



## Electric Actuator HQ004 & HQ006

- Output torques of 40 and 60Nm
- Reversible motor with low current consumption
- IP67 weatherproof
- Manual override Anti-condensation heater
- Four limit switches
- 4-20mA and 0-10V control options

### > Description

The HQ-004 and HQ-006 electric actuators are specially designed for quarter turn, on/off applications such as ball, butterfly, plug valves and dampers. In addition the HQ006 has an option of adding a **PCU** (Proportional Control Unit) for modulating operation in control systems. The actuators are small, light and compact design, with high output torques. Various control options and a wide range of voltages are available to meet your specific requirements. High Quality electrical components, alloy gearing and a high pressure die cast aluminium housing ensure reliability and extended life span.

**HQ004** – ON/OFF DUTY

**HQ006** – ON/OFF DUTY

**HQ006** with PCU – PROPORTIONAL



### Description

The series HQ004 – HQ006 electric rotary actuator is a compact and powerful unit which provides a long service life. Materials and components have been chosen for maintenance free operation. The modular design offers many additional features such as limit switches , heaters, optical indicator and manual override.



### Beschreibung

Die Serie HQ004 - HQ006 elektrischen Drehantrieb ist ein kompaktes und leistungsstarkes Gerät , das eine lange Lebensdauer bietet . Materialien und Komponenten sind für einen wartungsfreien Betrieb gewählt. Der modulare Aufbau bietet viele zusätzliche Funktionen wie Grenzwertschalter , Heizungen, Lichtanzeige und Handbetätigung .



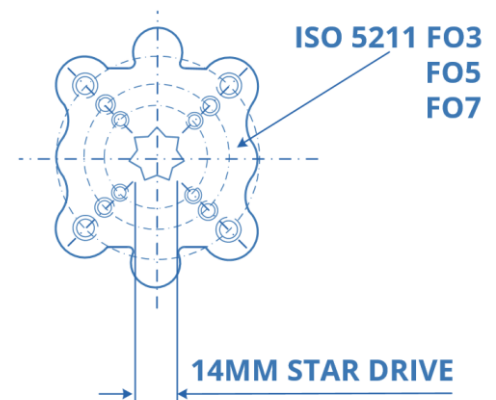
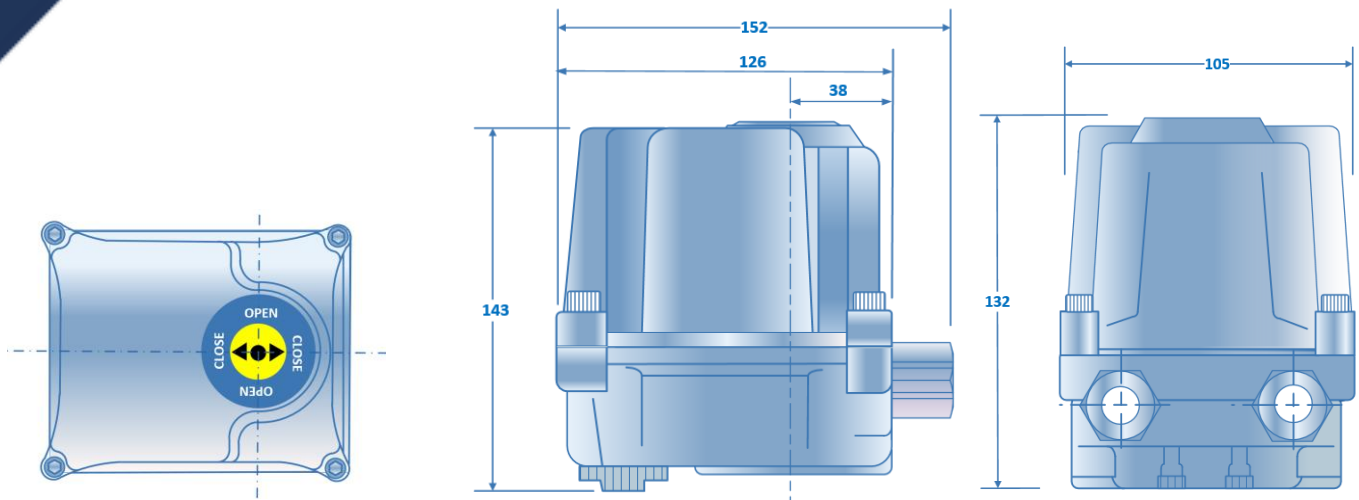
### Descripción

La serie HQ004 - actuador rotativo eléctrico HQ006 es una unidad compacta y potente que ofrece una larga vida útil . Los materiales y componentes han sido elegidos para la operación sin necesidad de mantenimiento. El diseño modular ofrece muchas características adicionales, tales como interruptores de límite , calentadores, indicador óptico y control manual.



