

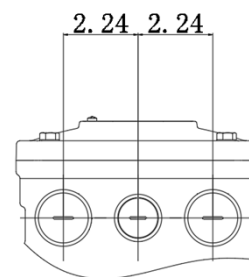
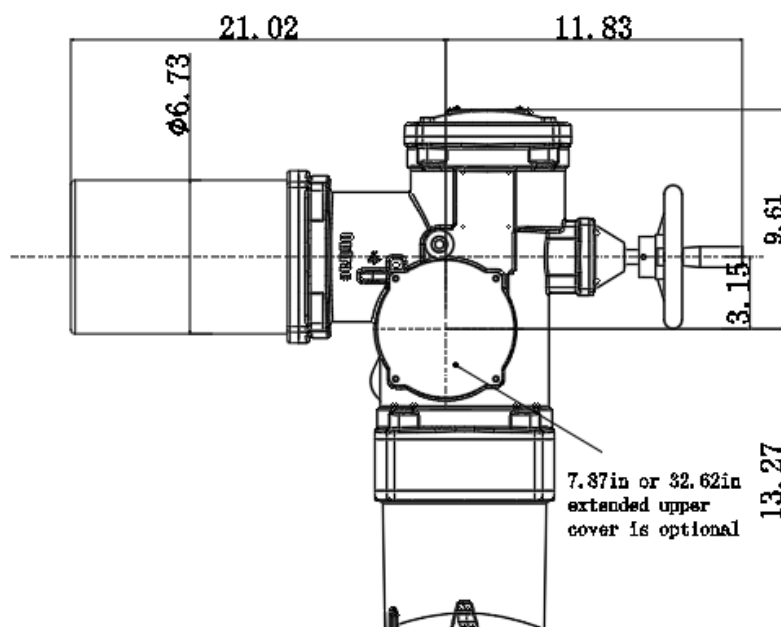
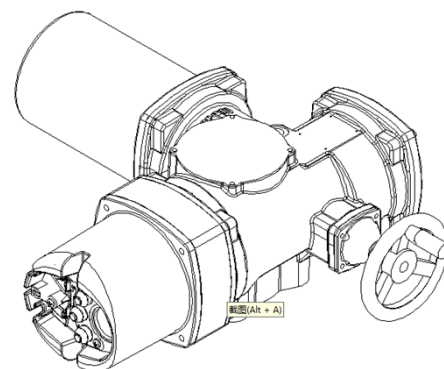
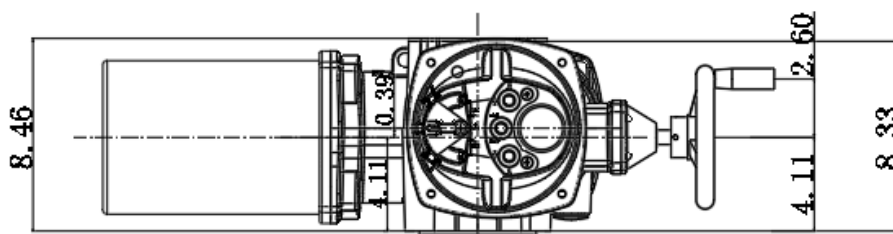


Technical data

Model	Self-lock	Motor type	Switch-off torque* (ft-lb)	Speed (RPM)	Speed group	Rated Power* (KW)	Rated Current (A)	Rising valve stem dia. (inch)	Weight (lb)
MOE790RL	Yes	S2	207-516	37-95	RL	14.7	24.82	2.68	139
			171-428	62-156					
MOE790PL	Yes		295-736	24-60	PL				

Note: *1.) It is the reference for 380VAC 50Hz 3PH power supply; 2.) Rated power/current 100% load

