



Electric Actuator QT (Quarter-turn) Type



*Modulating Type

COMPANY PROFILE

Unimech Vietnam is a member of Unimech Group Berhad (UGB), which was incorporated in Vietnam on 16 Aug 2013. UGB is one of the leading values add engineering business group in Malaysia.

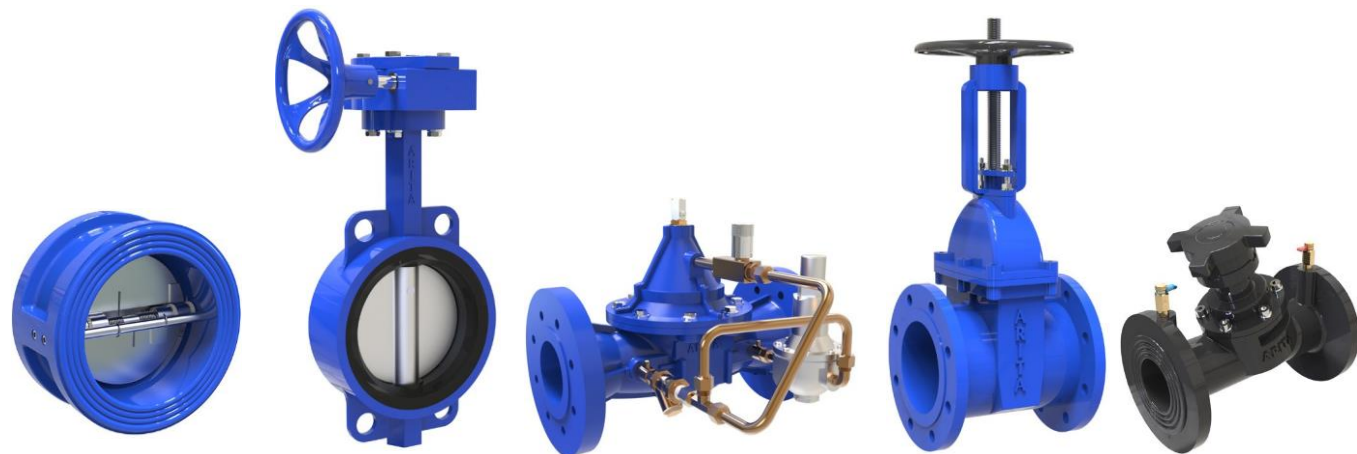
The business activities in Unimech Vietnam includes trading and supplying various kind of industrial, high-rise and commercial valves, strainers, steel flanges, pipe fittings, rubber expansion bellows, gaskets at a competitive price, with the good quality products and services to our customers, always meet within the scheduled delivery time. In line with the industrial growth, we do supply a diverse range of materials included brass, bronze, cast steel and stainless-steel valves in various sizes ranging from 1/4" to 48". Our products are tested and certified in meeting our customers' requirements.

With criteria: "Unimech Vietnam want to achieve One Stop Solution for our client in Vietnam", please contact us by phone: (+84) 28 3636 5818 or by email: lc.low@unimechgroup.com.

