MORC®

MORC CONTROLS LTD.

Product Selection Guide

Valve Accessories Professional Manufacturer

- ■ Smart Positioner
- ■ Electro-Pneumatic Positioner
- ■ Pneumatic-Pneumatic Positioner
- ■ Solenoid Valve
- ■ Air Filter Regulator
- ■ Limit Switch Box
- ■ Other Accessories

MORC MORC CONTROLS LTD.

Contents

## Introduction & Qualification Certificate

Introduction

MORC Controls Ltd. was established in October 2008, as Chinese High Technology and New Technology Enterprise and it mainly engaged in the research, development ,production and sales of valve accessories. The company has gained ISO9001 quality management system and ISO14001 environmental management system certification, and successfully joined the HART Communications Foundation. The products have obtained CE, ATEX, NEPSI, SIL3 ,3C as well as other quality and safety certificates.

In June 2022,Our branch company Anhui MORC Technology Co., Ltd. was officially put into production, with a total area of more than 10,000 square meters, where is the main production base of MORC.

MORC product range involves in valve positioner, solenoid valve, limit switch, air filter regulator and Pneumatic /Electric Actuator, which are widely used in petrochemical, natural gas, metallurgy, power, new energy, paper-making, foodstuff, pharmaceutical, water treat-ment industries, aerospace industry, shipping and so on. We are also capable of providing complete set of control valve and on-off valve solution as we have a very close relationship with valve manufacturer.

With the rapid development of industrialization, automation and intelligence in the world, MORC will adhere to the development philosophy of "quality first, technology first, continuous improvement, customer satisfaction", provide customers with better products and services, and build MORC into world's leading valve accessories brand.

Qualification Certificate
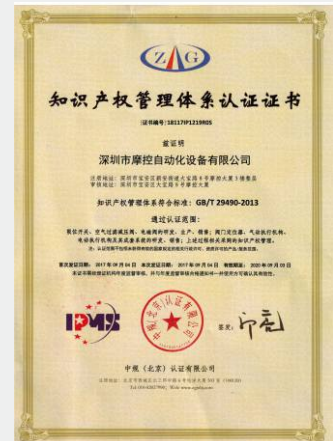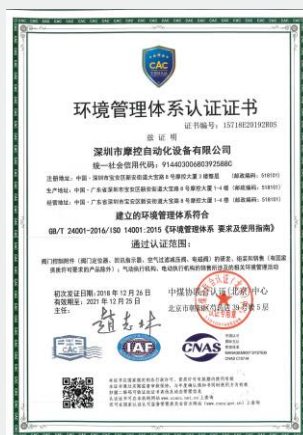
History

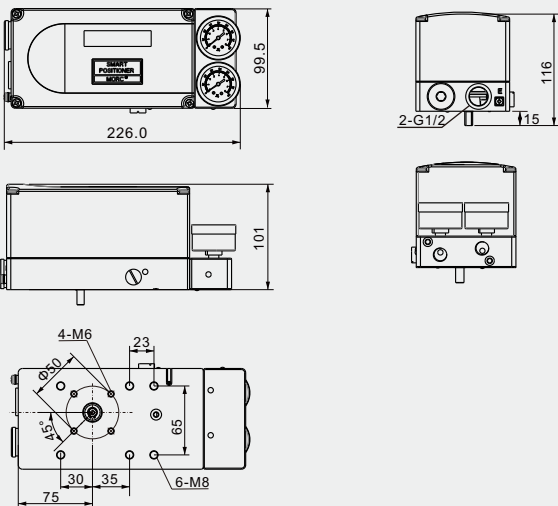|	
2022.09	The company has successfully passed the examination of Sinopec Yipaike Commercial Credit Center and obtained the A-level credit evaluation certificate
2022.09	The company's solenoid valve, limit switch, Air Filter Regulator, Air Operatedvalve control valve Obtain the SIL 3 certificate issued by TUV
2022.06	2022.09 MORC branch company Anhui MORC Technology Co., Ltd. was officially put into production.
2021.12	The company was awarded the second prize of science and technology Progress issued by China Society of Automation
2021.12	The company's intelligent valve locator won the 23rd Hi-tech Fair excellent Product award
2021.11	The company and universities have established an industry-university-research cooperation and innovation base
2021.06	The company was awarded the first batch of Shenzhen specialized and special new small and medium-sized enterprises
2020.12	Obtained the Explosion proof 3C certification for related products.
2020.11	Joined the HART Communications Foundation and became a member of it.
2020.04	Continue to obtain the National and Shenzhen high-tech enterprise qualification certificate.
2020.03	Through the acceptance of Shenzhen's special fund project for future industrial development.
2019.01	Obtained ISO9001:2015 Quality Management System Cerfiticate
2018.12	Obtained ISO14001:2015 Environmental Management System Certificate
2017.08	Opening of the design and testing laboratory
2017.06	Certified SIL3 for Solenoid Valves & Limit Switch Box
2016.07	Obtained the National and Shenzhen high-tech enterprise qualification certificate
2016.07	Special funding provided by Shenzhen future industry development
2015.12	Obtained ISO 9001:2008 quality management system certification
2015.09	Moved to a newer and bigger MORC building
2014.07	Obtained air filter regulator and solenoid valve invention patent and software patent
2014.04	Obtained CE certificaton for all range of products
2012.06	Obtained Shenzhen innovative small and medium-sized company certification
2010.05	Implemented ERP management system
2008.10	Established Shenzhen Morc Controls Co., Ltd