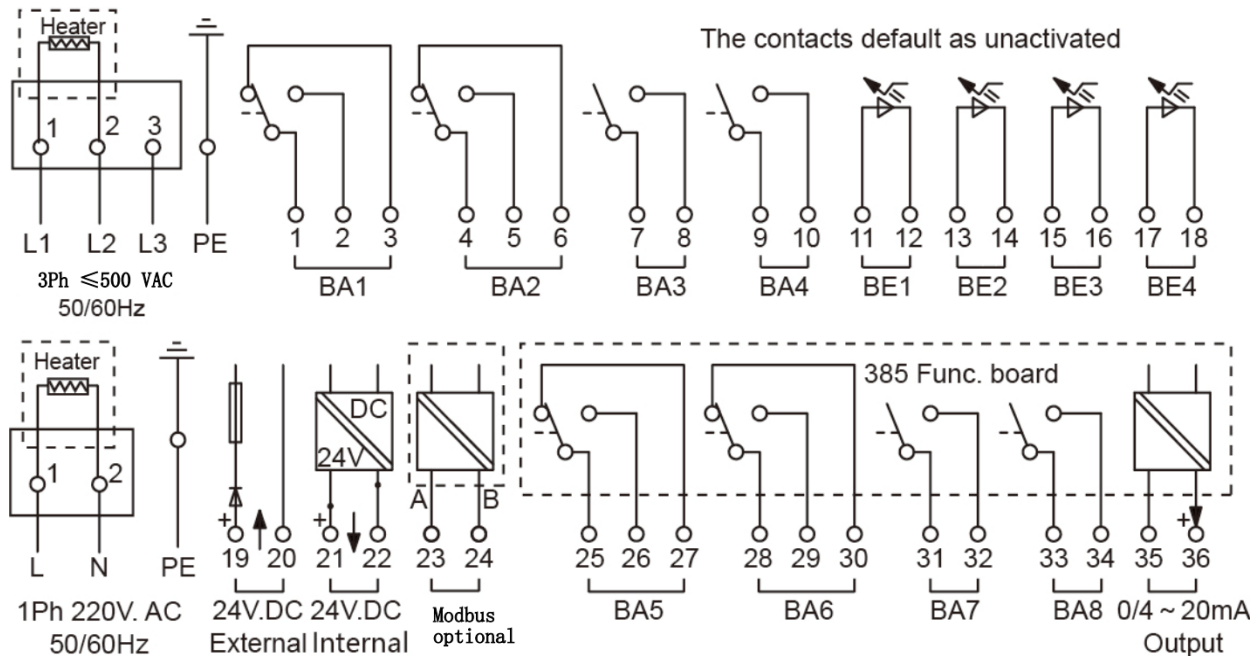
Mechanical dimensions. Integrated type (inch)



Default Hole Size: 1-3/8"-6



Digital Signal Input Wiring Diagram



- Optional 385 board is required to use the function in dotted line closed part.
- BA contact is for output status. BE contact is for digital input.
- Pin 19, 20 are external 24V power supply plug-in terminals. If use, when 380V main power supply is out, actuator's output signals remain, analog output terminal (385 board required) will remain its own status, the LED screen of actuator displays normally.
- 3 phase 550/600VAC are optional

Input port factory default function settings:

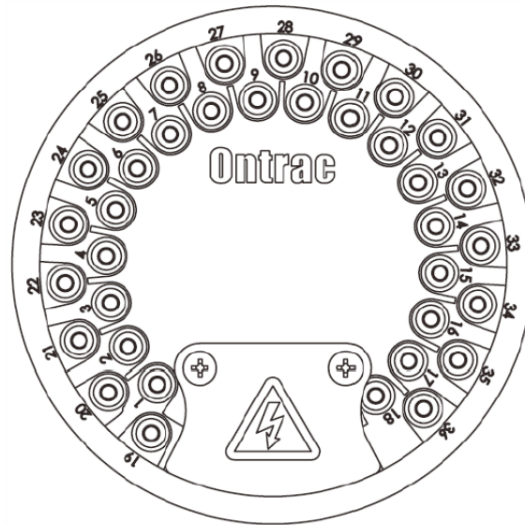
BE1	01	Operation command in "OPEN" direction
BE2	02	Operation command in "CLOSE" direction
BE3	03	Shutdown command
BE4	04	Fault alarm reset command

Output port factory default function settings:

BA1	01	Ready to run
BA2	02	Fault alarm
BA3	03	Open to the end position
BA4	04	Close to the end position
BA5	05	Exceeded torque in "OPEN" direction
BA6	06	Exceeded torque in "CLOSE" direction
BA7	07	Intermediate valve position indication 1
BA8	08	Intermediate valve position indication 2