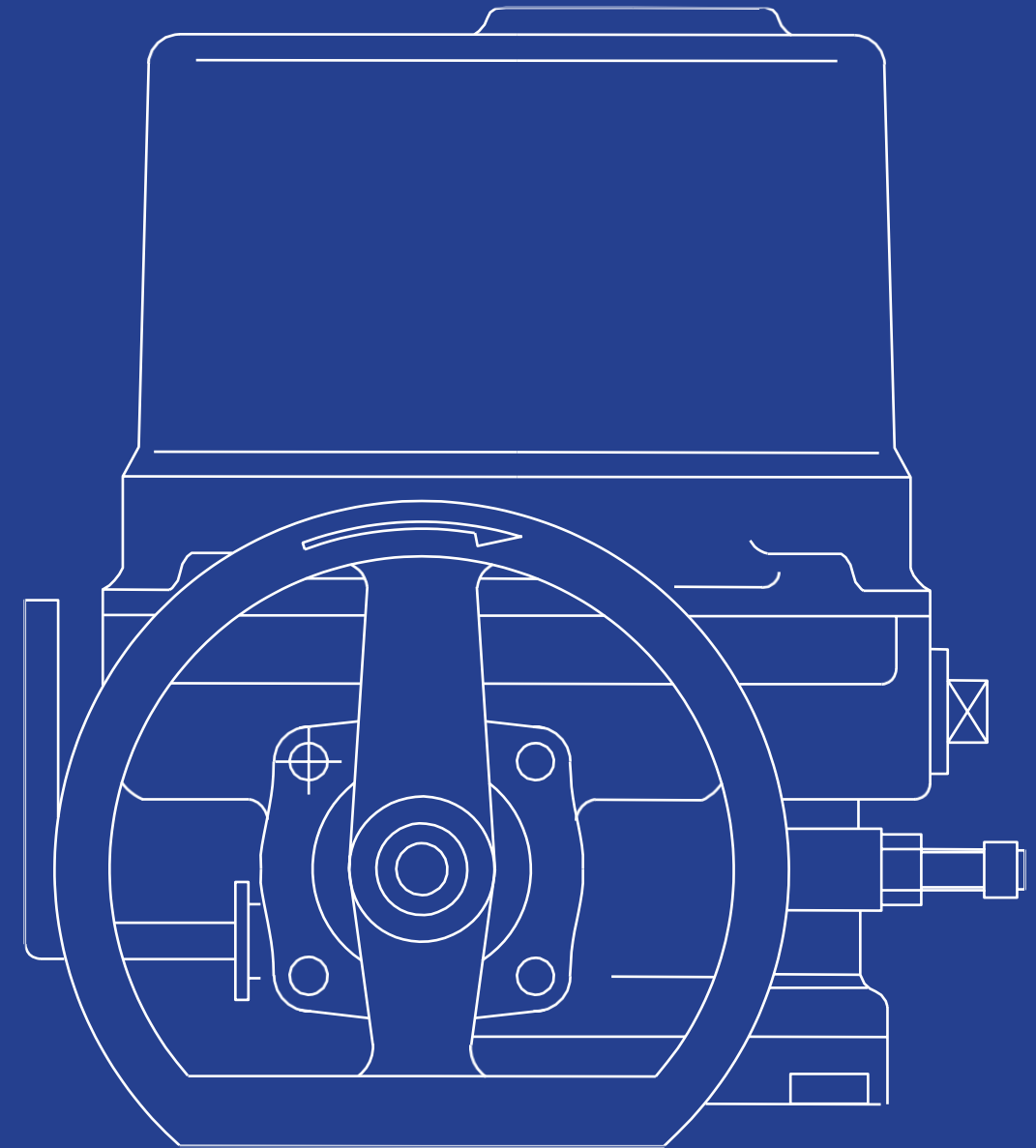
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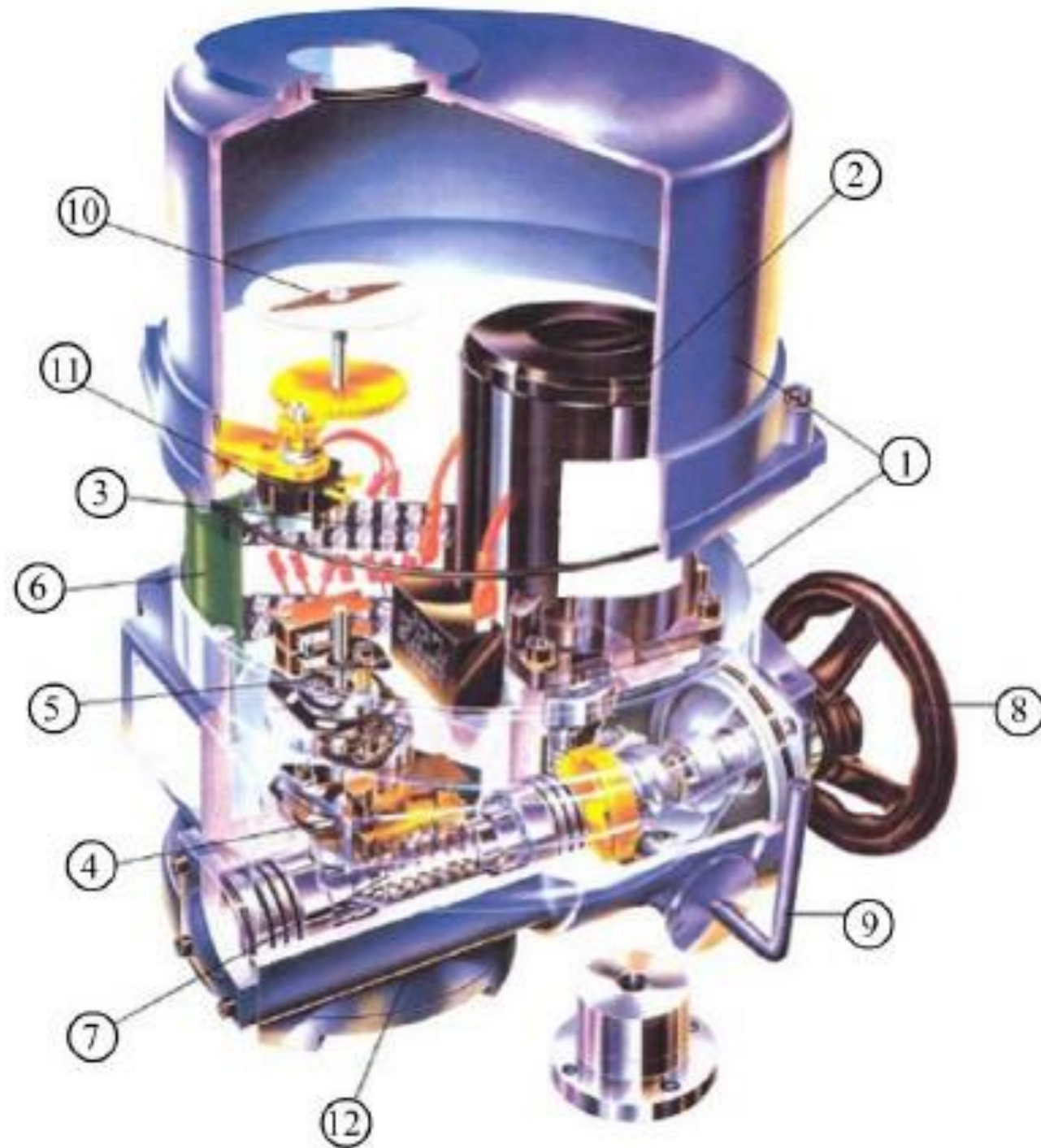


