RTC TAIWAN
ATYCO FLUID CONTROL

Company Profile

TAIWAN ATYCO FLUID CONTROL Zhejiang Factory is located in Lishui Industrial Zone, Liandu District, Lishui City, Zhejiang Province. It is known as "the hometown of longevity in China". It is a high-tech enterprise that integrates the research and development, production, manufacture, sale, installation and debugging of Intelligent Execution agencies and intelligent control products

The company has a R&D team consisting of more than 10 high-end professional technicians, including master's and postgraduate students. The company has introduced advanced technology at home and abroad, making full use of its advantages, avoiding disadvantages and independent innovation. Committed to being a pioneer in the national brand of the actuator industry and a pioneer in technological innovation.

The company produces intelligent electric actuators and intelligent control products with international leading level. It adopts advanced DSP system, professional non-contact Hall effect pulse counting coding system and photoelectric encoder system, with Chinese and English menu operation and display, system automatic diagnosis, prompting and protection, intelligent, efficient and user-friendly design. It has created excellent performance such as perfect function, simple debugging, simple installation, easy setting and lifetime use.

The company adheres to the business philosophy of "customer-oriented product demand, market-oriented, quality-oriented, continuously surpassing, inevitably outstanding", and sincerely welcomes the extensive cooperation of new and old customers. We will provide you with efficient, fast and high-quality services with high-quality products, customer satisfaction prices, first-time technical support and after-sales service.
The company's business philosophy: customer-oriented product demand, market-oriented, quality-oriented, continuously surpassing, inevitably outstanding

Leading R&D technology: A professional R&D team provides solutions for intelligent control in your customized new product development. It has an actuator body control technology that ensures you get the highest quality and perfect product.

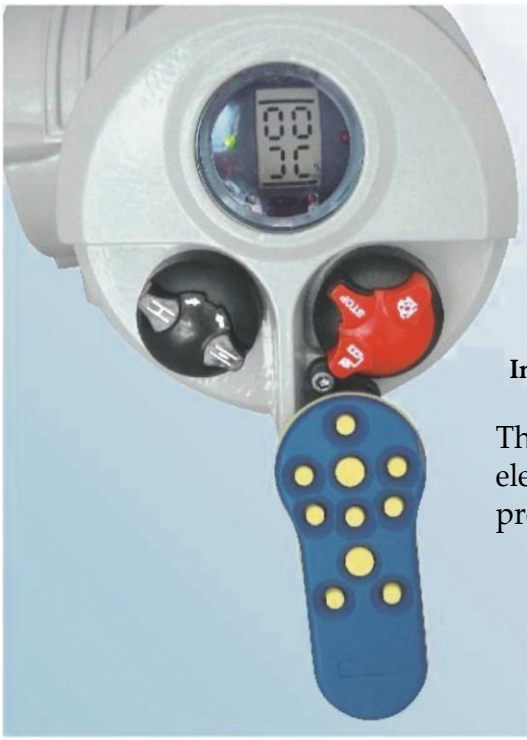
Professional R&D team: A research and development team consisting of more than ten high-end professional and technical personnel, including master's and postgraduate students, to provide you with professional technical research and development, technical support and technical services. According to your requirements, we will provide you with comprehensive product and technical training.

Excellent product quality: excellent management team, professional R & D team, advanced production technology, strict implementation of IS09001 international quality system standards, to ensure product quality, users can rest assured to use.

Efficient service support: Real-time online product inquiry and ordering system for fast and efficient customer service. After-sales support is available within 48 hours.

Comprehensive industrial application: widely used in the automatic control systems of vapor-liquid transportation pipelines of power stations (hydropower, thermal power, nuclear power), oil (gas) fields, oil refineries, oil (gas) pipelines, steel, chemicals, fertilizers, pharmaceuticals, printing and dyeing, sugar, sewage treatment, water supply, etc.

Contents



LM/LMT actuatorfeatures

Innovation of Imtork.LM/LMT Series Intelligent Electric Actuators

The latest-generation Imtork.LM/LMT series of intelligent electric actuators, using advanced DSP system, the product's precise control and highreliability are perfectly combined.

Lifetime use

No matterin any environment orapplication, LM/LMT actuator-as always maintains its stable reliability, outstanding and extraordinary, concise design, doublesealedwaterproofcasing,"non-invasive" infrared setting and comprehensive protection system, making LM/LMT a reliable leader in valve control field.

Non-invasive-life-long seal

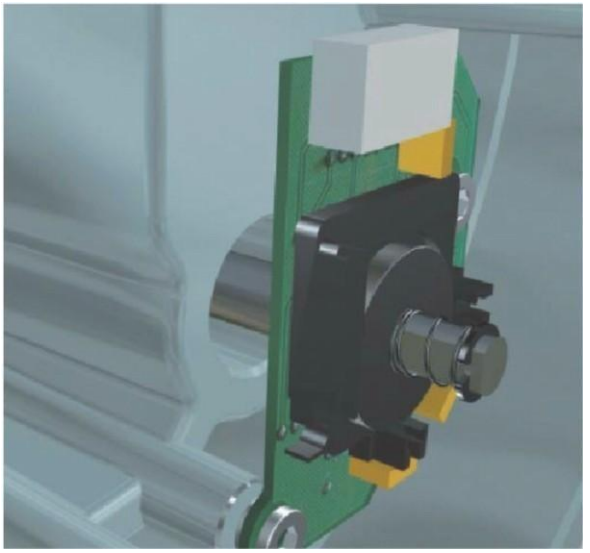
LM/LMTdoesnotneedtoremovetheendcoverofthe electric box for field debugging. All settings and adjustments are completed by using the provided infrared setter. After assembly in the controlled environmentofourfactory,airconvectioniseliminated and all internal components are protected for life. Non-invasivecontrolmeansthat thereis no through shaft passing through the control box.

Debugging is simple

Theinfraredsettercanbeusedforsimple,safeand fast non-invasive adjustment. The LM/LMT setter usedon demand can be used to enterand adjust the actuatorsettings, suchastorquevalue, limit, control and display functions. Imtork provides a unique setterfornon-invasivesettingofactuatorsinany environment, regardless of whether power supply is provided or not.

Troubleshooting is simple and convenient.

LM/LMT's easy-to-read display with background lighting provides icons for valve operating conditions, controls, and actuator alarms.



Valve position measurement

Reliableprocesscontroldepends onthe accurate positioning of the end of the valve stroke. Non-contactvalvepositionmeasurementensuresthe precision control and service life of theactuator. The rotation of the output central shaft is converted into adigital signal by Hall magnetic effect encoder and thencomparedwiththelimitstoredinasafeand permanent memory.

Humanized design

LM/LMT includes a unique liquid crystal display specially developed for actuator display. Its large screenallowsuserstoeasilyseevalveposition, torqueanddiagnostic screenfromadistance. Unique LCD with background lighting system provides high visibility under all lighting conditions. At the sametime, red, yellow and green LEDvalve positionindicators are provided.

Display support

Imtork recognizesthat local and remote valve positionindicationisrequiredat all times, even whentheactuatorpoweristurnedoff.forthis reason, within LM/LMT Aself-containedbatteryisinstalledtomaintain andupdatethevalveindicationwhenthepoweris turned off. The battery also supports data recording and debugging when the power isturned off.

Configuration

The LM/LMT infrared setter provided for setting, adjusting and viewing allows usersto easilyentertheactuatorconfigurationthrough the liquid crystal display.

Valve closed

Valve opened

Torque valve position display

Diagnostic display

Help screen

With LM/LMT setter, nine help screens can be called up, which enables real-time and group analysis of control signals, valve and actuator states and indicationstates.

Valve torque indication

The LM/LMT setter isused to observe thevalve torquecorrespondingtothevalvepositionin real time through the liquid crystal display. Therefore, the analysis of the valve working conditionsbecomesastandard function.

Conditional control

Forapplicationswithsafetyrequirements, LM/ LMT configuration is required as conditional control.Inthismode,theoperationdependson twoindependentsignals. Takethevalve closing command as an example, aremote valve closing inputsignaland avalve closinginterlockinput signal are simultaneously provided. The actuator will operate and close the valve. If only one signal is provided or one signal is lost, the actuatorwillbe setorstoppedtopreventfailure. Whentheconfigurationisconditionalremote control,interlockinginputisnotrequired for local operation.

Diagnostic icon on screen

There are four special alarm icons in the LCD, whichcan clearly display the alarms of valves, control systems and actuators.