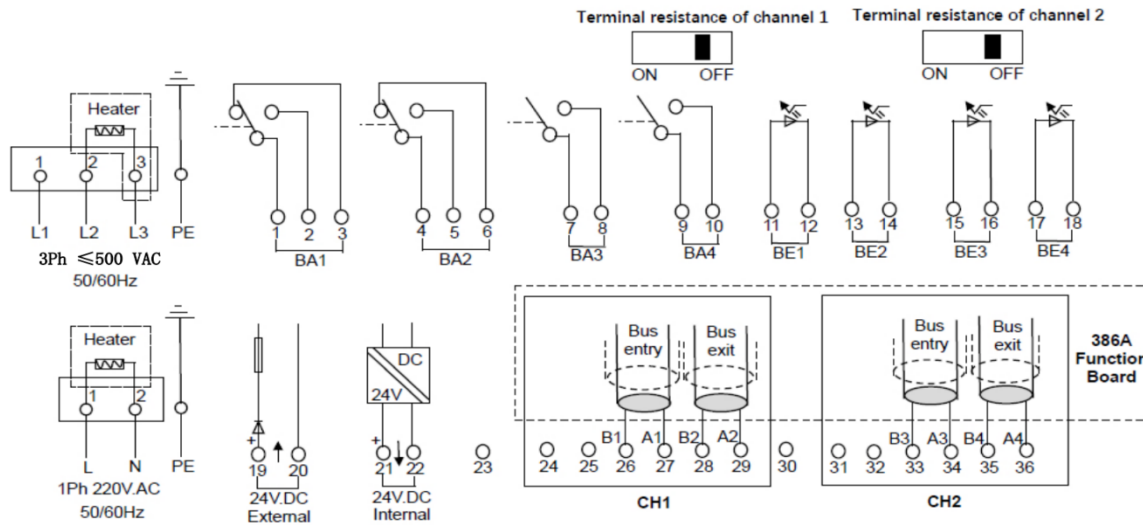


Explosion Proof Wiring Board



Schematic Diagram of Terminal Block

Profibus-DP Wiring Diagram 386A board

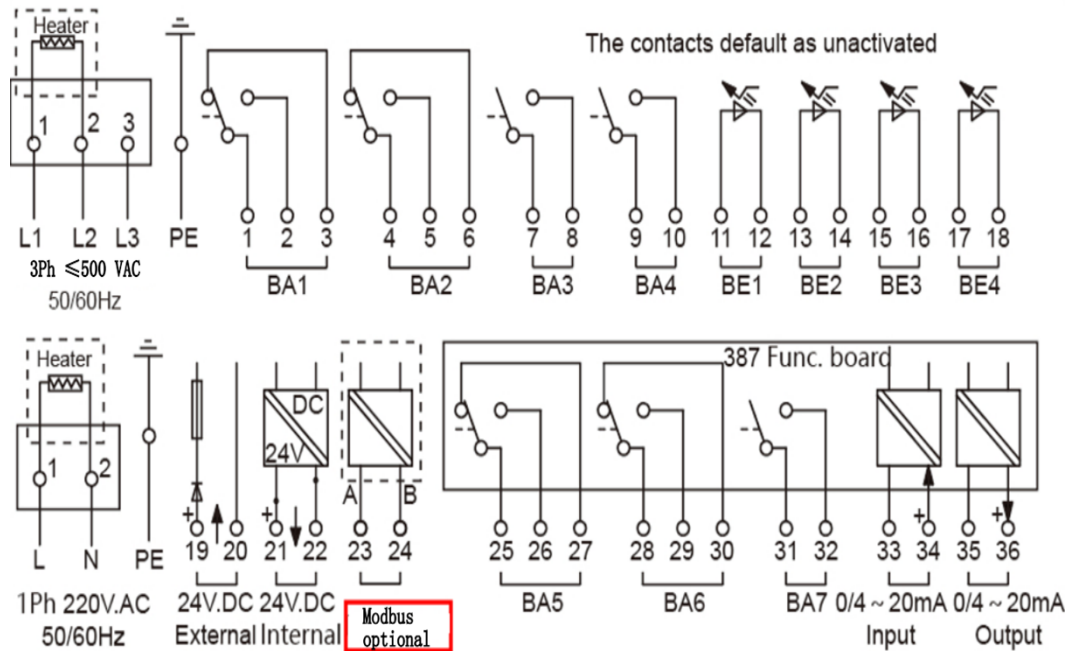


The status contact in the figure is in an unrigged state (default setting)

