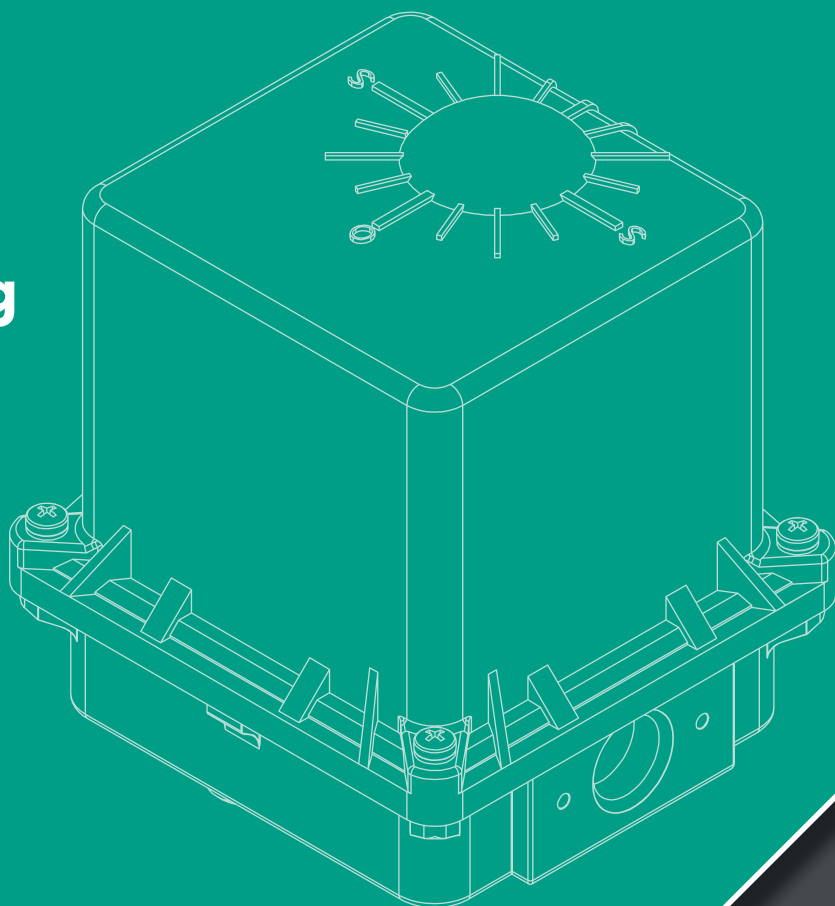
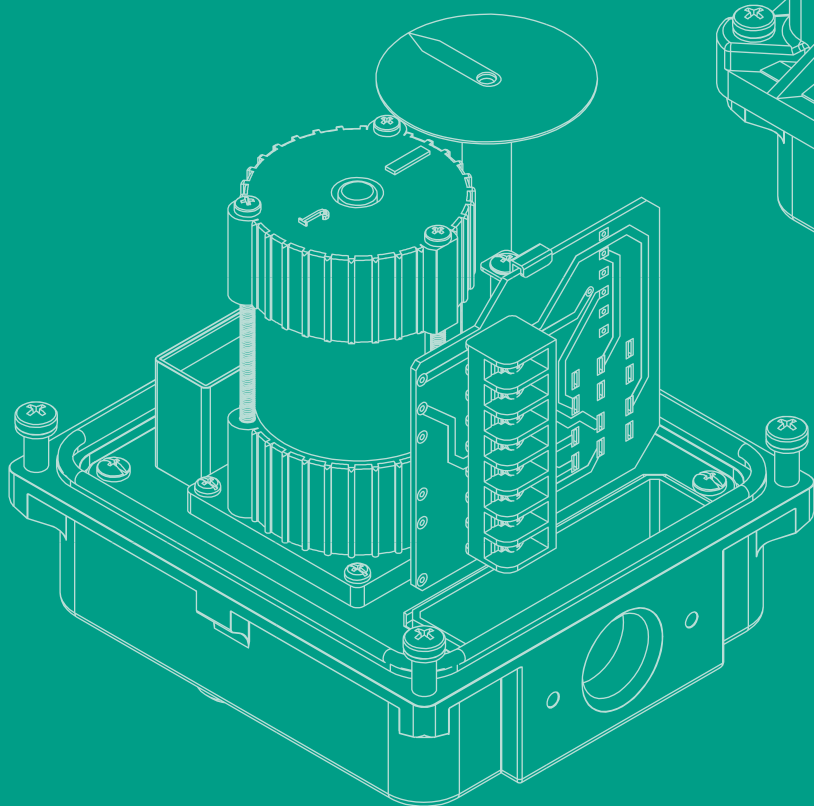