Security Protection and Intelligence

Protection of Valve Blocking Motor

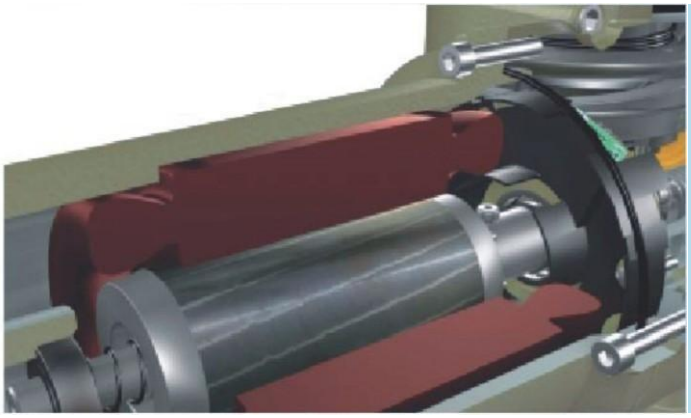
Ifthevalveis stuck and thereis no action within 7 seconds after thestart signalis issued, the logiccircuitcan disconnectthe responding contactor to prevent the motor fromoverheating.

Phase synchronizer

LM/LMT's unique automatic in-phase adjustingdeviceforphasesynchronizer is used to prevent valve damage caused by incorrect power connection and ensure that the three-phase motor always has the correct power phase sequence.

Single phase protection

In order to further prevent the motor from overheating. LM/LMT's electronic device continuously monitors the three phases of the power supply. If one or more phases are lost, it can prevent the control circuit from exciting the contactor. As a standard function, it can obtain on-site and remote alarm when the power supply is out of phase.



LM overheat protection

LM/LMT isequippedwith twothermal protection relaysin the motor coil to directly detect the temperature of the coil. If thecoilistoolarge, thecontrolcircuitoftheactuatorcanbe disconnected.

Modbus

LM/LMT series actuators using Modbus module, connected by RS485 data bus and using Modbus RTU communication protocol, can transmit data at a maximum speed of 38.4Kbit/s, can be conveniently configured in currently popular configurationsoftware,andprovideall controlfunctionsof actuatorsand field buscommunication of feedback data. The bus control system is automatically switched to a normal communicationmoduletoensure normal operationofthe system.

Remote diagnosis -IrDATM

LM/LMT Implementation Successfully Implements Fast, Secure, Non-Invasive Communication and Standardized Data Exchange with Ir DA. The configuration of actuators can be analyzed and changed.Each LM/LMT includes a built-indatarecorder. Wecanexplain andgive suggestions for analysis of operating data such as valve torque distribution, actuator events and statistics. The recorded datainformation can also be transmitted to the user's site headquarters through IrDA (TM) compatible PDA. After analysis and change of actuator configuration, it is transmitted back to the actuator.

Transient inversion protection

When the actuator receives an instantaneous reversal command, the automatic delay circuit is used to prevent unnecessarywearofthevalvestemandgearbox causedby impactload. The circuit can alsolimit surge current through the contactor.

Automatic self-detection and diagnosis function (ASTD)

At any time, once the actuator is powered on, it will automatically detect the operating circuit to ensure correct operation. For rarely occurring equipment faults, it can be diagnosedand automaticallydisplayed on the screeninthe formoficons, whiletheelectricoperationofthe actuatorwill be prohibited to facilitate on-site maintenance.

Profibus

All functionsofProfibusDPdesignedbySIEMENSSPC3 application specific integrated chip are compatible with EN50170 standard. the data transmission rate is 9.8Kbit/s, the sizeof244 bytesofdataper second,andtheresponsetimeof ann is from hundreds of microseconds to hundreds of milliseconds. the transmission medium is shielded twisted pair or optical fiber. the isolation technology eliminates external interference. according to user requirements, it can also provide DN, HAT, FF and other standardfieldbus interfaces.

Bus control system

Fieldbus is the development trend in today's industrial controltechnology field. LMseriesactuatorsusespecial microprocessors to increase the capability of digital computers and digital communication, making it an intelligent control device. Twisted pair wires are used as busesto connect a plurality of actuatorswith bus interfaces into a network, and data transmission and information exchange are realized according to open and standard communication protocols. Using fieldbus system, the actuator changes the original centralized controlinto decentralized control, simplifies thesystem design, improves the reliability of system operation, and can save a lot of installation and maintenance costs for users.

Lifelong technical support

Imtorkknowsthatourusersneedtechnicalsupport. Factory shutdown, delayed commissioning plan, improper maintenance costs and high fines do not allow ineffective support. The full series of Imtork electric actuators have global technical support functions. Imtork Technical Support Center provides fast and convenient technical support for usersalloverthe world. Nomatterwheretheactuatorsarein the world, they can contact Imtork through GSM wireless phones, thus obtaining product technical support from professional technical support centers, including configuration of actuators and troubleshooting of data analysis.

* Summary of LM Actuator Performance

Performance Data Sheet (380V50Hz Three Phase)

Actuator Output Speed (rpm)								
speed	18	24	36	48	72	96	144	192
model	torque (Nm)							
LM18	110	110	110					
LM20	205	205	205	205	205	205	100	
LM25	400	400	300	250	250	230	150	
LM35	600	600	540	470	470	370	260	
LM40	1000	1000	8500	680	680	550	400	
LM70	1500	1500	1300	1000	1000	750	650	540
LM90	2000	2000	1700	1350	1350	1000	870	730
LM91							1350	1350
LM95		3000						

Note: Whentheactuatordrivesleeveis directlyinstalled onthegatevalve, it is recommendedthat the operatingspeedshouldnot be too fast. The rated torque is the maximum torque set in the opening and closing directions.

LM Actuator Mechanical Interface Dimension Table									
Actuator model		LM18	LM20	LM35	LM40	LM70	LM90	LM91	LM95
			LM25						
Flange type	ISO5210	F10	F14	F16	F25	F25	F30*	F25	F30
	Mss sp-102	FA10	FA14	FA16	FA25	FA25	FA30*	FA25	FA30
Acceptable stem diameter									
Type A(max)lifting rod	MM	32	38	54	64	70	70		
Non-lifting rod type	MM	26	32	45	51	57	57		
*Type Z(max)lifting rod	MM		51	67	73	83	83		83
Non-lifting rod type	MM		38	51	57	73	73		73
Z3	MM	32	51	67					
Type B1 (fixing hole)	MM	42	60	80	100	100	120	100	
Type B2(fixing hole)	MM	20+	30+	40+	50	50	50	50	
Type B3 (fixing hole)	MM		30+	44+	50	60	60	60	

Note: When LM90 uses B3 and B4 sleeve, the flange type is F25. +For LM18 to LM35 actuators, Type A drive sleeve must be used when the required valve shaft or rod moves axially

Actuator Output Speed (rpm)								
Actuator model	LMM18		LMM20		LMM25		LM35	
Flange type	F10		F14		F14		F16	
Rated thrust	44KN		100KN		100KN		150KN	
Acceptable stem max diamater(mm）	28		40		40		48	
Speed （rpm）	Adjusting torque(Nm)	Max seat torque(Nm)	Adjusting torque(Nm)	Max seat torque(Nm)	Adjusting torque(Nm)	Max seat torque(Nm)	Adjusting torque(Nm)	Max seat torque(Nm)
18	34	61	81	122	152	204	271	544
24	34	54	81	109	152	204	271	544
36	30	54	68	81	129	163	253	408
48	27	48	54	68	102	136	203	313
72	-	-	47	54	102	136	203	218

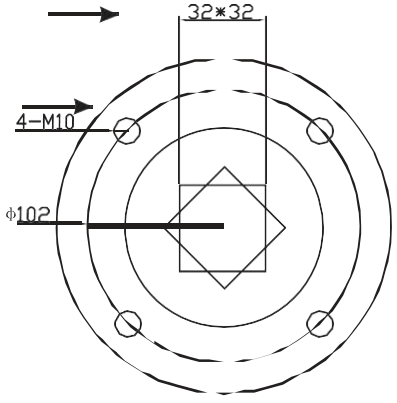
LML series performance parameters									
Actuator model	LML18			LML20					
Maximum motior				113					
Screw diameter/head count	25/3			33/7			38/15		
Flsnge type	F10			F14					
Actuator speed (rpm)ⁿ	Linear speed (mm/sec)ⁿ	Adjusting thrust (KN)ⁿ	Rated seat thrust (Nm)ⁿ	Linear speed (mm/sec)ⁿ	Adjusting thrust (KN)ⁿ	Rated seat thrust (Nm)ⁿ	Linear speed (mm/sec)ⁿ	Adjusting thrust (KN)ⁿ	Rated seat thrust (Nm)ⁿ
18	0.9	15	28	2.1	24	36	5.4	16	18
24	1.2	15	25	2.8	24	36	7.2	16	25
36	1.8	14	25	4.2	20	24	10.8	13	25
48	2.4	12	22	5.6	16	10	14.4	11	13
72				8.4	14	16	21.6	8	11