1. Optional Profibus-DP 386 board is required to use the function in dotted line closed part, with channel 1&2 redundancy
2. BA contact is for output status. BE contact is for digital input.
3. Pin 19, 20 are external 24V power supply plug-in terminals. If use, when 380V main power supply is out, actuator's output signals remain, analog output terminal (386A board required) will remain its own status, the LED screen of actuator displays normally.
4. 3 phase 550/660VAC are optional
5. Profibus DP (Decentralized Peripherals) up to a baud rate of 1.5Mbit/s. Our actuators are supplied with active bus termination. The electrical connections are via RS485 type A. Double channel Profibus to give redundancy available as option.



Modbus Wiring Diagram, 388 board

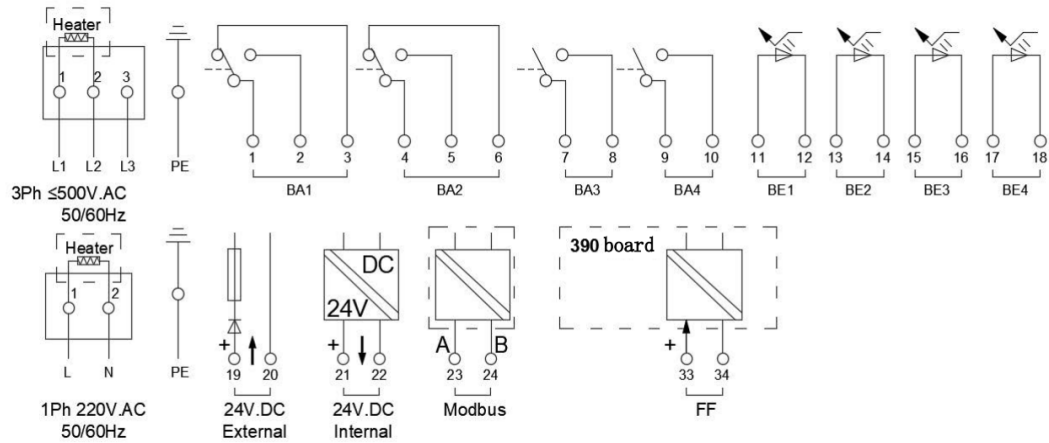


1. The status contact in the figure is in an unrigged state (default setting), 3 phase 550/660VAC are optional
2. Optional 388 board is required to use the function in dotted line closed part.
3. BA contact is for output status. BE contact is for digital input.
4. Pin 19, 20 are external 24V power supply plug-in terminals. If use, when 380V main power supply is out, actuator's output signals remain, analog output terminal (390&384 board required) will remain its own status, the LED screen of actuator displays normally.
5. Pin 21, 22 are internal 24V power terminals, can be used to power customer's input signal, limit to 30mA.
6. Modbus: Ontrac offers RTU protocol communications at a baud rate up to 38.4kbits/s. Our factory default speed is 9.6kbits/s giving a 0.932-mile maximum distance between nodes. We use a master / slave query response polling cycle with CRC (Cyclic Redundancy Check).