**Max-Air**  
TECHNOLOGY

*The Best Way To Automate Your Process*

**ATTUATORI ELETTRICI  
On/Off e Modulanti**

**On/Off & Modulating  
ELECTRIC ACTUATORS**



## **AE SERIES Technical Brochure**

# Caratteristiche / Features

## DESIGN COMPATTO

La serie AE è stata progettata con un design compatto in modo da minimizzare l'ingombro totale del pacchetto valvola più attuatore ed il peso dello stesso, riducendo eventuali costi per supporti.

## RANGE DISPONIBILE

3 modelli disponibili da 35 Nm a 200 Nm; a richiesta con controllo proporzionale, fast acting, o duty cycle 100%.

## ISO 5211

La serie AE è dotata di multiple forature secondo ISO 5211 per una semplice automazione.



Coperchio in AL disponibile a richiesta per AE01 e AE02  
AL cover available on request for AE01 and AE02 models

## GRADO DI PROTEZIONE

IP67 standard secondo IEC60529.

## INTERRUTTORI

Tutti gli attuatori AE sono dotati di serie di n° 2 fine corsa ausiliari, a richiesta è possibile aggiungerne un'altra coppia.

## INGRANAGGI

Tutti gli ingranaggi in metallo sinterizzato.

## MANUALE D'EMERGENZA

Disponibile standard su tutti gli attuatori AE. Permette una manovra di emergenza in caso di mancanza di corrente.

## PROTEZIONE TERMICA

Presente standard su tutti gli attuatori AE per evitare eccessivi surriscaldamenti e conseguente danneggiamento del motore.

## TENSIONI DISPONIBILI

Gli attuatori AE sono disponibili con tensione:  
Monofase: 12 VDC (solo AE01 e AE02);  
24 VDC/AC (AE01 - AE03H); 110 VAC; 220 VAC  
Trifase: 220 VAC, 380 VAC (solo per AE03)

## CONDIZIONI DI UTILIZZO

Temperatura Ambiente:  $-10^{\circ}\text{C} \div +60^{\circ}\text{C}$   
Umidità relativa: 30% ÷ 95%

## OPZIONI DISPONIBILI

- Resistenza Anticondensa
- 2 fine corsa aggiuntivi
- Indicatore ON/OFF LED
- Controller proporzionale (solo per 110 VAC o 220 VAC): la versione modulante è utilizzata quando l'applicazione richiede che l'attuatore controlli il posizionamento della valvola a seconda di un segnale analogico in Ingresso. I seguenti segnali di ingresso possono essere utilizzati:
  - 4-20 mA
  - 0-10 V
  - 1-5 V
- Potenzimetri: questi dispositivi opzionali sono utilizzati per fornire continui segnali elettrici in relazione alla posizione della valvola. Il valore di resistenza standard è 5kΩ.

## COMPACT DESIGN

AE series features a compact design, minimizing the complete valve package envelope size and its weight and therefore eliminating the need for pipe supports.

## AVAILABLE RANGE

3 different models from 35 Nm to 200 Nm; available on request with proportional control, fast acting motor, and 100% duty cycle.

## ISO 5211

AE series has standard multiple mounting patterns according to ISO 5211 for easy automation.



## PROTECTION DEGREE

Water and dust proof IP67 according to IEC60529.

## ELECTRO MECHANICAL SWITCHES

All AE actuators are equipped as standard with n° 2 auxiliary limit switches, 2 additional ones can be added on request.

## GEARS

All gears are made of sinterized material.

## MANUAL OVERRIDE

Manual Override is standard on all AE units allowing for emergency operation in case of electricity failure.

## THERMAL PROTECTION

Standard on all AE actuators to prevent motor overheating and possible damages.