Actuator model	LML25					
Maximum motio	115					
Screw diameter/head count	33/7			38/15		
Flange type	F14					
Actuator speed (rpm)ⁿ	Linear speed (mm/sec)ⁿ	Adjusting thrust (KN)ⁿ	Rated seat thrust (Nm)ⁿ	Linear speed (mm/sec)ⁿ	Adjusting thrust (KN)ⁿ	Rated seat thrust (Nm)ⁿ
18	2.5	45	60	5.4	31	41
24	3.4	45	60	7.3	31	41
36	5.5	38	48	10.8	26	33
48	6.8	30	40	14.4	20	27
72	10.1	10	40	21.6	20	27

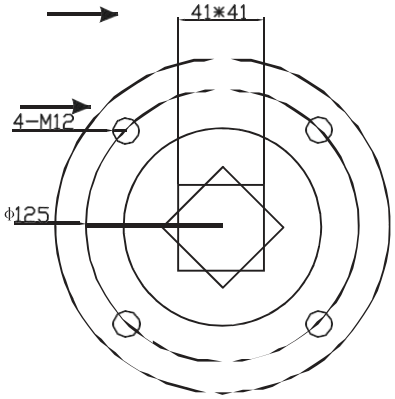
*Performance Summary of LMT Angular Stroke Actuator

Performance and mechanical data

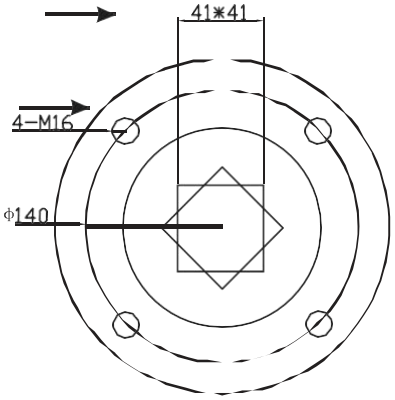
Actuator	IQT100-200	IQT300-500	IQT600-800	IQT1000	IQT1200-2000
Torque					
Maximum value Minimum value	200 50	500 300	800 600	1100 800	2000 1200
Run time					
90°Maximum value	30S	30S	60S	120S	120S
Flange					
ISO5211	F10	F10	F10	F12	F14
Weight					
KG	23	23	23	38	38
Coupling Acceptable axis					
Round hole and keyway Maximum value MM	42	42	42	60	60
Square hole AF Maximum value MM	32	32	32	41	41
Hand wheel					
Turn 90°	80	80	80	80	80
Angular adjustment					
Standard angle	80-100	80-100	80-100	80-100	80-100
Motor power					
Ac380 power	40W	60W	60W	90W	90W



F10 flange size and coupling processing size



F12 flange size and coupling processing size

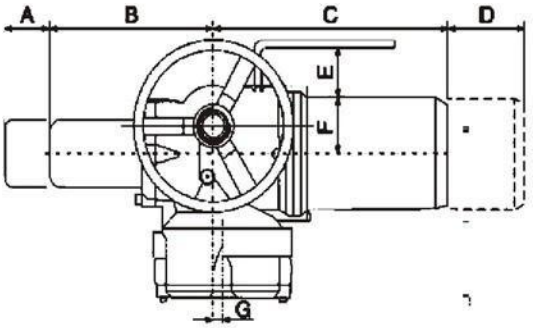


F14 flange size and coupling processing size

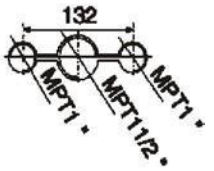
* Optional flanges F05.FA05.F07 and FA07 use the base. The required base model must be stated.
* The device comes with a solid coupling. Final processing by the valve manufacturer.
* The optional power supply voltage of the device is AC380V, AC220V. Other voltages are customized.

Outline mounting size

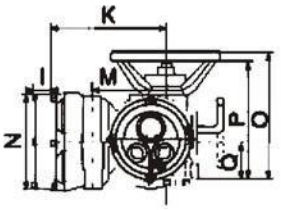
Dimensions of LM10/12/18/20/25/actuator



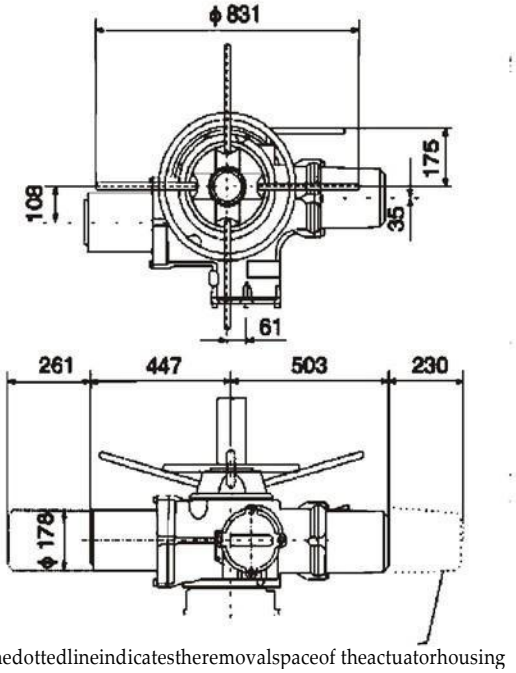
Cableinlet



The dotted line indicates the removalspace of the actuator housing

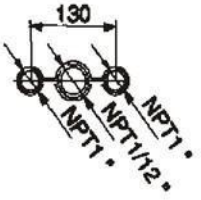


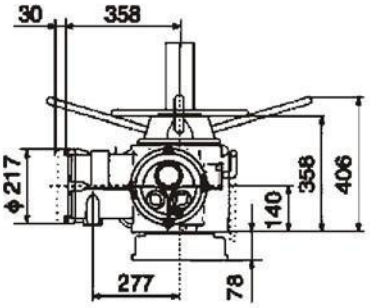
Dimensions of LM40 actuator



Thedottedlineindicatestheremovalspaceof theactuatorhousing

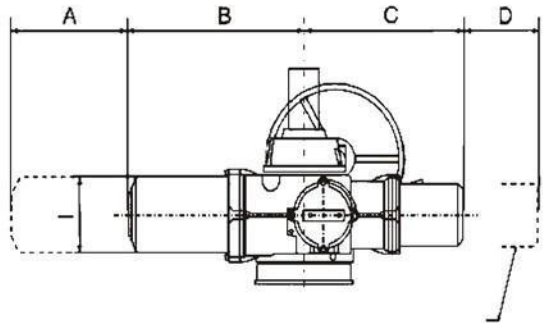
Cableinlet





Size / Spec.	A	B	C	D	E	F	G	ϕH	ϕI	ϕJ	K	L	M	ϕN	O	P	Q
LM18	165	268	358	230	119	41	11	457	101	229	265	30	179	217	253	233	87
LM20/25	230	345	388	230	119	41	25	650	127	229	265	30	199	217	303	285	108
LM35	247	368	402	230	120	42	40	786	151	229	307	30	222	217	341	315	122

Dimensions of LM70/80/91/95actuator



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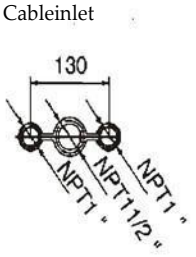
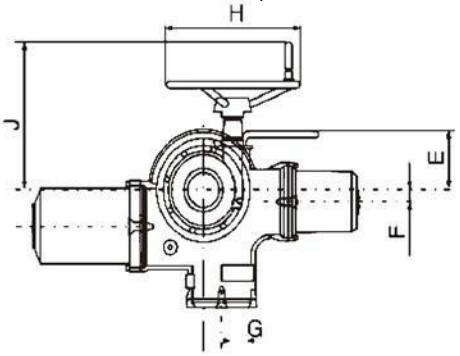
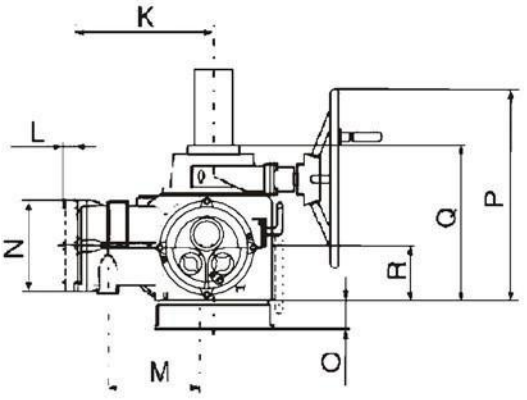




