

## SSR-200 ARMS

# System Security Anti Rollover x Articulated Arms

The device "SSR-200 ARMS" is a tool to implement security and agricultural machinery operators with articulated arm against the danger of tipping over as a result of 'arm extension or when traveling on land too steep / inclined. Moreover, in case of actual rollover, will automatically switch off the machine functions by limiting the dangers arising from the state of tipping. Through continuous monitoring of the transverse axis and the longitudinal axis of the machine and of the working angles of the two sensors mounted on the respective arms in function of programmable thresholds to reaching / exceeding the values set in the device provides to emit a signal (on-off or proportional with increasing intensity) to alert the operator of the hazardous condition. If the machine were to swing (maximum threshold is exceeded) the device stops a second signal for supplying a safety switch (normally supply combustion engine). The device is of particular interest for the application of all those machines with movable arms and using rotary tools (blades, mulches, etc..), Where in the event of rollover, disconnection command tool is entrusted exclusively to the operator. Another possible application is to control and safeguard against the operation of the internal combustion engine beyond the limits of inclination specified by the manufacturer. With the model ARMS is possible to obtain precise measurements even at medium-high speed with the aid of eight digital inputs which can measure the angular velocity of the medium.

### TECHNICAL unit:

Power supply: ..... Model 12V ....  
(7V/15V): ..... Model .... 24V (15V/30V)  
Power consumption: ..... 200mA  
Operating Temperature: ..... -40 to +85 ° C  
Sensitivity: ..... 0.1 °  
Mean error: ..... 0.1 °  
Accelerometers 3-AXIS X, Y, Z: ..... 2 ...  
Output: 1. # 2 RELAY 'tipping NC contacts in series Alarm  
maximum current: ..... 2 ..... 16A.  
Early warning tipping Contacts NC: .. maximum current 2A 3.  
CANBUS port  
4. Analog Signal tilt axis X: ..... 0 - 10V  
0 - 5V  
5. Analog signal Y axis inclination: ..... 0 - 10V  
0 - 5V  
6. Digital Signal: Open Collector .....  
9. Digital inputs (selectable NPN or PNP): ..... No. 8  
10. Relay outputs' 1st: ..... n ° 2  
Metal Box: ..... 100x100x59  
Degree of protection: ..... IP66/67  
When the machine is safety relay contacts are closed,  
the arrival of a dangerous situation, the relays open.

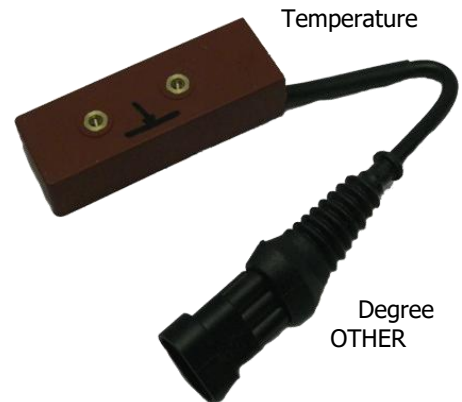


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#### TECHNICAL Transducers:

Power supply: ..... from 10.5V to 32V ..  
 Reading Range: .....  $\angle$  -100 ° to +110 °  $\angle$   
 range: ..... -25 ° C to 85 ° C  
 Resolution: ..... 0.088mA ..... / 0.6 °  
 Consumption to disconnected outputs: ..... 18mA @ 12V 20mA @ 24V  
 Fall of Max output voltage: 6.5V .....  
 Response Time: 125ms .....  
 Error @ Tamb 0 ° C to 50 ° C:  $\pm$  2.0 ° .....  $\angle$   
 Error @ Tamb -25 ° C to 85 ° C:  $\pm$  4.0 ° .....  $\angle$   
 Linearity error  $\pm$  2% ..... f.s.  
 Shock resistance (SWITCHED): ..... 9'800m / s<sup>2</sup> (1000G)  
 Electrical connection: AMP Superseal ..... 250  
 of Protection: IP67 .....  
 VERSIONS:  $\angle$  .....  $\pm$  10 ° ,  $\pm$  105 °  $\angle$  ,  $\angle$   $\pm$  175 ° , 360 °  $\angle$