## VOLTAGE OPTION

AE actuators are available as:  
Monophase: (only AE01 and AE02);  
24 VDC/AC (AE01 - AE03H); 110 VAC; 220 VAC  
Three Phase: 220 VAC, 380 VAC (only for AE03)

## WORKING CONDITIONS

Ambient Temperature:  $-10^{\circ}\text{C} \div +60^{\circ}\text{C}$   
Relative Humidity Range: 30% ÷ 95%

## AVAILABLE OPTIONS

- Heater/Thermostat
- Additional 2 switches
- Built-In ON/OFF LED Indicator
- Proportional controller (for 110 VAC or 220 VAC only): modulating control is used when application requires the actuator to position the valve using an analog control signal.  
The following input signal can be used:
  - 4-20 mA
  - 0-10 V
  - 1-5 V
- Potentiometers: These optional devices are used to provide continuous electric signal in relation to valve position. Resistance value of 5kΩ is standard.

# Dati Tecnici / Technical Data

## STANDARD ON/OFF 12 VDC

Model	Coppia Torque	Duty Cycle*	Peso/Weight	Velocità di manovra a 90° Operation Speed for 90°	Corrente nominale Rated Current (A)**	Overload Protection Device	
						Fuse	
AE01	35Nm	100%	1,9 Kg	10 to 15 s	2,5A	3,0A	
AE02	50Nm	100%	1,9 Kg	10 to 16 s	2,5A	3,0A	

\* The definition of Duty Cycle is in accordance with IEC 60034-54 duty type \*\* The value may vary depending of the load

## STANDARD ON/OFF 24 VAC/VDC

Model	Coppia Torque	Duty Cycle*	Peso Weight	Velocità di manovra a 90° Operation Speed for 90°	Corrente nominale Rated Current (A)**	Overload Protection Device	
						Fuse	
AE01	35Nm	100%	1,9 Kg	11 to 16 s	1,2A	1,2A	
AE02	50Nm	100%	1,9 Kg	12 to 18 s	1,2A	1,2A	
AE03	150Nm	100%	3,9 Kg	8 to 18 s	2,5A	3,0A	
AE03H	160Nm	100%	6,9 Kg	10 to 15 s	2,5A	3,0A	

\* The definition of Duty Cycle is in accordance with IEC 60034-54 duty type \*\* The value may vary depending of the load

## STANDARD ON/OFF 110VAC/220VAC (1Phase)

Model	Coppia Torque	Duty Cycle*	Peso Weight	Velocità di manovra a 90° Operation Speed for 90°	Corrente nominale / Rated Current (A)**		Overload Protection Device
					110VAC @ 60 Hz	220VAC@60Hz	
AE01	35Nm	20% in 15 min	1,7 Kg	10 s	0,7A	0,4A	TP***
AE02	50Nm	20% in 15 min	1,8 Kg	8 s	0,9A	0,5A	
AE03	170Nm	50% in 60 min	4,4 Kg	10 s	1,2A	0,8A	
AE03H	200Nm	50% in 60 min	7,9 Kg	10 s	1,2A	0,8A	

\* The definition of Duty Cycle is in accordance with IEC 60034-54 duty type

\*\* The value is measured under the frequency of 60 Hz, and may vary depending on the load and current frequency

\*\*\* TP indicates motor thermal overload protector

## MODULATING 110VAC/220VAC @ 60Hz (1Phase)

Model	Coppia Torque	Duty Cycle	Peso Weight	Velocità di manovra a 90° Operation Speed for 90°	Corrente nominale Rated Current (A)**		Overload Protection Device			
					110VAC	220VAC	Motor		PCB	
							Fuse			
							110VAC	220VAC	Fuse	
AE01	25Nm	100%	2,1 Kg	16 s	0,2A	0,10A	TP***	0,25A	0,25A	0,15A
AE02	50Nm	100%	2,1 Kg	36 s	0,2A	0,10A		0,25A	0,25A	0,15A
AE03	120Nm	50% in 60 min	3,7Kg	54 s	0,3A	0,15A		0,25A	0,25A	0,15A
AE03	170Nm	50% in 60 min	4,8 Kg	8 s	1,2A	0,72A		1,5A	1A	0,15A
AE03H	200Nm	50% in 60 min	8,3 Kg	10 s	1,2A	0,72A		1,5A	1A	0,15A

\* The definition of Duty Cycle is in accordance with IEC 60034-54 duty type

\*\* The value is measured under the frequency of 60 Hz, and may vary depending on the load and current frequency.