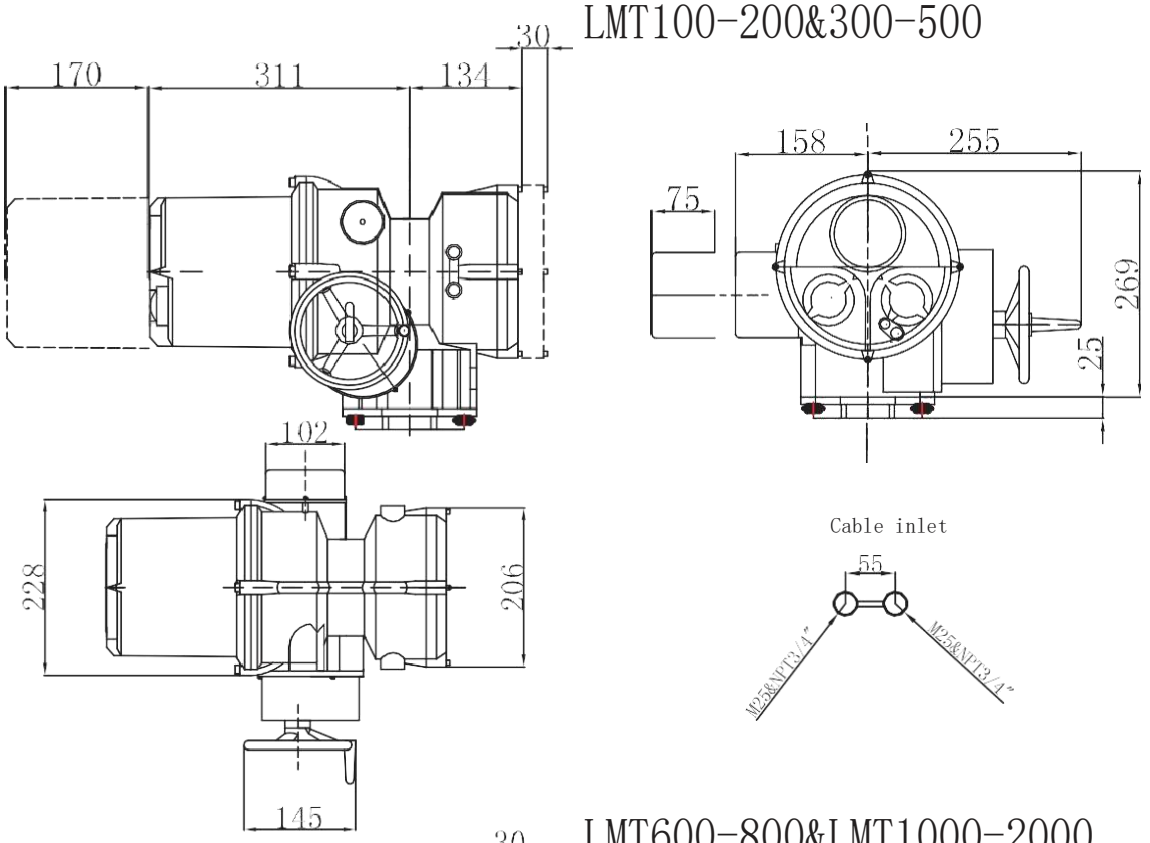


Dimensions of LM70/90/91/95actuator

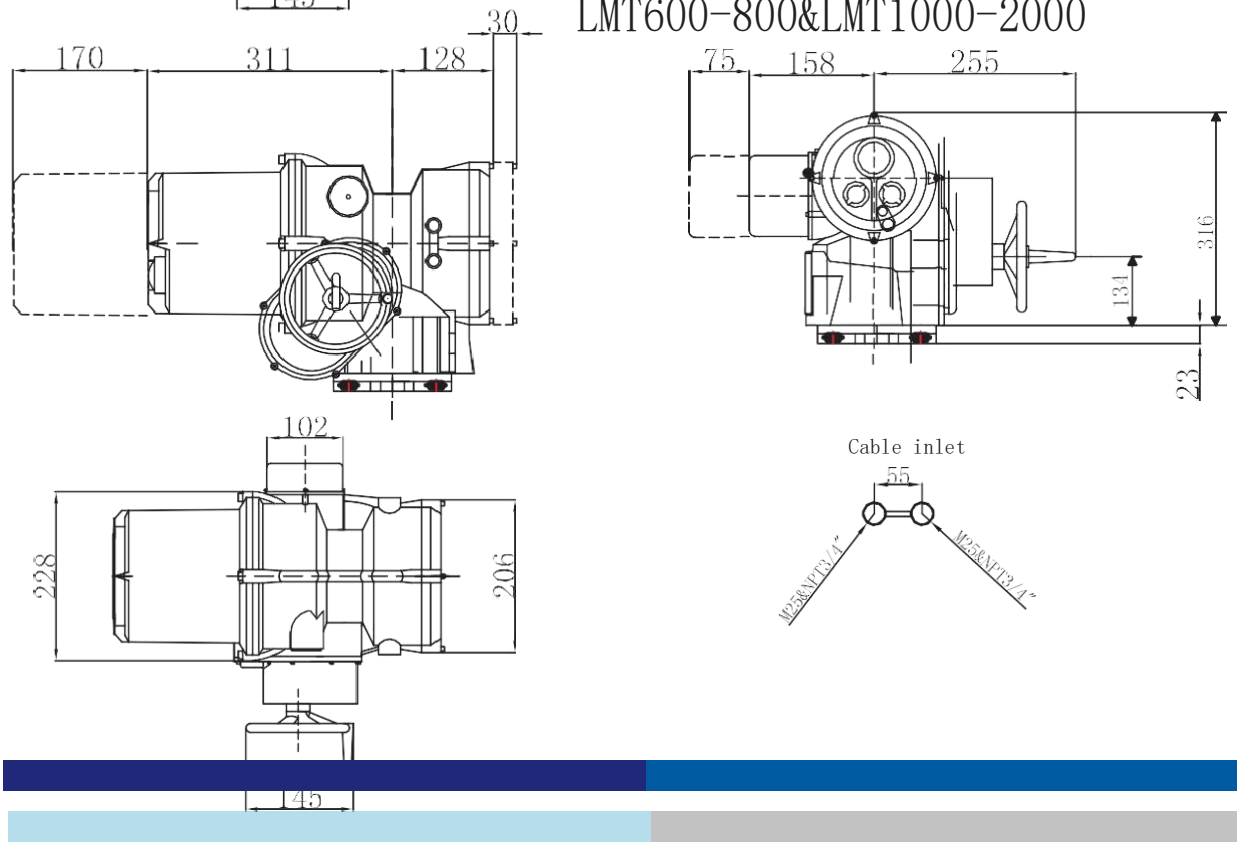
Size / Spec.	A	B	C	D	E	F	G	ϕH	ϕI	ϕJ	K	L	M	ϕN	O	P	Q	R
LM70/90	335	521	503	230	175	35	61	432	178	438	358	30	272	217	60	517	384	140
LM91	360	545	503	230	175	35	61	432	222	438	358	30	272	217	60	517	384	140
LM95	335	521	503	230	175	35	61	432	178	438	358	30	272	217	60	517	384	140