### Description

La série HQ004 - HQ006 actionneur rotatif électrique est une unité compacte et puissante qui offre une longue durée de vie. Matériaux et composants ont été choisis pour un fonctionnement sans maintenance. La conception modulaire offre de nombreuses fonctionnalités supplémentaires tels que les interrupteurs de fin de course, appareils de chauffage, indicateur optique et commande manuelle.



## Standard Specification

Enclosure	:	Weatherproof IP67
Power Supply	:	110/220v 50/60Hz, 24 VAC/DC
Duty Cycle	:	(On/Off Duty) S2, 35%
Motor	:	Reversible Motor
Limit Switches	:	2 x SPDT, 250V AC 3A
Space Heater	:	2W (110/240 V AC)
Manual Override	:	Hexagon
Conduit Entries	:	2 x M20
Travel Angle	:	320°± 10° (0°to 320°)
Ambient Temperature	:	minus 20°C to plus 70°C
External Coating	:	Dry Powder Polyester

## Option Specification

Enclosure	:	IP68
Conduit Entry	:	2 x PG 13.5, 1/2" NPT
PIU	:	Potentiometr Unit (1K - 10K)
PCU	:	Proportional Control Unit (In/Out 0-10VDC,4-20mA)
CPT	:	Current Position Transmitter (Output 4-20mA DC)
LCU	:	Local Control Unit (Remote/Open/Stop/Close s/w)

## Standard Specification

Type (model)	Max Output Torque	Operating Time 50/60Hz	Motor Class E	Rated Current (A)				Weight
				24V	110V	220V	24VDC	
		90°	W F					Kg
HQ - 004	40NM	14 / 12 Secs		0.3	0.39/0.4	0.19/0.2	0.2	3
HQ - 006	60NM	14 / 12 Secs		0.3	0.39/0.4	0.19/0.2	0.2	3

## DESCRIPTION

HQ-006 Actuator is newly designed and invented for small size valve automation like ball, butterfly, plug and even dampers. Small, light and compact design, high torque and various control options will meet your specific requirements. HQ provides high technical service & quality products for your automation system.

## FEATURES

Compact and light due to high grade aluminum alloy housing.

High resistance for corrosion due to hard anodizing on inside & outside and polyester powder coating on external surface

Output torque : 60Nm(6kg.m)

The actuator motor is reversible, high torque and low current design. Solid with O-ring system giving Weatherproof (IP67)



## STANDARD CONFIGURATION

Manual Override Hexagon  
Wide, easy mounting base standard to ISO5211 (F03/F05/F07)  
Standard 4 limit switches.  
2 for operation, 2 for extra(dry contacts)  
Captive cover bolt.  
Space heater.  
Limit switches for easy and tight setting.  
Terminal block. (11P) Standard colour : Blue



## OPTION CONFIGURATION

Position Indication Unit (Potentiometer kit, PIU)  
High resolution potentiometer with precisely machined gearing directly engaged with driving shaft provides continuous monitoring of position of valve and actuator.

## Proportional Control Unit (PCU)

-HQ PCU is a combination of electronic positioner.