Electric Actuator



PRODUCT FEATURE

This QT series of quarter-turn Electric Actuator is developed based on advance technology and follow strictly international requirements. As an independent part-turn product, it is suitable for controlling butterfly valve, ball valve and plug valve etc. , which are required 90° to turn open or close. These actuators are featured by attractive appearance, small size, light weight, high efficiency, high reliability, high protection capability, low noise and so on. It can be operate on site and remote controlling. The application used in Petroleum and Chemical Industries, Power Generating Plant, Water Treatment, Paper-Mill Industries and etc.



1. Enclosure

Standard enclosure fulfilled protection class IP 67, NEMA 4 & 6. (Explosion proof version is available.)

2. Motor

Squirrel cage motor is of encapsulated type, with high stall torque and low inherent force for seating & unseating of valves. All motor are integrated with build-in thermal protection.

3. Terminal Connection & Wiring

Terminal connection is of "WAGO" push on type, making wiring connection very easy & without fuss. Electric wiring circuit is standardized for single & three phase voltage. Additional terminal is available on request.

4. Limit Switches

A pair of limit switches are activated by means of simple, reliable & adjustable cam plates, mounted directly onto, and driven by center column. The unique cam plate design does not allow over travel of limit switches.

5. Torque Switches

Electric actuators with torque more than 100 Nm , are installed with torque switches for over-load protection.

6. Heater

For prevention of condensation due to weather & temperature changes, and also keeps internal components clean & dry. A 20W space heater is provided inside all the electric actuator.