Overall installation dimensions

LMT100-200&300-500



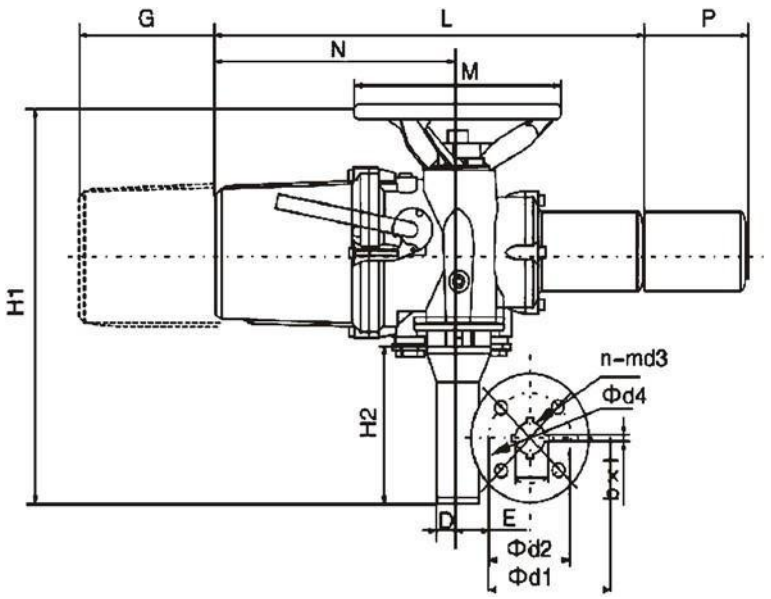
LMT600-800&LMT1000-2000



The outer dimensions and installation dimensions of the angular motion actuator

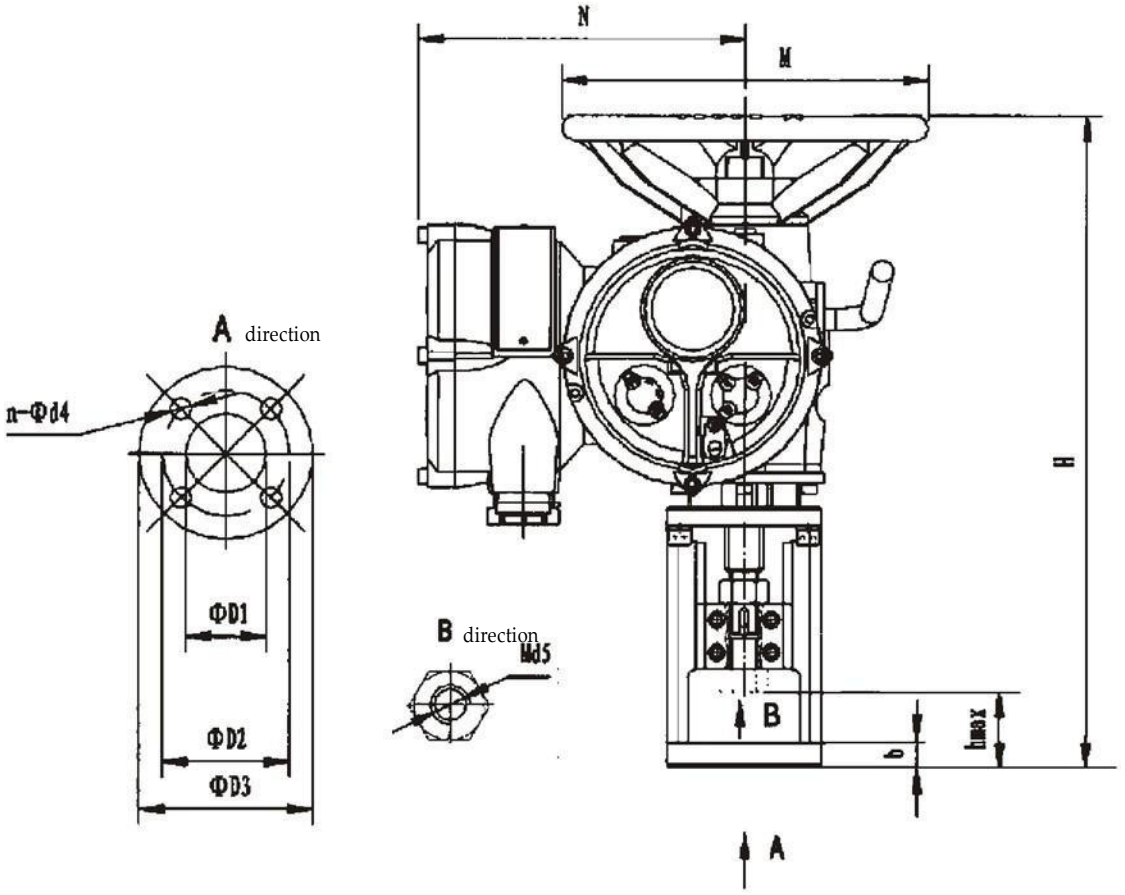
1. direct connection installation form

a. primary deceleration



Actuator model	D	E	H1	H2	G	L	M	N	P	b×l	ϕd1	ϕd2	N-md3	Max allowable diameter	Secondary reduction gearbox	
															Input Flange	Input Flange
LM18/W5-70	50	136	640	320	180	560	ϕ300	320	180	22×105	285	165	4-M20 deep16	76	F14	F16
LM20/W5-40	50	136	700	320	180	678	ϕ508	340	220	22×105	285	165	45°	76	F14	F16
LM20/W6-70	50	178	710	330	180	678	ϕ508	340	220	28×143	375	254	"8-M16 deep16 22.5° Uniform	102	F14	F25
LM25/W7-60	70	210	845	465	180	678	ϕ508	340	220	28×143	450	254	"8-M16 deep14"	127	F14	F25
LM35/W7-60	70	210	885	465	180	715	ϕ762	365	260	28×143	450	254	22.5° Uniform	127	F16	F25

The Outline and Installation Dimension of LML Direct motion Intelligent Electric Actuator



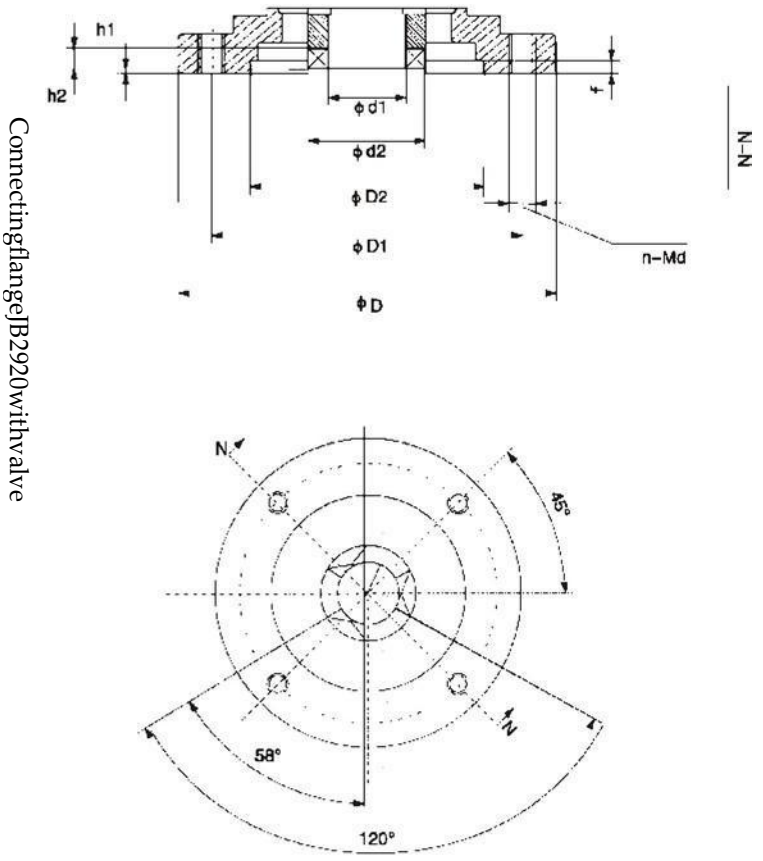
(mm)

Actuator model	N	M	H	B	ϕD1	ϕD2	ϕD3	N-ϕd4	Md5	motion	Hmax
LML18	265	300	660	22	80	105	140	4-ϕ12	M12×1.25	40	105
								4-ϕ14	M16×1.5	60	114
LML20	280	508	720	30	95	118	200	4-ϕ12	M12×1.25	40	105
								4-ϕ14	M16×1.5	60	114
								4-ϕ18	M20×1.5	100	95
LML25	280	508	720	30	100	138	200	4-ϕ14	M16×1.5	60	114
								4-ϕ18	M20×1.5	100	95

Flange connection dimensions

*(JB2920) Standard Flange Connection Dimension Chart

ConnectingflangeJB2920withvalve



Parameter \ Model	Frame number	D	D1	D2(H9)	d1	d2	h1	f(min)	h2	h2N-Md
LM18	2	ϕ145	ϕ120	ϕ90	30	45	2	4	8	4-M10
	0	ϕ115	ϕ95	ϕ75	26	39	2	4	6	4-M8
LM20-25	3	ϕ185	ϕ160	ϕ125	42	58	2	4	10	4-M12
	0	ϕ145	ϕ120	ϕ90	30	45	2	4	8	4-M10
LM35	4	ϕ225	ϕ195	ϕ150	51	72	2	5	12	4-ϕ18
LM40	5	ϕ275	ϕ235	ϕ180	62	82	2	5	14	ϕ22
LM70-90	7	ϕ330	ϕ285	ϕ220	72	98	3	6	16	ϕ26
LM91	8	ϕ380	ϕ340	ϕ280	83	118	3	6	20	ϕ22

* Drive coupling for actuator

Beforeinstallingtheactuator, accordingtotheexternaldimensionsoftheactuator, asuitable spaceforthepipelineshouldbe selected tofacilitatetheaccessoftheinstallerandthemaintenance. At thesametime,careshould be takentoleavespace for the removalofdetachableparts during commissioning, repairing and maintenance.

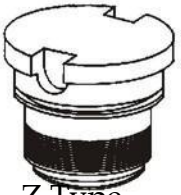
The actuator shall not be installed upside down. Refer to the model and weight of the actuator. If necessary, the actuator may be hoisted for vertical or horizontal installation. Check the flange installation size of the actuator and see if the drive shaft sleeve is in conformity with thevalve.Otherwise,remove the driveshaftsleeve from thebaseoftheactuator,processitinto aform matching the valve, and reinstall it.

Theendfacedimensionsoftheconnectingandinstalling flangesofintelligentactuators with linear motion and angular motion all conform to ISO5210 standard. If there are special requirements, please contact our technical department orindicate when ordering the contract.

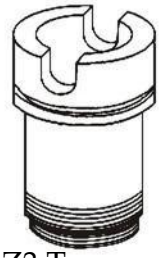
Although thesizeoftheendfaceoftheoutputflangeofthemulti-turn intelligentactuator conformsto ISO5210 standard, considering the force onthe outputshaftof the actuator, thedrive connection is divided into thrust type and non-thrust type.