#### Programming via PC (with software range and 1 suite USB-SPI):

- Auto-learning of leading zeros
- Setting analog output (5V or 10V)
- Gain of the analog signal
- Sensitivity (average value bed set xn ° readings)  
field can be set from 1 to 100 readings
- Angle of operation ALARM relay
- Angle of operation PRE-ALARM relay
- Reading in the number of interventions of the PRE and
- Dell 'ALARM
- Measurement of the 'corner in Real Time
- N ° pulse encoder revolution or transducer Pk
- Wheel diameter in cm
- Distance between the wheels in cm
- Position of the level of the wheel in cm
- Working angle of the 2 arms
- Degrees of downgrading working angle
- Angular velocity limit
- Intervals encoder reading (step by 100mS)



#### PRODUCT COMPLIANCE WITH EUROPEAN DIRECTIVE 2002/95/EC CE RHOS

**Item Code: F00176-ARMS-000**



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#### DISPLAY PANEL (OPTIONAL)

##### SPECIFICATIONS:

|                           |                                |
|---------------------------|--------------------------------|
| Power supply:             | 8 ... - 30Vdc                  |
| Degree of Protection:     | IP 65 front side,<br>IP30 Rear |
| Working temperature:      | -20 ° C + 85 ° C               |
| Temperature max.:         | -35 ° C to + 90 ° C            |
| Backlit buttons           | 7                              |
| Digital Inputs            | 20                             |
| Analog Inputs / frequency | 4                              |
| Output power (2 Amps)     | 4                              |
| CAN BUS Line              | 2                              |
| Inputs NTSC / PAL         | 4                              |
| RS232 input               | 1                              |
| RS485 input               | 1                              |
| USB Input                 | 1                              |
| SD Card Slots             | 1                              |
| GSM module (option)       | 1                              |
| Connectors: Molex         | MINIFIT jr.                    |
| Dimensions: 170x230x20mm  |                                |

**EMC: ISO 7637-2 ISO 2575**



#### MECHANICAL AND ELECTRICAL FEATURES OF PLASTICS:

##### Silicone: Non-Conductive

|   |                                  |
|---|----------------------------------|
| Max:  | -55 ° C ~ +250 ° C               |
| Specific Gravity 1.15                               |                                  |
| Tensile Strength:                                   | 90Kg/cm <sup>2</sup>             |
| Tear Strength:                                      | 20Kgf/cm                         |
| Compression:  | September 60% (180 ° C x 22hrs.) |
| Elongation at break:                                | 350%                             |
| Volume resistivity:                                 | 8 x 10 <sup>14</sup> ohm cm      |
| Breaking Isolation:                                 | 24kV/mm                          |
| Colour: black                                       |                                  |
| Dielectric Constant:                                | 4.2 (50Hz)                       |
| Tangent Dielectric:                                 | 13% (50Hz)                       |
| High resistance to 'alcohol and sweat               |                                  |
| High resistance to ultra violet rays and detergents |                                  |

**Item Code: F00208**

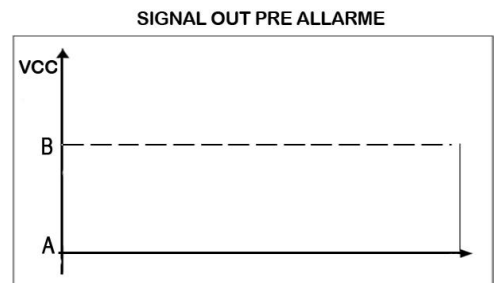
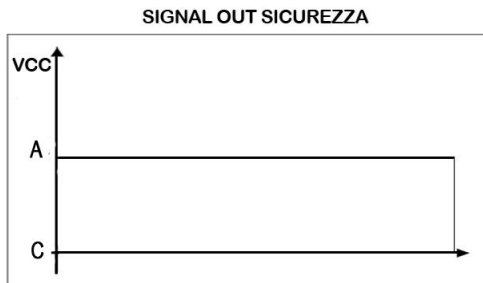
#### EXAMPLES OF APPLICATIONS and positioning transducers:



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As in the example in the tractor at the top, the same technology can be applied on variety of machines, such as forklift trucks, tractors and telescopic platforms are.