\*\*\* TP indicates motor thermal overload protector

## FAST ACTING UNITS 12 VDC

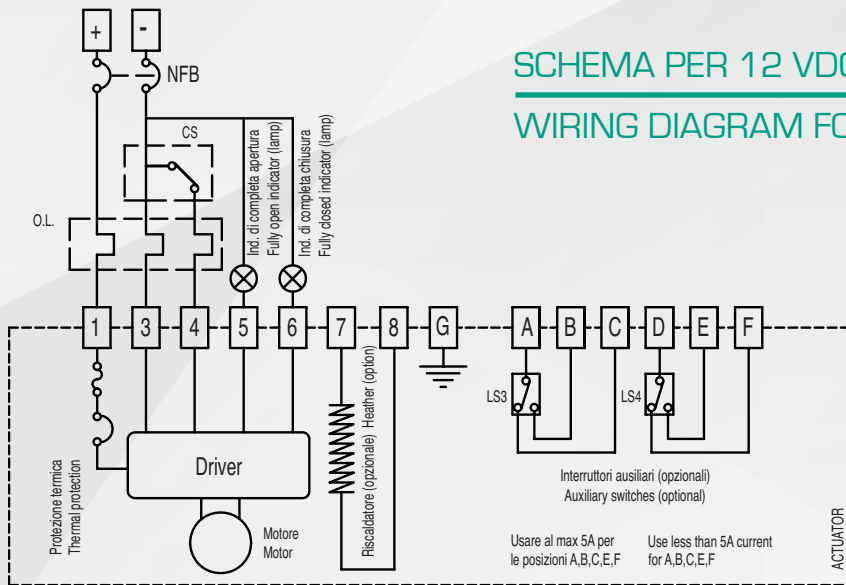
Model	Coppia/Torque	Duty Cycle	Peso/Weight	Velocità di manovra a 90° Operation Speed for 90°	Corrente nominale Rated Current (A)	Overload Protection Device	
						Fuse	
AE01	10Nm	100%	1,9 Kg	1 to 2 s	2,5A	3A	
AE01	25Nm	100%	1,9 Kg	3 to 6 s	2,5A	3A	

## FAST ACTING UNITS

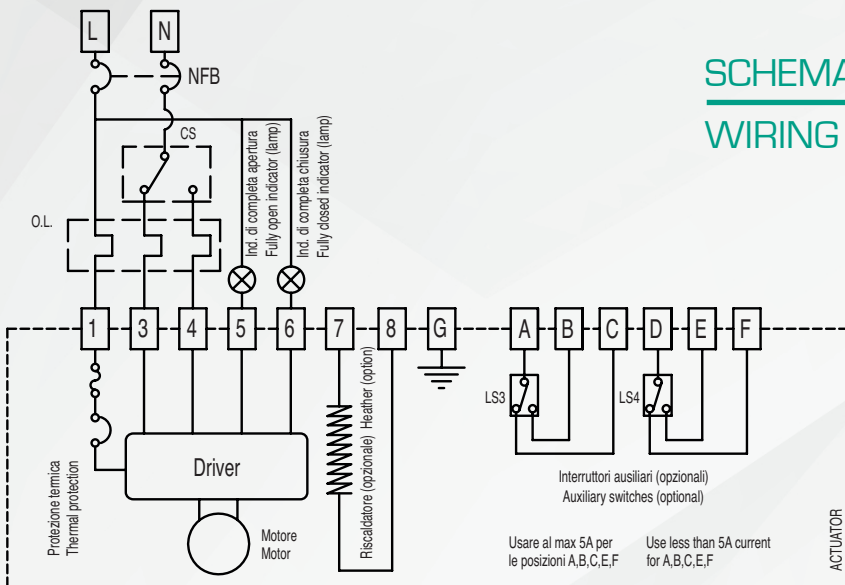
Model	Coppia Torque	Duty Cycle	Peso Weight	Velocità di manovra a 90° Operation Speed for 90°	Corrente nominale Rated Current (A)	Overload Protection Device	
						Fuse	
AE01	10Nm	100%	1,9 Kg	1 to 2 s	1,2A	1,5A	
AE01	25Nm	100%	1,9 Kg	3 to 8 s	1,2A	1,5A	
AE03	30Nm	100%	3,9 Kg	1 to 3 s	2,5A	3A	
AE03	60Nm	100%	3,9 Kg	3 to 7 s	2,5A	3A	