Thrust type

A Type
For LM10 to 35

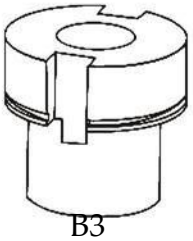


Z Type
For LM20 to 35
Suitable for stem
with larger diameter.

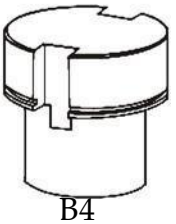


Z3 Type
For LM20 to 35
Suitableforstem with
larger diameter.

B1



B3

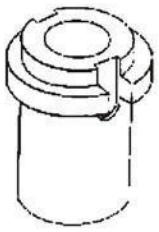


B4

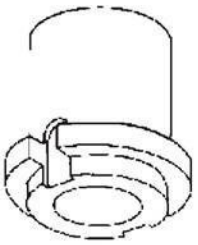
Thestop push bearing on the detachable thrust base is designed to be fully sealed and lubricated for life. The stop push bearing on the integral thrust base is designed to be lubricated by lubricating oil in the gear box of the actuator. Both integraland detachablethrust basesaredesigned tomaintain appropriate thrust force so that no load will act on the gears of theactuator.

LM40/70/91 and 95 actuators

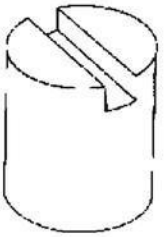
Thrust type



Type A position 1
For LM40/70 and 90 models

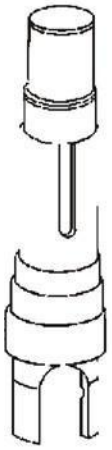


AM position 2
For LM40/70 and 90 models



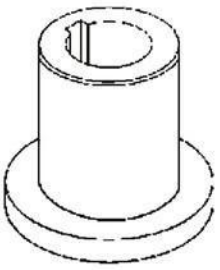
For LM40/70/90/95, suitable for stem with larger diameter and length.

Non Thrust type



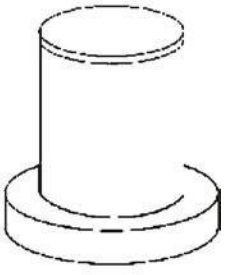
B1

Used for LM40/70/90 type, with larger fixing holes, holes and keyways conforming to ISO standard



B3

For LM40/70/90 and 91 models, with larger fixing holes and keyways conforming to ISO

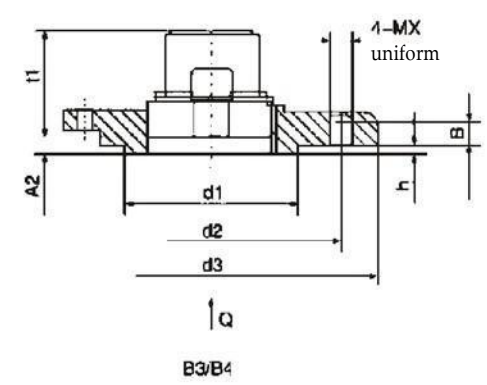


B4

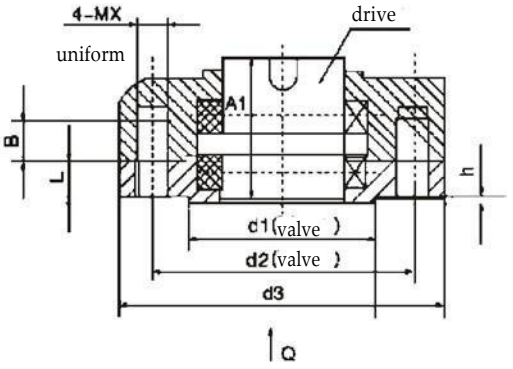
Used for standards LM40/70/90 and 91, solid drive shaft sleeves, which need to be processed by the user when needed.

Standard Flange Connection Dimension Chart

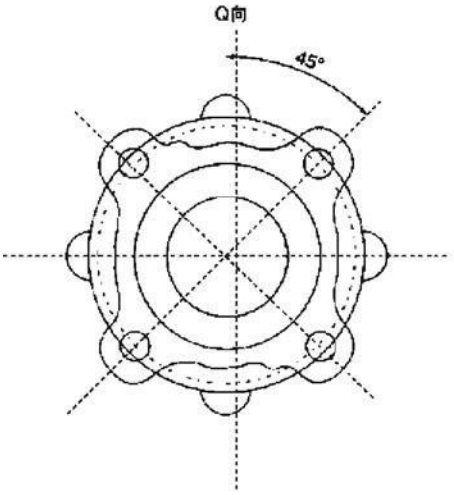
F10/F14/F16 Connecting Flange

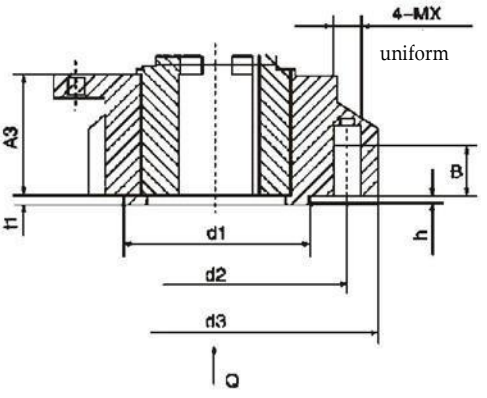


B3/B4



A

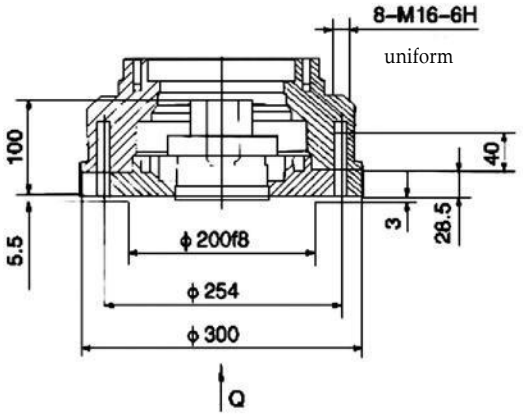




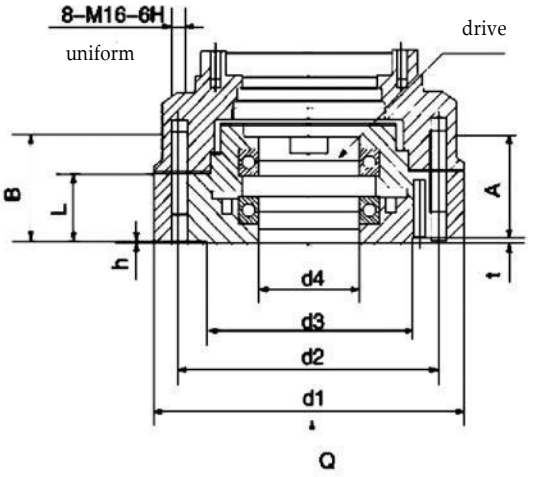
B1

Spec.	Flange	d1	d2	d3	A1	A2	A3	B	h	t1	t2	L	MX
LM18	F10	ϕ70f8	ϕ102	ϕ125	62.5	52	45	15	3	6.5	5	22	M10-6H
LM20	F14	ϕ100f8	ϕ140	ϕ175	78.5	72	65	24	4	7	5	19	M16-6H
LM25													
LM35	F16	ϕ130f8	ϕ165	ϕ210	88.5	80	80	30	5	7	3.2	21	M20-6H

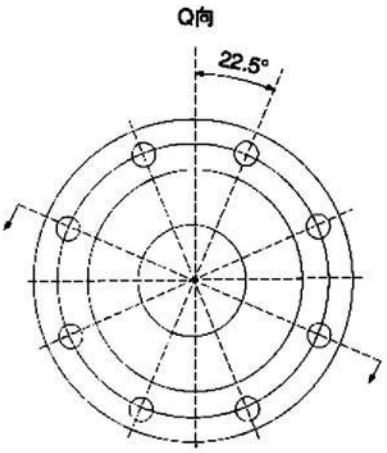
F10/F14/F16

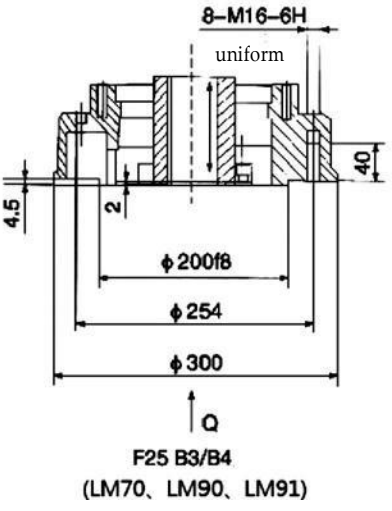


F25 B3/B4
(LM40)



F25A
(LM40、LM70、LM90)