7. Self Locking Mechanism

Because of the worm gear design system, all the electric actuator is self locking.

8. Handwheel

The correct size of handwheel on the electric actuator ensures adequate strength for safe and efficient emergency operation.

9. Manual Over-Ride

Engage by pulling the lever & turning the hand-wheel. Lever is auto declutch when power supply is switched on, and handwheel does not turn as extra safety feature.

10. Visual Position Indicator

The Visual position indicator is directly mounted onto the center drive column to provide the visual position of the valve.

11. Potentiometer(Optional)

Available on request, is to provide & transmit remote indication of valve position.

12. Mounting & Adaptor

Bottom flange mounting dimension conforms to ISO5211. An adaptor drive bushing is provided for every Electric Actuator, is removable and for machining to suite valve stem size.

TECHNICAL PARAMETERS

QT1~QT4 (including QT3X & QT4X)

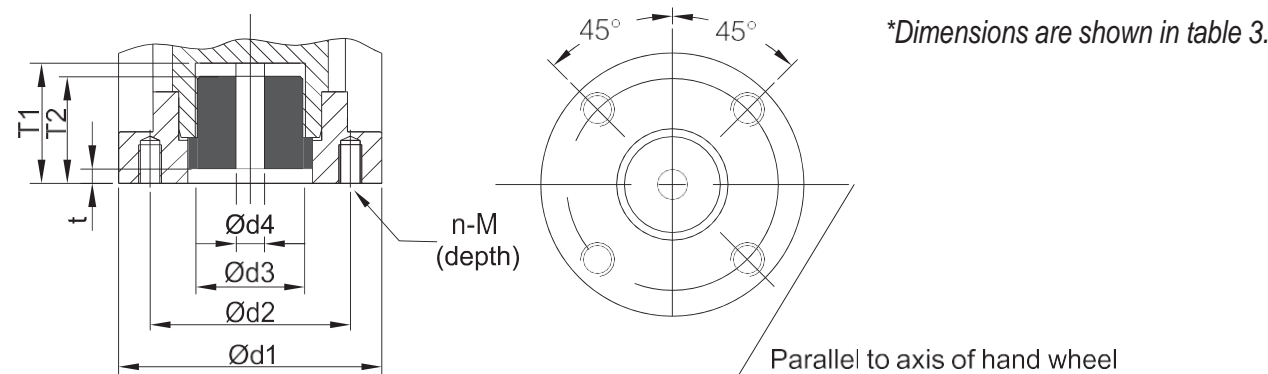
380V 3-phase motor

Table 1

Model	Size	Output Torque (N.m)	Output Speed (r/min)	Motor Parameter		Operation time of 90°(s)	Weight (kg)
				Power (kW)	Current (A)		
QT1	QT05	50	1	0.025	0.40	15	9
	QT10	100	1	0.04	0.56	15	10
QT2	QT15	150	1	0.04	0.56	15	12
	QT20	200	1	0.05	0.85	15	13
QT3	QT30-0.5	300	0.5	0.04	0.56	30	17
	QT30-1		1	0.06	0.70	15	17
	QT40	400	1.5	0.06	0.70	15	17
	QT50-0.5	500	0.5	0.09	1.10	30	18
	QT50-1		1	0.12	1.20	15	18
QT4	QT60-0.5	600	0.5	0.12	1.00	30	22
	QT60-1		1	0.18	1.60	15	22
	QT80-0.5	800	0.5	0.18	1.60	30	25
	QT80-1		1	0.25	2.10	15	25
	QT100	1000	0.5	0.25	2.10	30	25
QT3X	QT120	1200	0.3	0.12	1.20	45	38
QT4X	QT150	1500	0.3	0.18	1.60	45	51
	QT200	2000	0.3	0.18	1.60	45	51
	QT250	2500	0.3	0.25	2.10	45	51

Note: Under rated voltage, guarantee value of the ratio of motor blocking current to rated current is 7, its tolerance is +20% of the guarantee value.

