

COMPACT MAGNETIC LIMIT SWITCHES

Compact Magnelimit



FEATURES

1. Combination of magnet (support) and limit switch (detection) saves on both construction and space, making it a perfect choice for equipment interlock
2. The built-in magnet safeguards checking of the facility's cover and gate.
3. Safe design prevents operator making errors.
4. 1 Form C (N.O., N.C.) contact construction
5. The product comes with three different types of weight sustainability: 9.8N{1kgf}, 29.4N{3kgf} and 49.0N{5kgf}.

6. Water-resistant type also available (internal switches only)

TYPICAL APPLICATIONS

1. Detection of safety cover opening/closing for factory automation equipment and inspection systems, etc.
2. Detection of opening/closing of closet or storage-room doors.

RoHS Directive compatibility information
<http://www.nais-e.com/>

PRODUCT TYPE

Form	Specifications			Available standards	Part No.
	Contact construction	Case color	Sustainable weight sustainability		
General #110 terminal	1 Form C	Ash-gray	1kgf	UL, C-UL	AZC31111G
			3kgf		AZC31113G
			5kgf		AZC31115G
Water-resistant #110 terminal			1kgf		AZC31211G
			3kgf		AZC31213G
			5kgf		AZC31215G
Water-resistant, lead wire down			1kgf		AZC31311G
			3kgf		AZC31313G
			5kgf		AZC31315G
Water-resistant, lead wire out			1kgf		AZC31411G
			3kgf		AZC31413G
			5kgf		AZC31415G

Note: The unit comes with one magnetic plate. Water resistance (IP67) applies to internal switches only. Excludes exposed part of terminals, externally mounted components, and magnet catches.

SPECIFICATIONS

1. Ratings

Figures in parentheses () indicate rated current of water-resistant type.

Rated voltage	Load type	Resistance load	Lamp load	Inductive load
125V AC		5A (2A)	1A (0.6A)	3A (2A)
250V AC		5A (2A)	—	3A (2A)
30V DC		5A (2A)	—	3A (2A)

Note:

1. Lamp load has 10 times the inrush current.
2. Inductive load is a minimum 0.4 (AC) and time duration is maximum 7ms (DC).

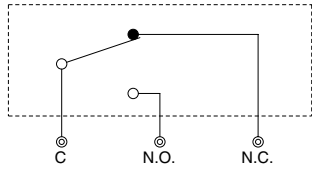
2. Switch operating features

Operating Position (O.P.)	0.8 mm min. (dimensions from case top)
Release Position (R.P.)	2.2 mm max. (dimensions from case top)

3. Capabilities overview

Contact	Material	AgNi
Electrical capabilities	Insulation resistance (initial)	Min. 100 Ω (measured at DC 500V insulation resistance)
	Voltage resistance	Between non-consecutive: 1000V AC/1 min. (initial)
		Between each pin and uncharged metal parts: 1500V AC/1 min.
		Between each pin and earth: 1500V AC/1 min.
Life	Mechanical life	Min. 10 ⁵ (ON/OFF frequency 30 times/min.)
	Electrical life	Min. 5×10 ⁴ (resistance load 125V AC 5A) ON/OFF frequency 10 times/min.
Usage conditions	Ambient temperature	-20 to +80°C -4 to +176°F (but not in a frozen environment.)
	Ambient humidity	Max. 85% RH
	Tolerable operating frequency	Mechanical: 30 times/min. Electrical: 10 times/min.
Sustainability (when using the enclosed adhesive board)		9.8N {1kgf}, 29.4N {3kgf}, 49.0N {5kgf}