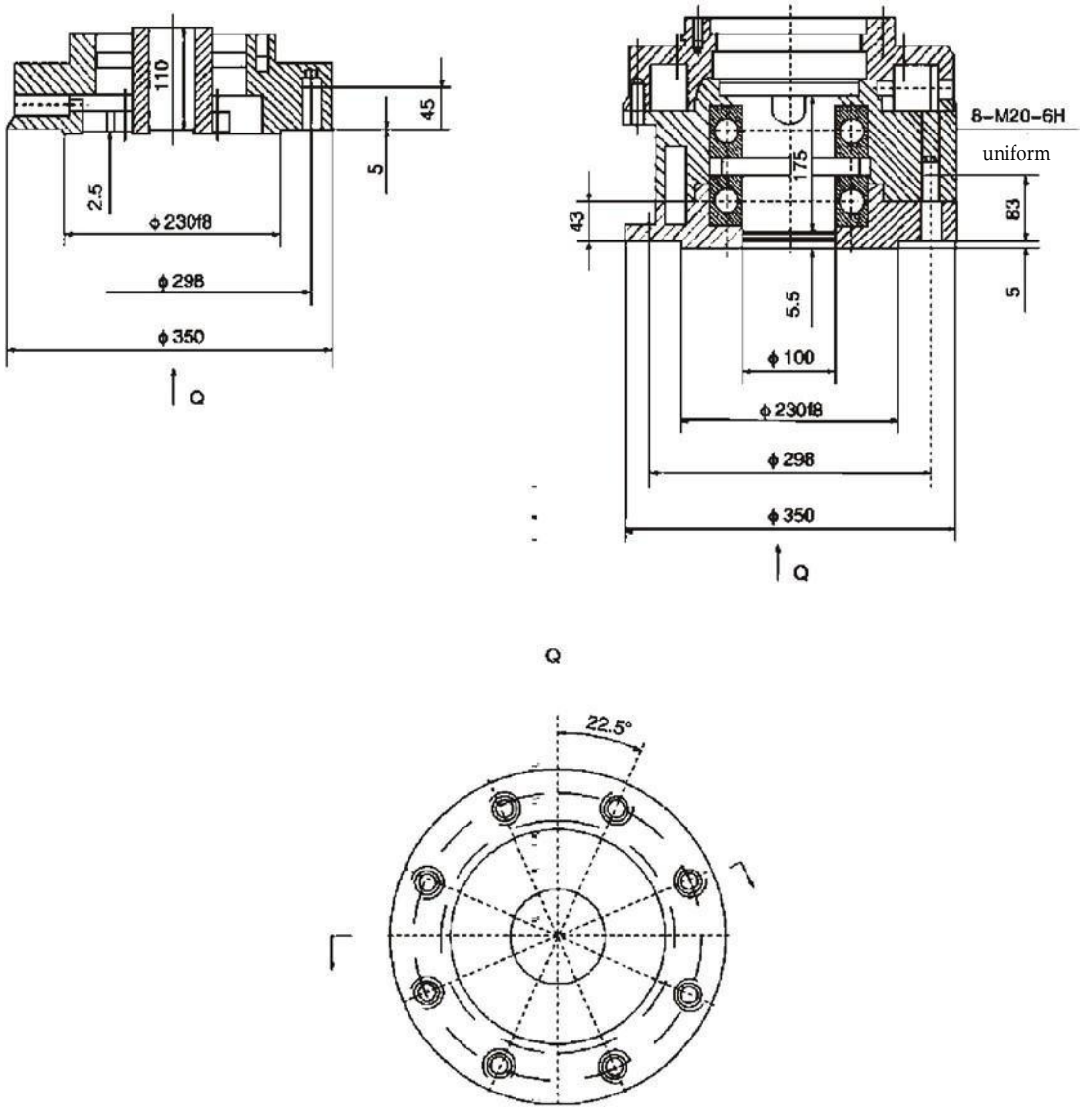




F25 B3/B4
(LM70、LM90、LM91)

Spec.	Flange	d1	d2	d3	D4	A	B	L	h	t
LM40	F25	ϕ300	ϕ254	ϕ200f8	ϕ100	100	106.5	66.5	3	4.5
LM70	F25	ϕ300	ϕ254	ϕ200f8	ϕ100	120	143	103	5	5.5
LM90	F25	ϕ300	ϕ254	ϕ200f8	ϕ100	120	143	103	5	5.5

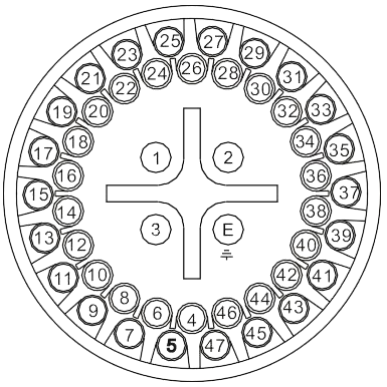
F30 Connecting Flange (LM95)



*Control and wiring

Thewiringmodeofintelligentelectricactuatoriscorresponding to the function of the actuator, and the customer connects according to the requirements of the automatic control system andthe functional characteristicsoftheactuator. The functional characteristics of this actuator are connected. The actuator has the following functions and corresponding terminals:

The terminals used below are basically configured terminals. The other terminals are additional contacts and alternative functions.



1
2
3 — 380V power supply

E — Ground wire

4 — Internal24VDCPower(-)

5 — Internal24VDCPower(+)

6
7 — S1relay contact, thedefault setting is closed when fully closed

8
9 — S2relay contact, thedefault setting is closed when fully closed

10
11 — S3relay contact, thedefaultsetting is closed when fully closed

12
13 — S4relay contact, thedefault setting is closed when fully closed

14
15 — alternative

16
17 — alternative

18
19 — alternative

20
21 — alternative

22 — Valve Position Current Output CPT(+)

23 — Valve Position Current Output CPT(-)

24

25 — EmergencyprotectionESDsignal

26 — Analog Signal Input(+)

27 — Analog Signal Input (-)

28

29

30

31

32

33 — Remote valve closing

34 — Remote selection switch, inching, self-holding and stop control terminals

35 — Remote valve opening

36 — Remote On, Off, Self-Hold, Stop Function 24VDC Public End -Vc

37 — Open valve interlock

38 — Open valve interlock

39 — Proportionalcontrol and automaticcontrol terminal (optional)

40 — Remote Control High Voltage Side Negative

41

42 — Remote Relay Output Electric Shock Common Terminal

43 — NormallyOpened End of Remote RelayOutput Contact

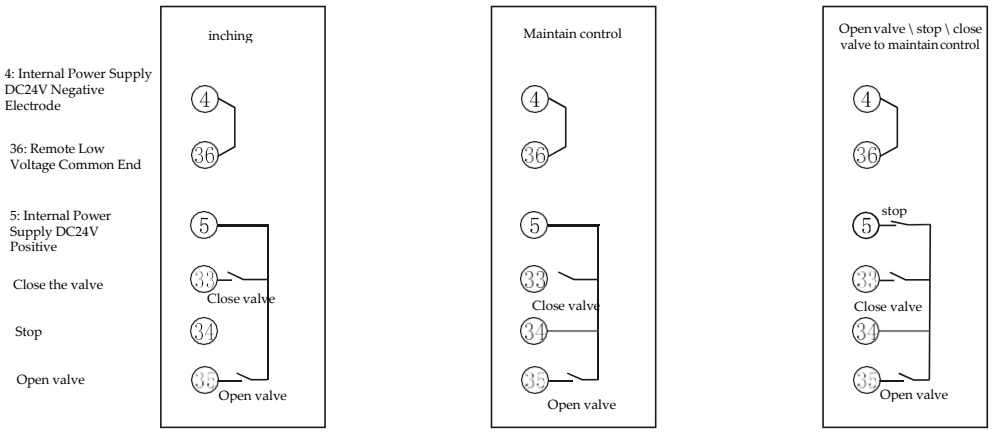
44 — Normally Closed End ofRemote Relay Output Contact