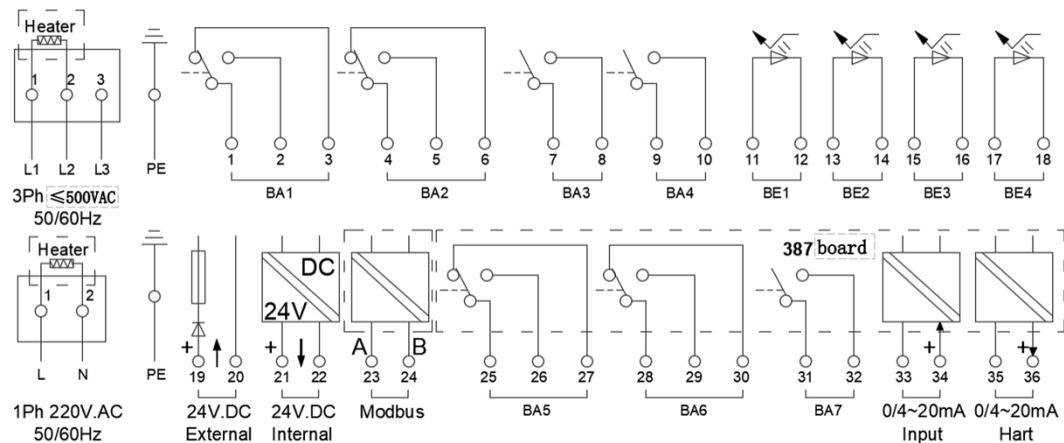


Foundation Field bus/ Hart Wiring Diagram,390 384 board

Foundation Fieldbus 390 board



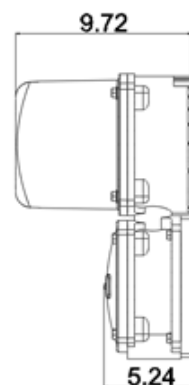
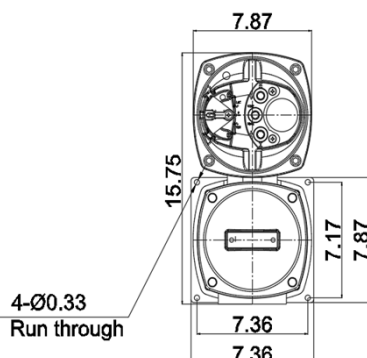
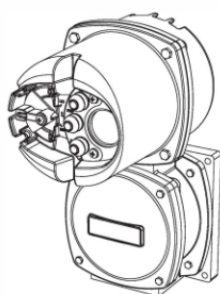
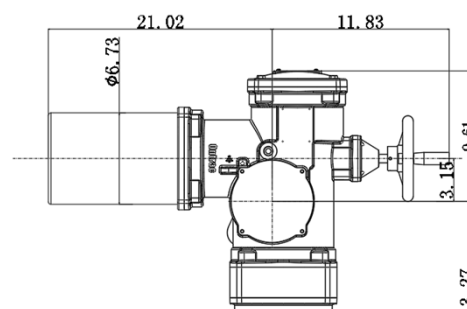
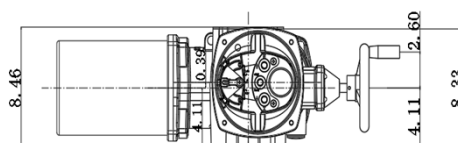
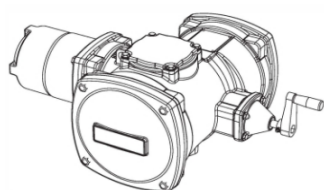
Hart 384 board



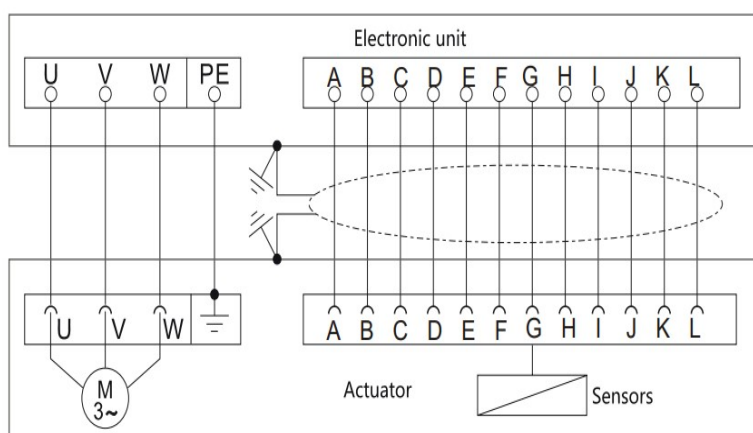
1. The status contact in the figure is in an unrigged state (default setting), 3 phase 550/660VAC are optional
2. Optional 390&388&384 board is required to use the function in dotted line closed part.
3. BA contact is for output status. BE contact is for digital input.
4. Pin 19, 20 are external 24V power supply plug-in terminals. If use, when 380V main power supply is out, actuator's output signals remain, analog output terminal (390&384 board required) will remain its own status, the LED screen of actuator displays normally.
5. Pin 21, 22 are internal 24V power terminals, can be used to power customer's input signal, limit to 30mA.
6. Foundation Fieldbus: Ontrac offers Foundation Fieldbus card designed for use on a communications bus operating at 31.25 Kbit/s
7. Hart: Ontrac can provide HART Communication Protocol (Highway Addressable Remote Transducer) connectivity. HART allows the use of conventional 4 – 20 mA wiring