OUTPUT CIRCUIT DIAGRAM



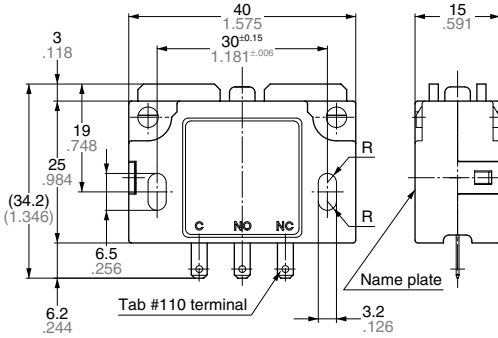
WIRING METHOD

- Tab #110 terminal
- Lead wire

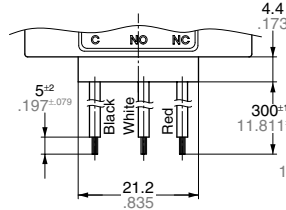
DIMENSIONS

mm inch

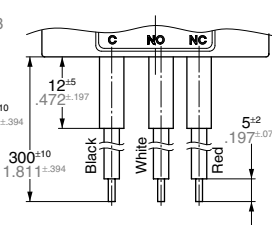
• Main unit: AZC3111*G, AZC3121*G



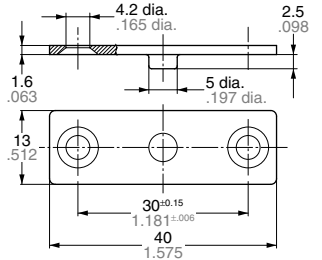
AZC3131*G



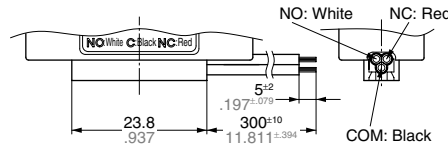
AZC3151*G



• Magnetic plate



AZC3141*G

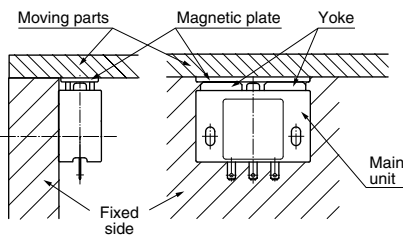


General tolerance: ±0.5 .020

ATTACHMENT

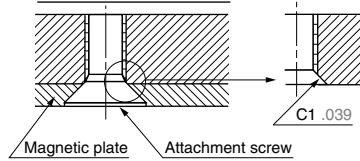
1. Attaching the main unit

- 1) Using an M3 screw, attach firmly remembering to employ a toothed washer, etc. The appropriate torque is 0.88 to 1.08N·m (9 to 11kgf·cm.)
- 2) When moving parts such as the gate are closed, ensure that the yoke of main unit and magnetic plate are flush with each other.

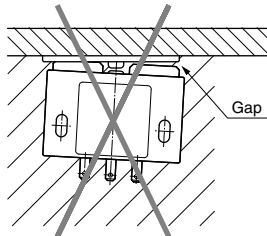


2. Attaching the magnetic plate

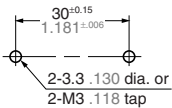
- 1) Install the magnetic plate using flat head screws, so that the screw heads do not protrude from the plate surface (short M3 flat head screws, and long 2.7 flat head screws).
- 2) Fit a C1 panel to the inlet vent of attaching moving parts for magnetic plate.



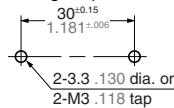
Note: Unless the magnetic plate and the yoke are flush with each other, adhesive power will be lost, and there is a risk that the switch will not operate.



Attachment hole processing dimensions for main unit



Hole processing dimensions for magnet plate



3. Wiring the tab #110 terminal

(AZC3111*G, AZC3121*G)

- 1) Use a commercially available tab #110 terminal connector for wiring.
- 2) Use the three immediate-connection connectors shown below for wiring:
Product name: 7.6 mm pitch microswitch connector (3P)
Manufacturer: Nippon Tanshi Co., Ltd.
Product Number:

Name	Product Number	Application Elec. Wiring
Housing	9880 - 4203	—
Receptacle	171587 - M2	0.3 to 0.75mm ²

Note: This product is not sold by Matsushita Electric Works, Ltd. Please direct inquiries to: Nippon Tanshi Co., Ltd. Sales +81-463-30-1150