## FAST ACTING UNITS 110VAC/220VAC

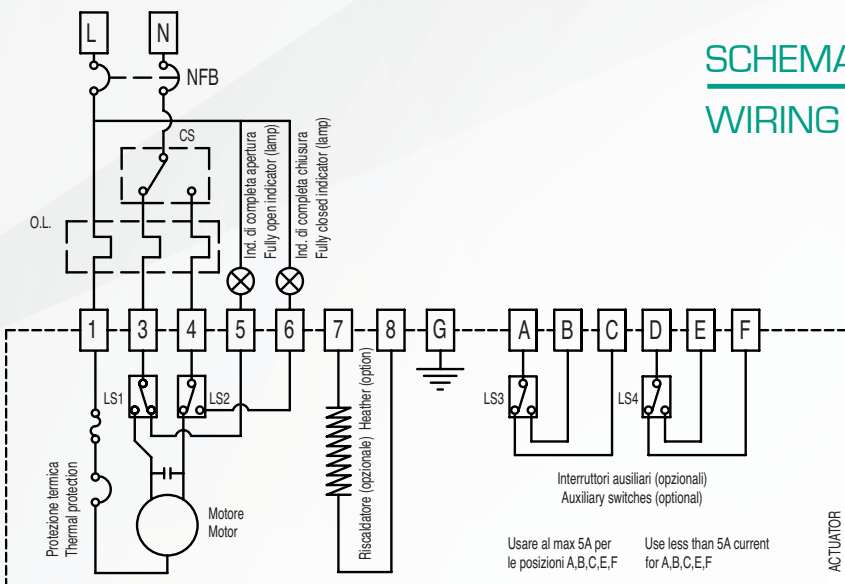
Model	Coppia Torque	Duty Cycle*	Peso Weight	Velocità di manovra a 90° Operation Speed for 90°	Corrente nominale / Rated Current (A)**		Overload Protection Device
					110VAC@60Hz	220VAC@60Hz	
AE01	9Nm	50% in 60 min	1,9 Kg	1 s	1,2A	0,38A	TP***
AE01	25Nm	50% in 60 min	1,9 Kg	3 s	1,2A	0,6A	
AE03	35Nm	50% in 60 min	3,9 Kg	1 s	1,2A	0,72A	
AE03	100Nm	50% in 60 min	3,9 Kg	5 s	1,2A	0,72A	



