 C22.2 n°14-M91	CE TÜV Rheinland UL CSA	Performance Level (PL) = e Safety category = 4 or SIL3 MTTFd = 415 years DC = 99 % CCF = 90 % TM= 20 years

Test conditions :

Switching Current = DC13-5 A/24 V, AC15-5 A/250 V, AC1-8A/250V
 Power Supply = 24 V PELV/SELV or 24 VAC
 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
 AWAX system safety level 4 approval : TUV Rheinland
 Name of Technical authority : Christophe PAYS from COMITRONIC-BTI



*photo non contractuelle

This product range is intended to monitor an emergency stop or safety sensor.
 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 ,



AWAX27XXL safety module technical data sheet

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

1. Application

The AWAX27XXL, category 4 has been designed to control mechanical switches, switches using the process ACOTOM® (BTI's trademark), or the emergency push buttons with 2 NC lines at least, located in 2 distinct zones. This module has a common supply voltage and 8 safety lines (2 x 3 NO + 2 x 1 NC), each line has a switching capacity of 8A/250VAC. The safety relay can be used in applications up to Kat4 PLe acc. EN ISO 13849 or Sil3 acc. EN 62061. It is recommended to test the system at least once a year.

2. Mounting instructions

The user is to install external fuses acc. the wiring example. 22.5mm wide case mountable on a symmetrical DIN rail 35mm according to DIN 50022. The tightening couple of the terminals is 0.68 Nm. Use 60/75°C copper wire only. The maximum diameter of the wiring cable is 2.08mm² (14 AWG). To provide a sufficient protection for the operators against electrical shock, the complete wiring between the safety relay unit AWAX26XXL and all external elements (e.g. emergency stop buttons) has to be performed by cables with isolation which is dimensioned for a nominal voltage of 250V even if the nominal voltage on the cable itself is only 24Vac/dc. The safety relay is to be installed in an IP54 environment.

3. Operating

Select the reloading mode of each zone with the two switches placed at the back of the module. Connect one switch or safety switch to each zone. Starting mode : lines 13/14, 23/24, 33/34, 43/44, 53/54, 63/64 open and 41/42, 71/72 closed. LED ON lit up.

Normal mode (N) of ZONE 1

a) The zone is reset by a NO contact (PB1). When the contact PB1 closes and if T11/T12 and T21/T22 lines are closed, then the 13/14, 23/24, 33/34 lines close and the 41/42 lines open. The LED V1 and V2, light up.

b) The T33/T34 contact should open, if not a fault will be detected at a next working cycle (locking and LED V1 lit up).

c) If the T11/T12 and T21/T22 lines open simultaneously, the safety lines change to their starting mode and the LED V1/V2 go out. If only one line (ex: T11/T12) opens, only the LED V1 goes out, the safety lines change to their starting mode and the module will stay locked in this position : an action on the T33/T34 contact will not have any effect. Check the T21/T22 line in this example.

Switch in automatic reloading mode (SR) of ZONE 1

The reloading contact is replaced by a wire.
Careful : the resetting has been done automatically after the correction of the fault. Its application has been prohibited in the access control of zone.
If the LED ON and V1 lights at the time of the switching on, check that the switch at the back of the module is on "SR".

Normal mode (N) of ZONE 2

operating identical to zone 1

Reloading contact T63/T64.
Safety lines NO : 43/44, 53/54, 63/64 and NC : 71/72.
Visualization Led : V3 and V4.

Switch in automatic reloading mode (SR) of ZONE 2

operating identical to zone 1

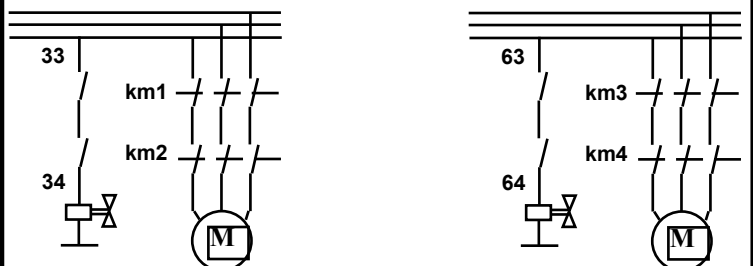
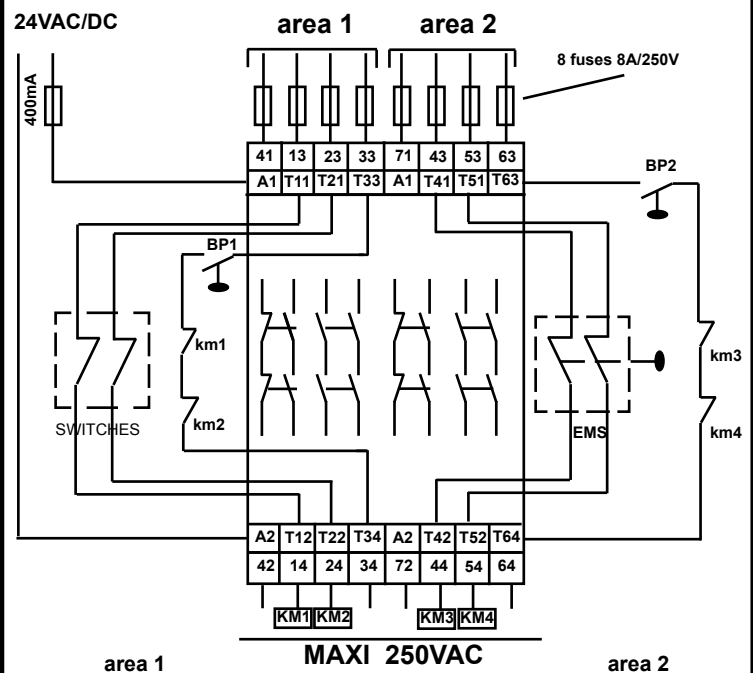
4. Notes

It is possible to connect several emergency stop in series with positive opening or more AMX Series Sensor or Anatom. In the case of ANATOM 78S, we limit the number of sensors in series to 30.
For the ANATOM 6S, we limit to 5. The customer must ensure that there is no masking of default when connecting to sensors in series.

5. Technical Characteristics

Supply voltage (Un)	24Vac/dc to be provided by a Class 2 power supply or a UL transformer protected by a UL Listed fuse rated 4A max.
Tolerance	-15 % / +10 %
Power consumption	2W (DC) ; < 5VA (AC)
Electrical protection	DLC : Electronic current-limiting circuit-breaker
Switching output	AC1 8A-250V/AC15 5A-250V/DC13 5A-24V
Minimal Switching power	50 mW or 10mA/5V
Response time	< 20ms
Switching rate	SR Mode : 5Hz/10mA and 0,1Hz/8A
Temperature	-20 °C / +60 °C
Protection class	IP20
Dimensions WxHxP	22,5 x 100 x 111mm
Weight	178 g

6. Wiring



7. Anschlußbeispiel AWAX27XXL mode SR