The System Security Anti Rollover ARMS applied on aerial platforms from the possibility of being able to control the load in elevation on inclined planes.

Thanks to the continuous control of the x and y axes of the machine and of the working angles of the arms in the case of exceeding of the angles of security set, intervenes bringing the load in a safety position or blocking its operation.



Tractors Telehandler In the Security System Anti Rollover ARMS monitors during operation of the machine working angles. In the case of approaching the corner of safety, the operator is alerted by an acoustic signal of view. At the overcoming of the angles of safety, the vehicle is stopped or brought within the limits of the security parameters.

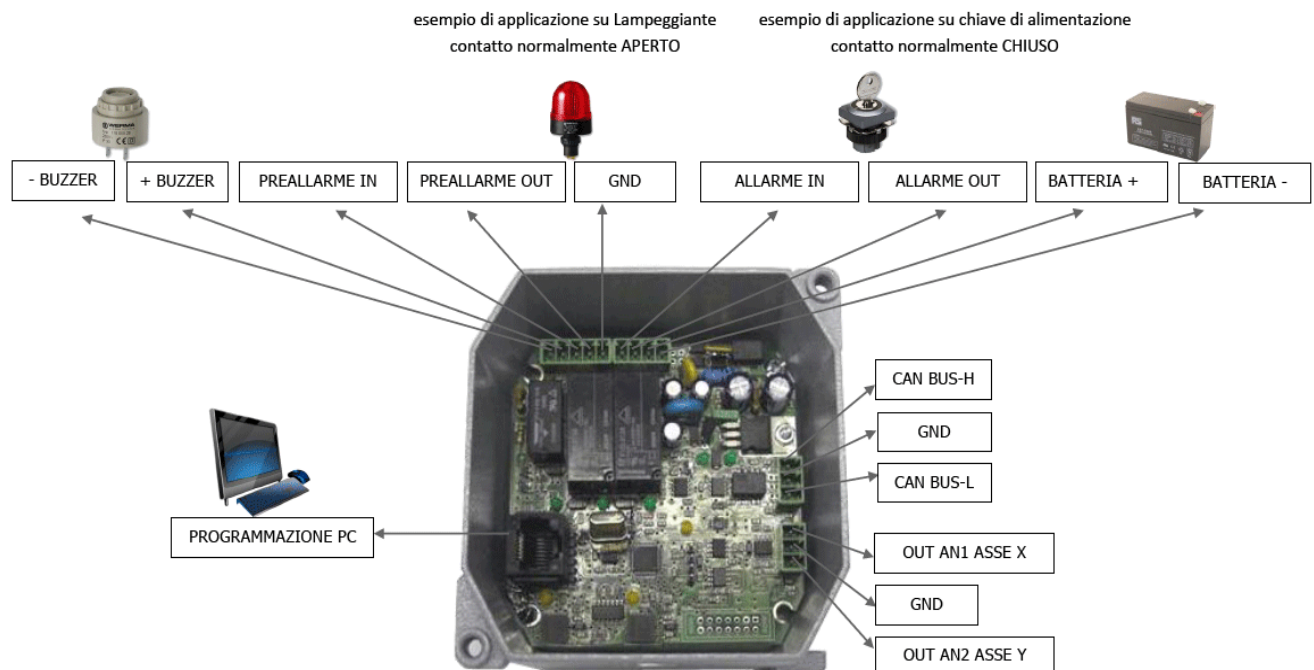
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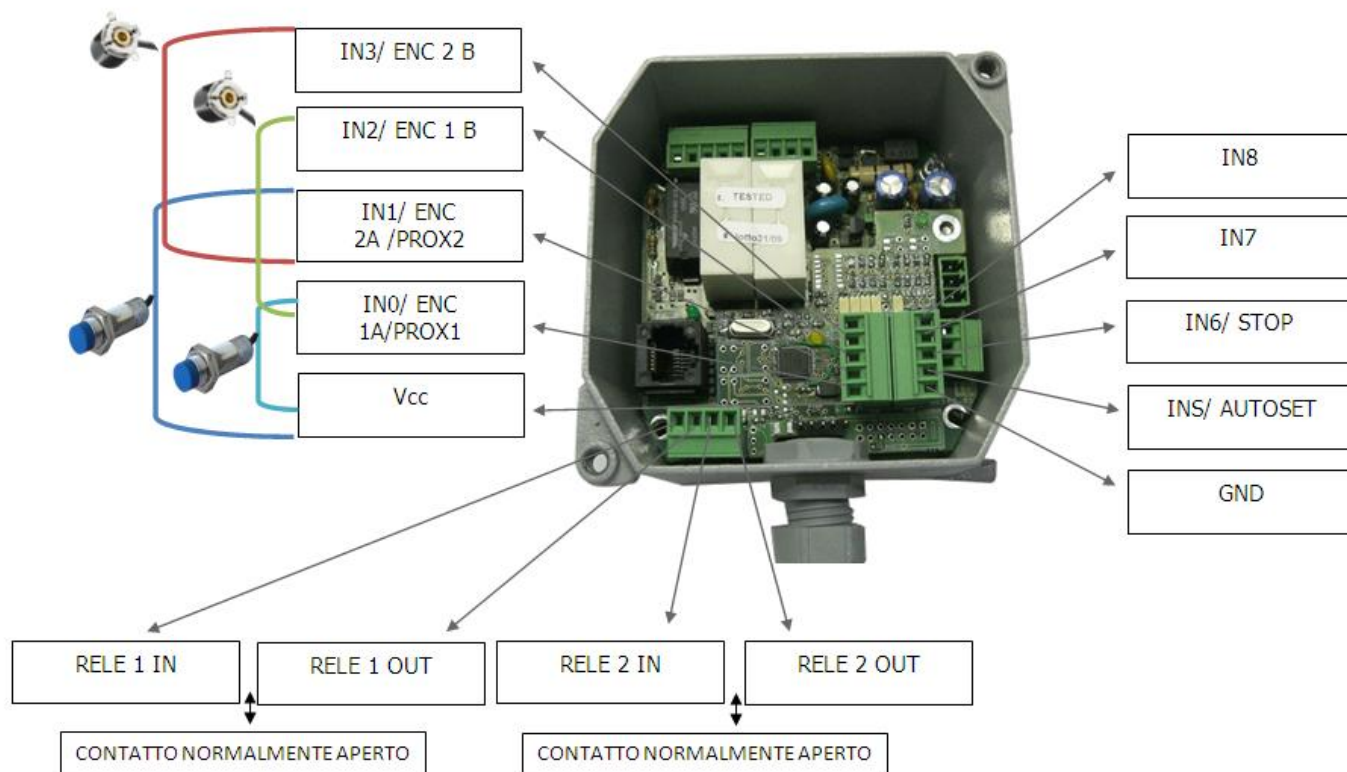
In the Scissors Platforms Security System Tilting controls the efficiency of the machine through the working angles. In the case of approaching the corner of safety, the operator is alerted by an acoustic signal of view. After successful completion of safety corners are limited working heights of the Platform.

## Wiring Card:



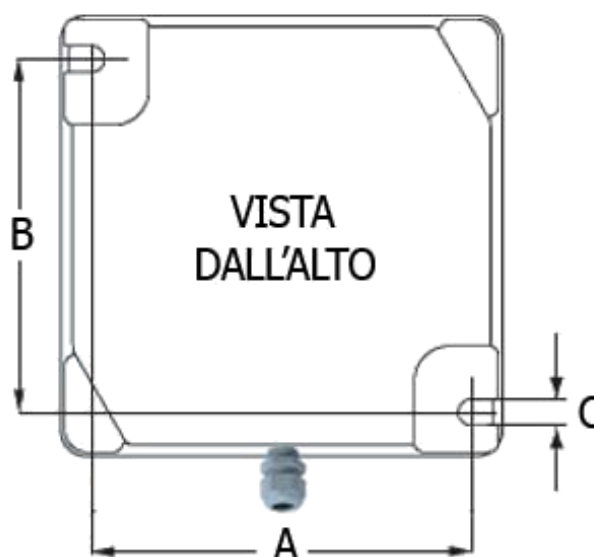
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### DISTANCE BETWEEN FIXING IN mm

A = 86mm  
B = 80mm  
C = 06mm



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