FLANGE DIMENSIONS



Note: $\varnothing d7$ can be supplied according to requirement from customer to give the hole and key way that are matched with valve shaft (please specify when ordering)

TECHNICAL PARAMETERS

QT1~QT4 (including QT3X & QT4X)

220V single-phase motor

Table 2

Model	Size	Output Torque (N.m)	Output Speed (r/min)	Motor Parameter			Operation time of 90°(s)	Weight (kg)
				Power (kW)	Current (A)	Capacity (μF)		
QT1	QT04	40	0.9	0.025	0.40	4	17.5	12
	QT06	60	0.9	0.025	0.40	4	17.5	12
	QT09	90	0.9	0.04	0.90	6	17.5	12
QT2	QT15	150	0.7	0.04	0.90	7	20.6	15
	QT19	190	0.7	0.05	1.10	8	20.6	15
QT3	QT28	280	0.6	0.04	0.90	8	26.3	20
	QT38	380	0.6	0.06	1.25(1.40)	10	26.3	20
	QT50	500	0.6	0.09	1.70(1.80)	16	26.3	20
QT4	QT60	600	0.5	0.12	2.30	18	29.4	30
	QT80	800	0.5	0.20	2.70(3.00)	18	29.4	30
	QT100	1000	0.5	0.20	2.70(3.00)	18	29.4	30
QT3X	QT120	1200	0.2	0.12	2.30	18	80	38
QT4X	QT150	1500	0.2	0.20	2.70(3.00)	18	90	70
	QT200	2000	0.2	0.20	2.70(3.00)	18	90	70
	QT250	2500	0.2	0.25	2.70(3.00)	25	90	70