SCHEMA PER 12 VDC  
WIRING DIAGRAM FOR 12 VDC



SCHEMA PER 24 VDC / VAC  
WIRING DIAGRAM FOR 24 VDC / VAC

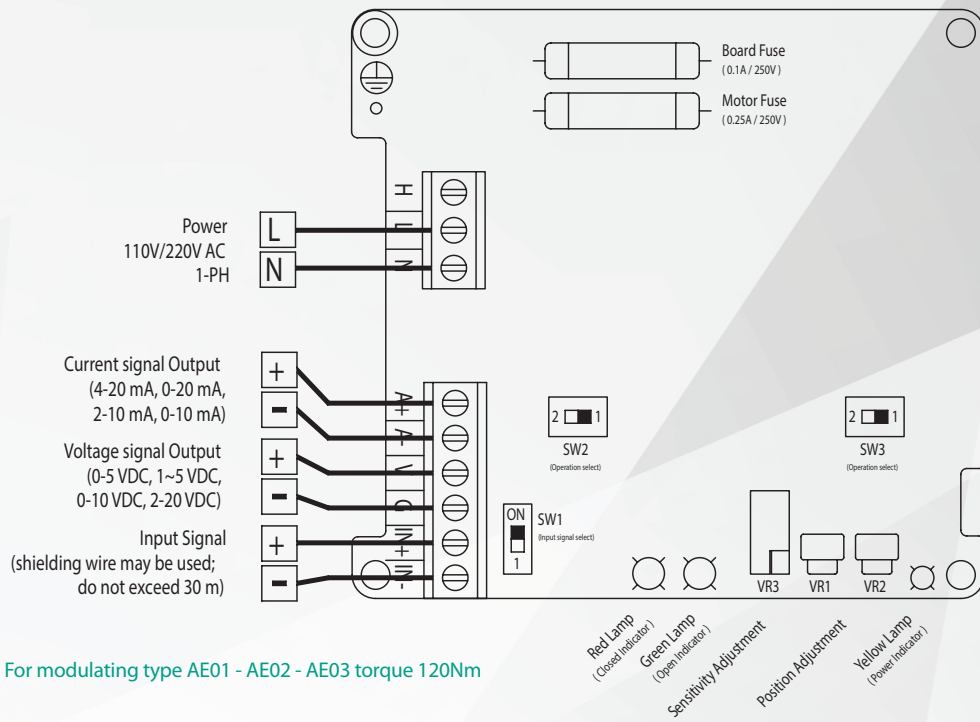


SCHEMA PER 110/220 VAC  
WIRING DIAGRAM FOR 110/220 VAC



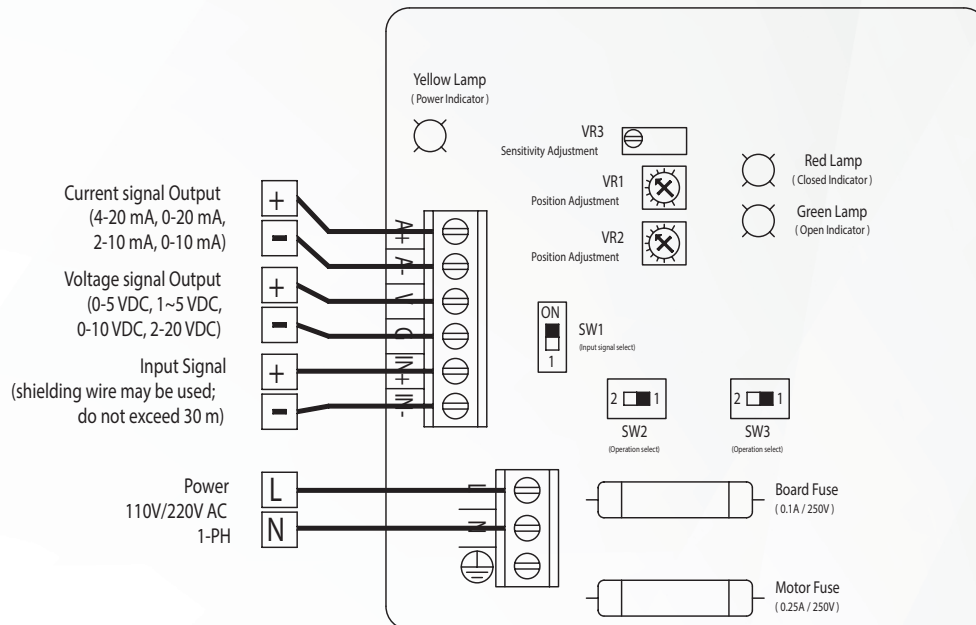
# SCHEMA CONNESSIONI, SCHEDA AMD

## CONNECTION DIAGRAM AMD BOARD



# SCHEMA CONNESSIONI, SCHEDA BMD

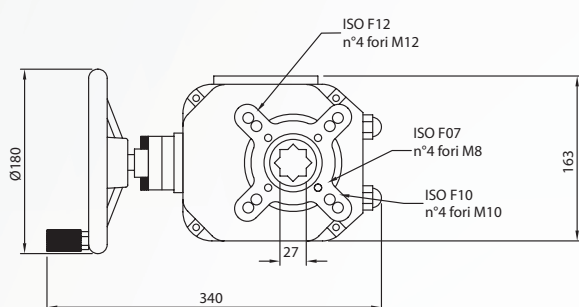
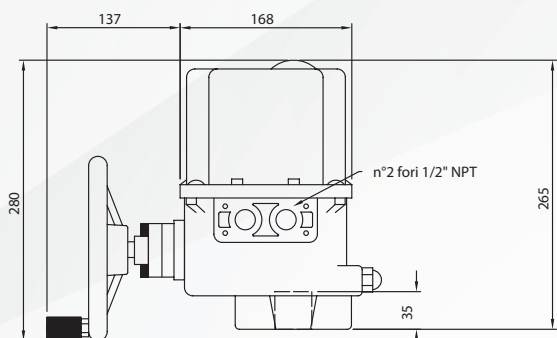
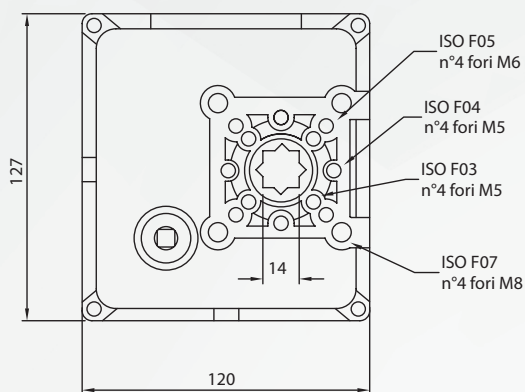
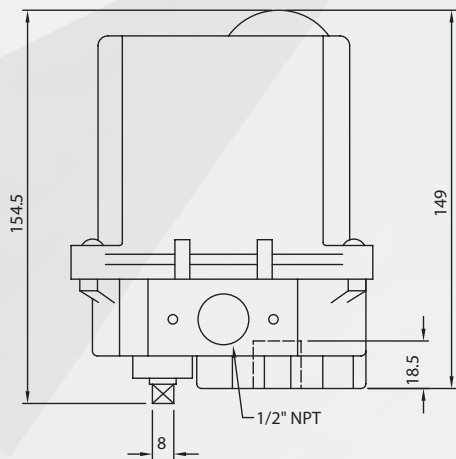
## CONNECTION DIAGRAM BMD BOARD