-Input signal range :

4~20mA, or 0~10VDC

-Output signal range :

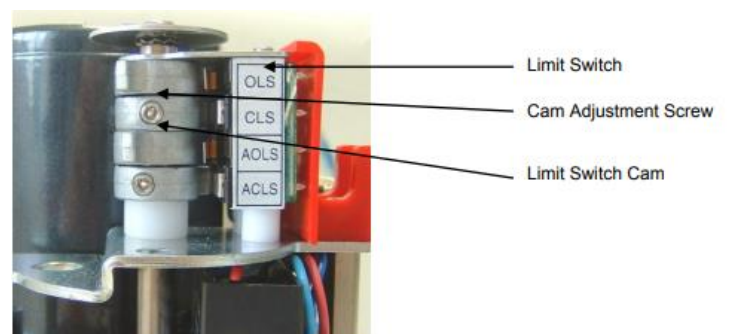
4~20mA, or 0~10VDC

-Adjustable range:

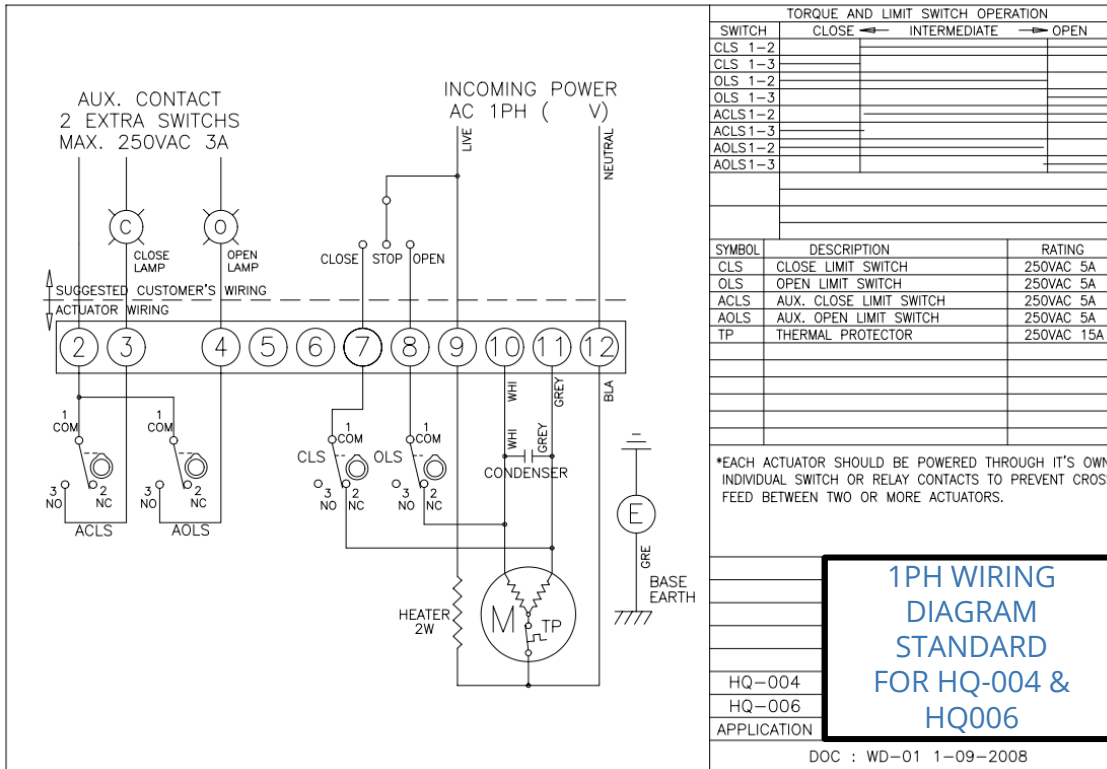
zero 8mA, open 16mA

-Position conversion accuracy :