Mechanical dimensions. Split type (inch)



Connection Diagram-Split type



4 cores

12 cores



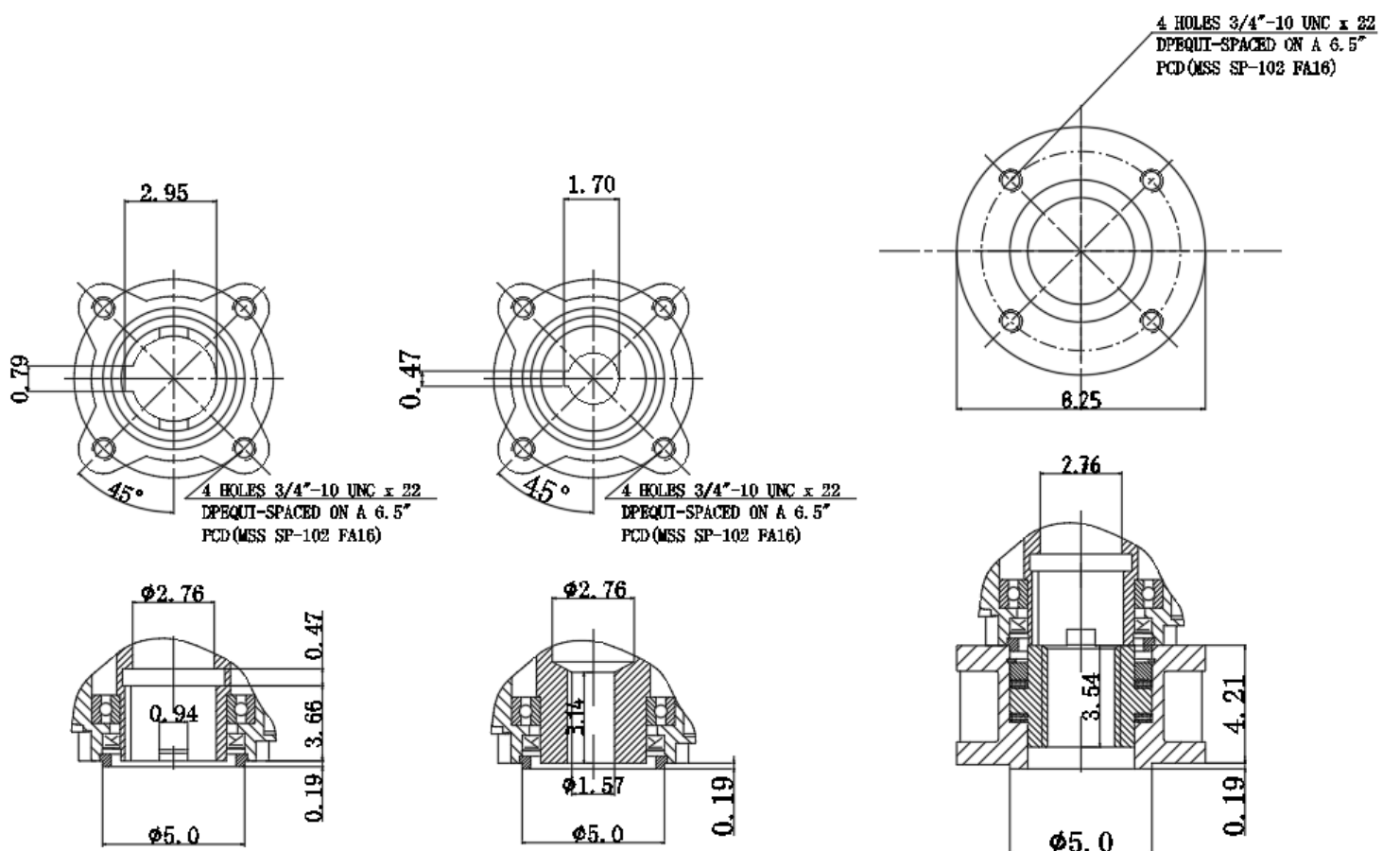
1. The sensor signal cable shall be a shielded 12 core cable; The cross-sectional area of the line shall not be less than 2.5mm², and the length of the line shall not exceed 10m;
2. The motor connecting wire shall be a shielded wire with a cross-sectional area of not less than 4mm², and attention shall be paid to the connection between the electric unit and the actuator part; **(Note: The motor terminal of the electric unit is yellow green terminal, and the three-phase power input terminal is gray terminal);**
3. In high-temperature environments, please use high-temperature cables, incoming line fittings (connectors), cable protection shell, etc. that meet the onsite requirements;
4. The figure above is only the wiring diagram between the electric unit and the actuator. Please refer to the wiring diagram of conventional products for control wiring on multitrac operation manual