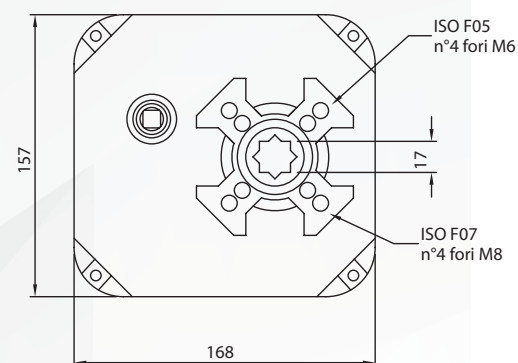
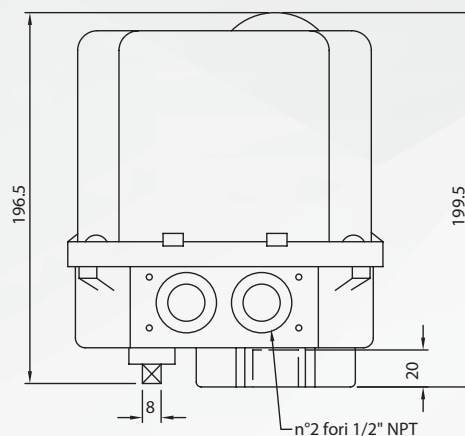
# Dimensioni