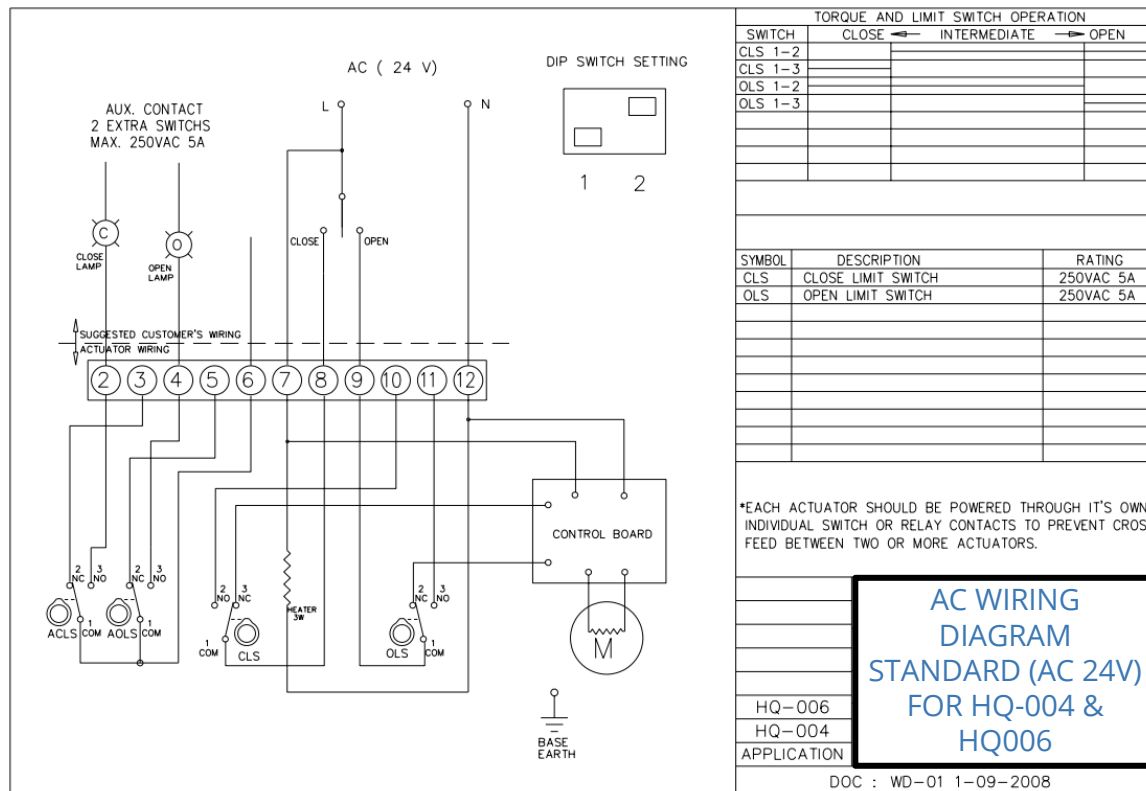
0.5~1.5%(depends on installation)



## 1PH Wiring Diagram Standard For HQ004 & HQ006



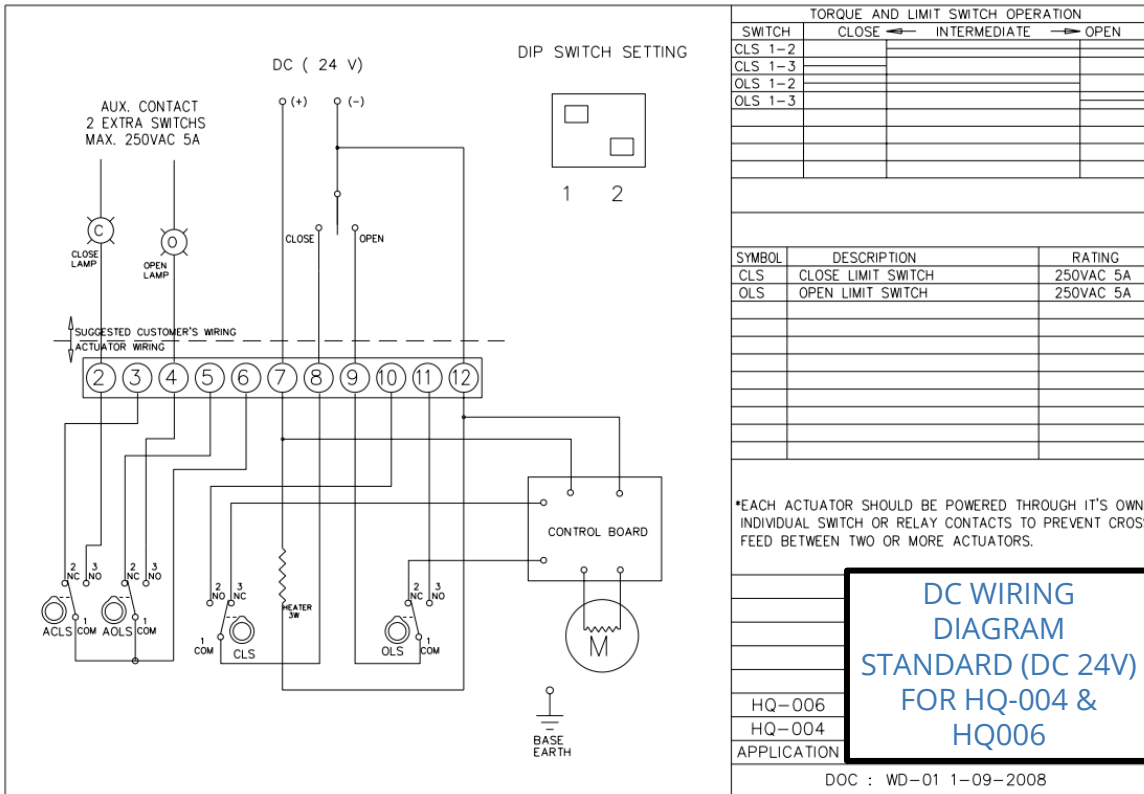
## AC Wiring Diagram Standard (AC24V) For HQ004 & HQ006