Output shaft

MOE 790L	Non-thrust		With-thrust
Mechanical interface type	B1	B3	A3
Flange size (MSS SP-102)	FA16	FA16	FA16
Shaft Φ (inch)	2.76	1.57	2.68
Maximum thread diameter (inch)			

Flange structure and valve connection size (inch)



FA16 flange B1 interface

FA16 flange B3 interface

FA16 flange mounted A3 output shaft



Specifications

Voltage supply	3-phase 4-wire: ≤500VAC, 50/60Hz±5%; 550/660VAC optional 1-phase 3-wire: 110/220V±10%, 50/60Hz±5%
Duty mode	S2-15min
Motor control	Variable frequency control technology
Add. control supply	24V.DC, max 40mA, 24V.DC (18~33V), max 500mA ,with short-circuit protection function
Digital output switch capacity	30VDC.5A or 220/110VAC 5A 250VAC 8A (optional)
Input Signal	1) Pulse width≥50ms, the number 0 is -3 ~ +5V or open circuit, and the number 1 is +12 ~ +35V 2) Profibus-DP, Modbus, Hart, Ethernet, Foundation Fieldbus (all optional) 3) 120VAC (optional)
Output Signal	1) 4 digital potential-free contacts 2) Enlarge to 8 digital contacts and one 4-20 mA (Optional) 3) Profibus-DP ,Modbus,, Hart, Ethernet, Foundation Fieldbus (Optional)
Torque tripping	40% ~ 100% adjustable, step 5%
Output speed	40% ~ 100% adjustable, step 5%
Accuracy	≤±0.5%
Dead zone	1% (0.5 ~ 10% adjustable)
Intermediate position Setting	Standard
Enclosure protection	IP67 (IP68 optional)
Explosive protection	Exd II CT4
Safety Integrity level	SIL2&3 optional
Ambient conditions	1) Temperature: On-off duty, MOE series, -25°C ~ +70°C Split type, MOE series, -40°C ~ +85°C 2) Humidity: The Multitrack actuator can operate up to 100% humidity 3) Air media: corrosive, flammable and explosive gas optional coating
Heater	Optional
Anticondensation	Anticondensation heater inside
Coating	Double layer powder coating, C5-M (ISO12944 Marine Optional)
Color	RAL9005 for standard
CE standard  And others	1) EN 61000-6-4: 2007, EN 61000-6-2: 2005 2) EN 61000-3-2: 2006 +A1:2009+A2: 2009, EN 61000-3-3: 2008 3) EN 60204-1: 2006+A1: 2009 4) ATEX: CML 14ATEX1108
Installation direction	4 different or orientation
Fatigue strength	0.75g sine wave within 5 ~ 200Hz or 2g sine wave within 5 ~ 150Hz
Cable connection	1*M32x1.5 for Φ13~Φ18, 2*M25x1.5 for Φ10~Φ16
Cable size	Ontrac power cable cross-section area are: flexible cable ≤ 6mm ² , non-flexible cable ≤ 4mm ² ; cable cross-section area of signal terminals is ≤ 2.5mm ² .