## Dimensions

### AE01 - AE02



### AE03

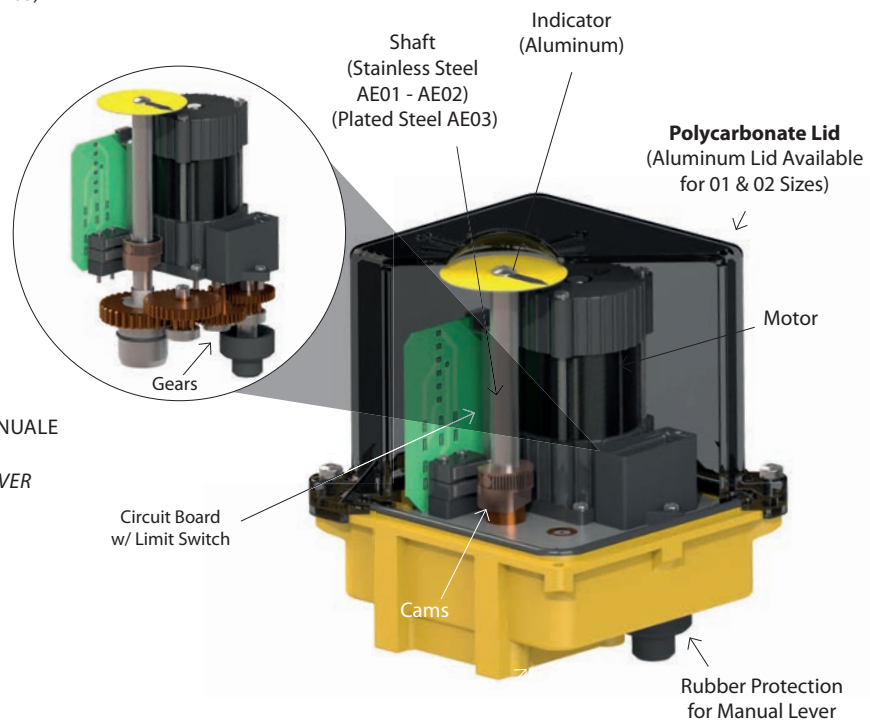
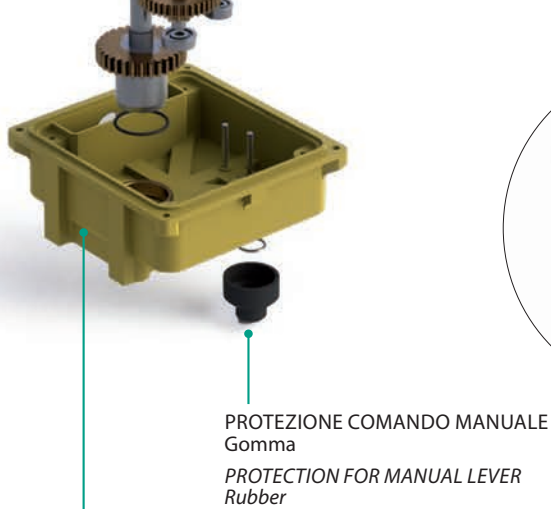
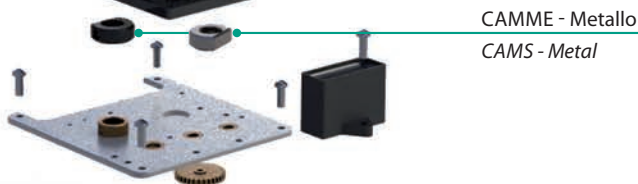
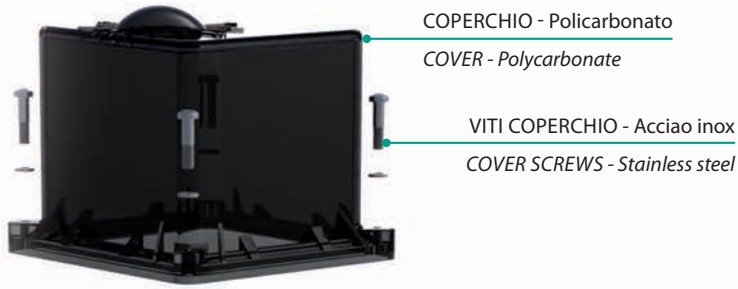


### AE03H



# Esploso

## Exploded View



# AE SERIES Electric actuator

AE 01 - 1 C A 0 0 S

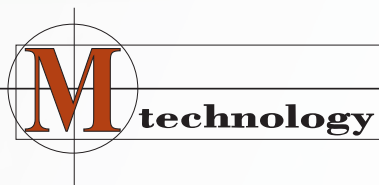
<b>AE SERIES</b> Attuatori elettrici - Electric actuator
<b>TAGLIA - SIZE</b> <b>01</b> fino a 35Nm - up to 35Nm <b>02</b> fino a 50Nm - up to 50Nm <b>03</b> fino a 200Nm - up to 200Nm
<b>COMANDO MANUALE A VOLANTINO - MANUAL OVERRIDE (HANDWHEEL)</b> <b>0</b> No <b>1</b> Si - Yes
<b>TENSIONE - VOLTAGE</b> <b>A</b> 12 VDC <b>C</b> 24 VAC/VDC <b>H</b> 110 VAC <b>J</b> 220 VAC
<b>FINE CORSA - LIMIT SWITCH</b> <b>A</b> 2* <b>B</b> 2 aggiuntivi - 2 additional
<b>RESISTENZA ANTICONDENZA - HEATER</b> <b>0</b> No <b>1</b> Si - Yes
<b>POSIZIONATORE INTEGRATO - INTEGRATED POSITIONER</b> <b>0</b> No <b>D</b> AMD <b>B</b> BMD
<b>TEMPO DI MANOVRA - OPERATION SPEED **</b> <b>S</b> Standard <b>A</b> Fast acting 1-3 s <b>B</b> Fast acting 3-8 s
<b>COPERCHIO - COVER</b> <b>Null</b> Standard <b>4</b> In alluminio - Aluminum cover***

Rev. 05-2021

\* Alimentati con la stessa tensione del motore - Supplied with the same motor's voltage

\*\* Controllare i dati tecnici nella tabella di riferimento - Check technical data of the related chart

\*\*\* Disponibile per i modelli AE01-AE02 - Just available for AE01 and AE02 models



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