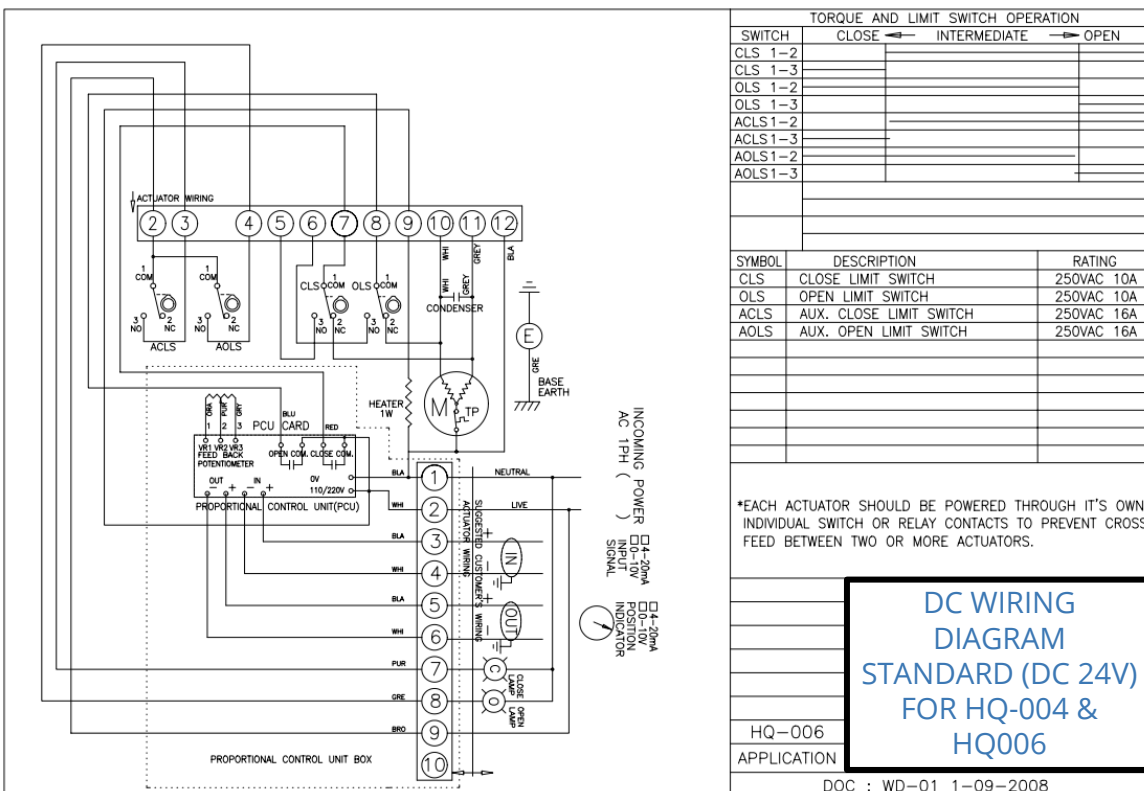
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## DC Wiring Diagram Standard (DC24V) For HQ004 & HQ006