FLANGE DIMENSIONS

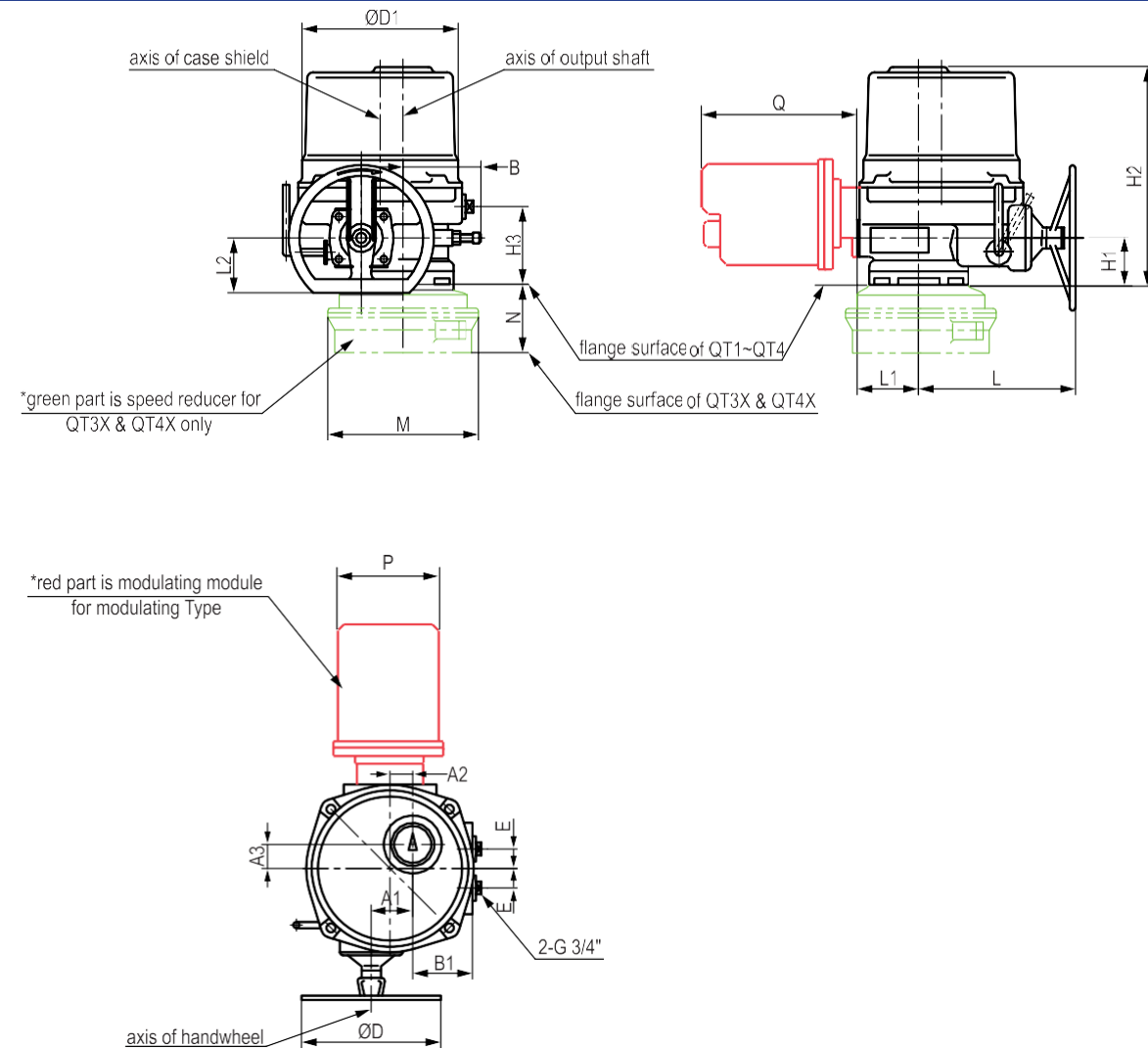
unit:mm

Table 3

Model	ISO 5211	$\varnothing d1$	$\varnothing d2$	$\varnothing d3$	$\varnothing d4$ (max)	n-M (depth)	T1	T2	t	Size
QT1	F 05	$\varnothing 65$	$\varnothing 50$	40	14	4-M6(12)	38	30	5	QT04
	F 07	$\varnothing 90$	$\varnothing 70$	54		4-M8(12)	43	40		QT06,QT09
QT2	F 07	$\varnothing 90$	$\varnothing 70$	57	22	4-M10(15)	49	40	5	QT15
	F 10	$\varnothing 125$	$\varnothing 102$			4-M10(15)				QT19
QT3	F 10	$\varnothing 125$	$\varnothing 102$	75	32	4-M10(18)	52	44.2	2.2	QT28,QT38
	F 12	$\varnothing 150$	$\varnothing 125$			4-M12(18)				QT50
QT4	F 10	$\varnothing 125$	$\varnothing 102$	85	42	4-M10(18)	63	51	1	QT60
	F 12	$\varnothing 150$	$\varnothing 125$			4-M12(20)				QT80
	F 14	$\varnothing 175$	$\varnothing 140$			4-M16(20)				QT100
QT3X	F 14	$\varnothing 175$	$\varnothing 140$	65	42	4-M16(26)	68	58	7	QT120
QT4X	F 14	$\varnothing 175$	$\varnothing 140$	82	52	4-M16(26)	72	62	7	QT150
	F 16	$\varnothing 210$	$\varnothing 165$			4-M20(32)				QT200,QT250

Note: Other dimensions are available upon customer's request.

DIMENSIONS



unit:mm

Table 4

Model	A1	A2	A3	B	B1	ØD	ØD1	E	H1	H2	H3	L	L1	L2	N	M	P	Q
QT1	44	17	36	75	68	102	170	27.5	60	256	109	179	62	76	125	216	148	156
QT2	49.5	22.5	30	85	77.5	200	200		64	263	113	187	85					
QT3(QT3X)	60	33	35	100	77	250	220		70	298	119	202	88					
QT4(QT4X)	70	43	38	115	87	250	260		78	342	127	225	106					