45

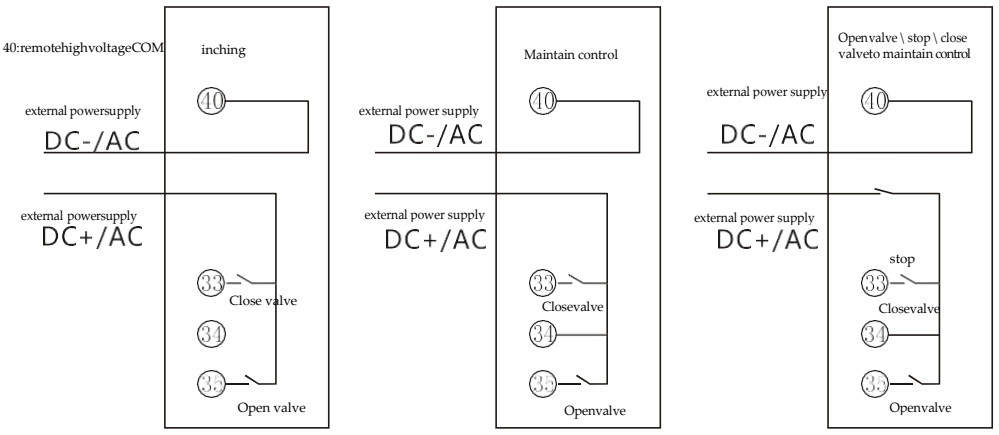
46

47

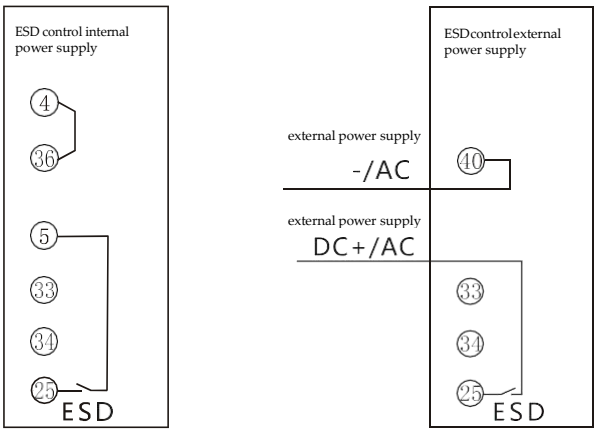
Internalpower supply control circuit



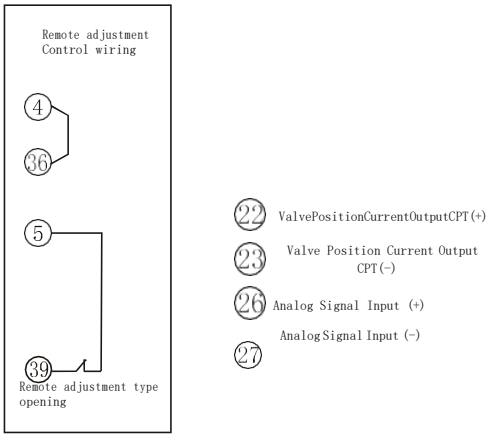
External power supply control circuit



ESD control power supply circuit



Internal power supply control circuit



*Description of productpreparation

Angular stroke Product model description of intelligent electric actuator

Function	Parameter						
model selection							
Type	LMT LMTM	LMT LMTM					
Specifications	100 200 300 400 500 600 700 800 900 1000 1200 2000		100 200 300 400 500 600 700 800 900 1000 1200 2000				
adapting flange	F05 F07 F10 F12 F14			F05 F07 F10 F12 F14			
Power supply	380V/50Hz 220V/50Hz Specific power supply				/ S T		
Menu	English menu Chinese menu					I Z	
Position detection method	Hall effect pulse counting encoder						1

*Description of productpreparation

Multiplerevolutions Description of Product Model of Intelligent Electric Actuator

Function	Parameter							
Model selection								
Type	LM LMM LML LMML	LM LMM LML LMML						
Specifications	18 20 25 35 40 70 90 91 95		18 20 25 35 40 70 90 91 95					
Output speed	18 24 36 48 96 144 192		18 24 36 48 96 144 192					
Adapting flange	F10 F14 F16 F25 F30			F10 F14 F16 F25 F30				
Drive shaft sleeve	A Z Z3 B1 B3 B4				A Z Z3 B1 B3 B4			
Power supply	380V/50Hz 220V/50Hz Specific power supply					/ S T		
Menu	English menu Chinese menu						I Z	
Position detection method	Hall effect pluse counting encoder 18-bit magnetic coding counter							1 2

For example, the selected model number is: LM1824F10A/Z1, indicating that the actuator model number is: LM18; Output speed: 24; Connecting flange: F10; The drive shaft sleeve is: A; Power supply: 80V/50HZ;
The menu is: Chinesemenu;
The position detection mode is: Hall effect pulse counting encoder

*Electrical parameters

220Vsinglephase50Hz

Model	Speed(rpm)	Torque (N.m)	Power (kw)	Rated current (A)	Blocking current (A)	Maxallowablestem diameter (mm)	Weight (kg)	Limit thrust (KN)
LM18	18	65	0.2	2.8	7.5	32	27	44
	24	65	0.2	2.8	7.5			
	36	65	0.2	2.8	7.5			
	48	45	0.2	2.8	7.5			
	72	40	0.2	2.8	7.5			
LM20	18	170	0.4	7	22	38	46	100
	24	140	0.4	7	22			
	36	140	0.4	7	22			
	48	135	0.4	7	22			
	72	120	0.4	7	22			
LM35	18	350	0.9	9	35	38	69	150
	24	320	0.9	9	35			
	36	300	0.9	12	65			
	48	300	0.8	12	65			
	72	220	0.8	12	65			

380Vthree-phase50Hz

Model	Speed(rpm)	Torque (N.m)	Power (kw)	Rated current (A)	Blocking current (A)	Max allowable stem diameter (mm)	Weight (kg)	Limit thrust (KN)
LM18	18	110	0.17	1.52	4.55	32	27	44
	24	110	0.21	1.75	6.5			
	36	110						
	48	85						
	72	70						
LM20	18	205	0.33	2.71	9.10	98	46	100
	24	205	0.42	3.50	9.20			
	36	205	0.52	2.75	9.50			
	48	205	0.63	3.80	12.2			
	72	108	0.74	5.59	16.6			

380V three-phase 50Hz

Model	Speed(rpm)	Torque (N.m)	Power (kw)	Rated current (A)	Blocking current (A)	Maxallowablestem diameter (mm)	Weight (kg)	Limit thrust (KN)
LM25	18	400	0.64	5.35	16.2	38	46	100
	24	400	0.74	5.95	16.2			
	36	300	0.76	6.10	16.6			
	48	250	0.72	5.94	16.8			
	72	255	1.03	5.75	25.2			
LM35	18	610	0.93	5.10	26.5	54	69	150
	24	610	1.14	5.80	26.5			
	36	540	1.44	9.40	28.6			
	48	470	1.55	9.50	37.5			
	72	470	2.05	12.40	40.20			
LM40	18	1000	1.60	10.50	40.3	64	190	220
	24	1000	1.98	11.40	40.8			
	36	850	2.22	14.10	49.10			
	48	680	2.14	15.60	71.00			
	72	680	2.94	17.30	71.20			
LM70	18	1500	2.34	14.5	65.00	70	190	220
	24	1500	0.91	16.60	65.00			
	36	1300	3.37	18.80	8.500			
	48	1000	3.32	18.40	8.500			
	72	1000	4.41	23.40	8.500			
LM90	18	2000	3.19	18.50	79.00	70	200	334
	24	2000	3.96	19.10	79.00			
	36	1700	4.44	20.50	79.00			
	48	1350	4.29	24.20	135.00			
	72	1350	5.87	30.60	135.00			
LM91	144	1350	10.82	58.00	230.00	70	200	
	192	1350	13.98	75.00	230.00			
LM95	24	3000	5.81	35.00	80.00	70	200	445

Note: The operating performance of the actuator can be guaranteed when the voltage error is 10% and the frequency error is 5%. The actuator can start normally under the condition that the maximumpressure drop is 15% and operate at normal speed.

Instructions for ordering

1. Please indicate the model according to the model representation method. If there are special requirements, it must be stated when ordering. If not, it shall be provided according to the regulations of Imtork.
2. The environment has explosive gas must be explained, and must comply with the provisions of the explosion-proof signs in this manual.
3. Please specify the connection size standard, stem diameter and extension length. If the connection size does not conform to this manual, it can be settled through negotiation with Imtork.
4. Turn the handwheel clockwise to close the valve. If the opposite is true, it must be explained.
5. The thrust type valve stem nut thread is generally processed by the user, and Imtork only processes one prefabricated hole. For Imtork machining, please provide the thread size.
6. RTC can also provide electric devices with other rotating speeds as required by users.
7. The basic type of LMQ series products is outdoor type, and its protection grade is IP67 (higher protection grade can be put forward when ordering).
8. The product can also be made into explosion-proof type. The user should put forward that the basic technical parameters and flange structural dimensions of explosion-proof type are the same as those of this sample, but the model, specification, overall dimension, structural type, explosion-proof level and performance of explosion-proof product are detailed in the sample of Imtork explosion-proof product.

TAIWAN ATYCO FLUID CONTROL EQUIPMENT
INTERNATIONAL COMPANY LIMITED
Liaoning Yuanlu Machinery Equipment Manufacturing Co., Ltd.
Address:55 Gongnong Road, Zhanqian District,
Yingkou City, Liaoning Province,China
TEL:+008613332319780
FAX:+00860417-3535904
Website:www.atyco.cn
Email:atycoln@163.com