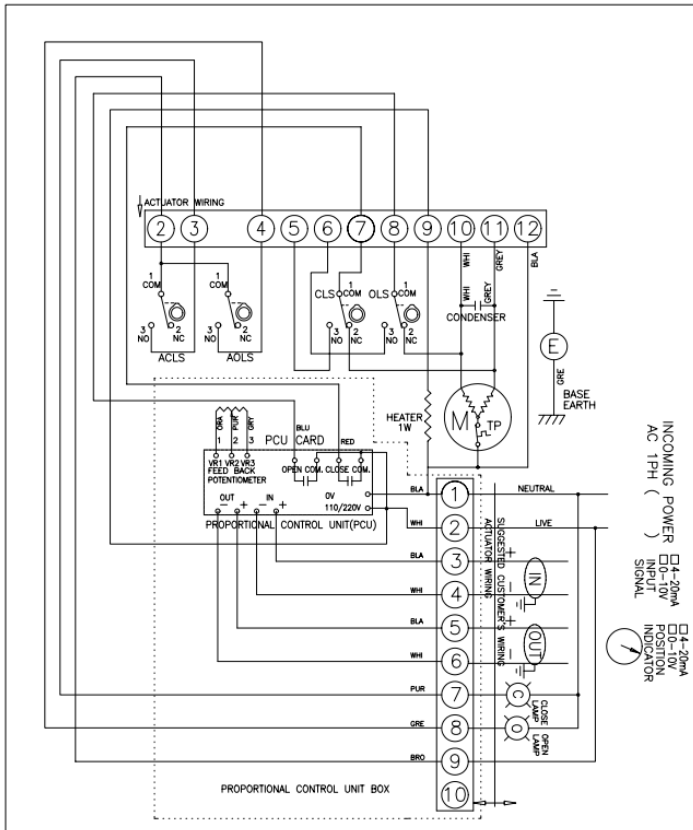
## DC Wiring Diagram Standard (DC24V) For HQ006



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## 1PH Wiring Diagram For HQ006 PCU Proportional Control



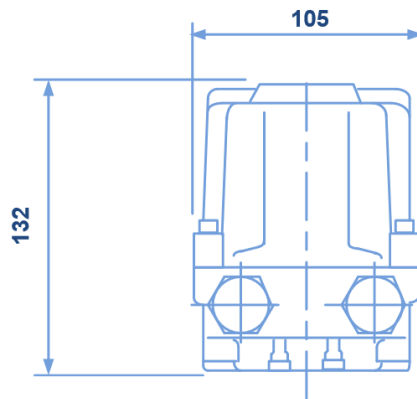
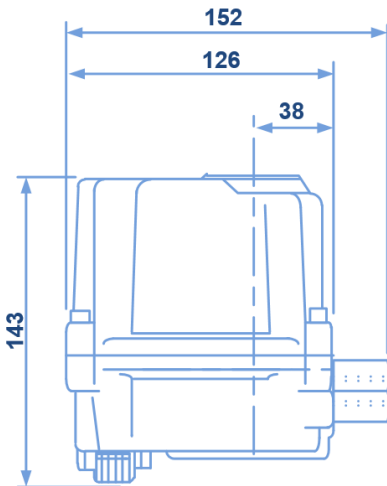
TORQUE AND LIMIT SWITCH OPERATION			
SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 16A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 16A

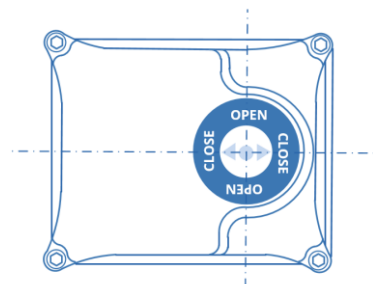
\*EACH ACTUATOR SHOULD BE POWERED THROUGH IT'S OWN INDIVIDUAL SWITCH OR RELAY CONTACTS TO PREVENT CROSS FEED BETWEEN TWO OR MORE ACTUATORS.

**1PH WIRING  
DIAGRAM FOR  
HQ006  
PCU  
Proportional Control**

HQ-006  
APPLICATION  
DO



With the control actuator version the input signals (eg. 4-20 mA, 0-20 mA, 0-10 V) as well as the output signals can be programmed.



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