WIRING DIAGRAM

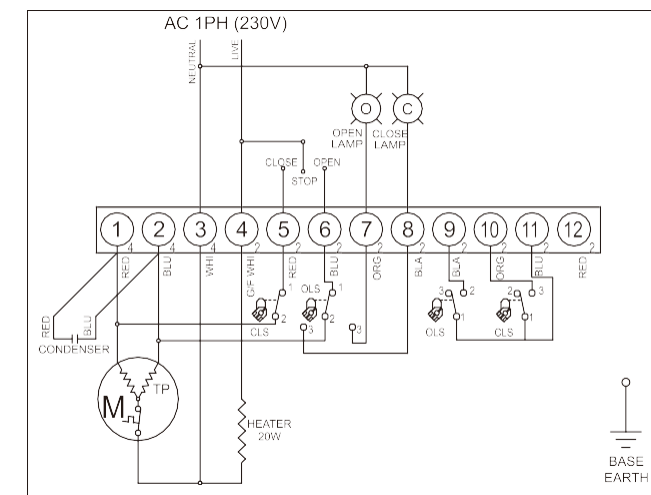
QT1 wiring diagram

CLS:Close Limit Switch (250VAC 6A)

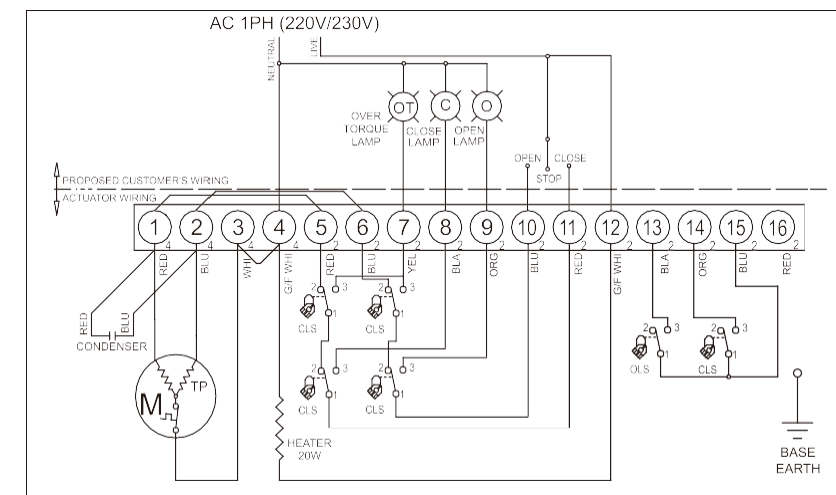
OLS : Open Limit Switch (250VAC 6A) TP

:Thermal Protector (250VAC 15A)

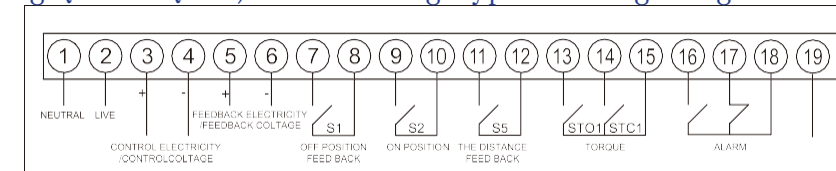
Switch	Close	Intermediate	Open
CLS 1-3			
CLS 1-3			
CLS 1-2			
CLS 1-3			



QT2~QT4 (including QT3X & QT4X) wiring diagram

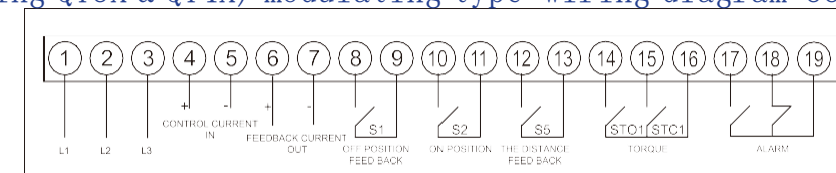


QT1~QT4 (including QT3X & QT4X) modulating type wiring diagram-220V



Note: 16,18 when alarm is attached;17,18 switch off

QT1~QT4 (including QT3X & QT4X) modulating type wiring diagram-380V



Note: 17,19 when alarm is attached;18,19 switch off

ARITA is a professional manufacturer and exporter that is concerned with the design, development and production of flow controls.



*The standard we covered is ANSI & API for US, JIS for Japan, BS for UK, DIN for Germany and GB for China. The lightweight control valves GCV-G of **ARITA** is in the industry leading. High-quality boutique valves are widely used in the water industry, electric power, chemical, mining, petroleum, food, medicine, construction and other industries all over the world.*

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