Product Qualification

Product Name	Model No.	Certificate	Certification number or certification level
Smart Positioner	MSP-25	CE	Anbotek: AT011410545E
		ATEX	II2G Ex ia IIC T6 Gb ; II2D Ex iaD IIIC T100 /85 Db ; IP66
		CNEX/NEPSI	Ex ia IIC T6 Ga / Ex ia IICT6 Ga; Ex ia IIIC T135 Db
		SIL3	SWISS: 086-03-026-00509/IEC61508 Parts1-7: 2010
		3C	SiTiiAS: 2020322307003475
	MSP-32	CE	Anbotek: AT011410545E
		ATEX	II2G Ex d IIC T6 Gb ; II2D Ex tb IIIC T100 /85 Db ; IP66
		NEPSI	Ex db IIC T6 Gb; Ext b IIIC T85 Db
		SIL3	SWISS: 086-03-026-00509/IEC61508 Parts1-7: 2010
		3C	SiTiiAS: 2020322307003471
Electro-Pneumatic Positioner	MEP-10	CE	Anbotek: AT011410545E
		ATEX	II2G Ex dmb IIC T6 IP66
		NEPSI	Ex db IIC T6 Gb; Ex tb IIIC T85 Db / Ex iaIIC T6 Ga; Ex ia IIIC T135 Db
		SIL3	SWISS: 086-03-026-00509/IEC61508 Parts1-7: 2010
Solenoid Valve	MC50-XXN/M	CE	Anbotek: AT011410550E
		SIL3	TUVNORD: CER-IND 1102822209002002/3
	MC50-XXA	CE	Anbotek: AT011410546E
		ATEX	II2G Ex ia IIC T 5/T6 Gb ; II2D Ex ia IIIC T100 /85 Db IP6X
		SIL3	TUVNORD: CER-IND 1102822209002002/3
	MC50-XXD	CE	Anbotek: AT011410546E
		ATEX	II2G Ex db IIC T6 Gb ; II2D Ex tb IIIC T85 Db ;IP66
		NEPSI	Ex db IIC T6 Gb; Ex tb IIIC T85 Db
		SIL3	TUVNORD: CER-IND 1102822209002002/3
		3C	SiTiiAS: 2020322307003472
	MC51-D	NEPSI	Ex db IIC T6 Gb; Ex tb IIIC T85 Db
Limit Switch Box	MLS100	CE	Anbotek: AT011410550E
		SIL3	TUVNORD: CER-IND 1102822209002001
	MLS300 MLS300-S	CE	Anbotek: AT011410550E
		ATEX	II2G Ex d IIC T6 Gb ; II2D Ex tb IIIC T85 Db ;IP67
		NEPSI	Ex db IIC T6 Gb; Ex tb IIIC T85 Db / Ex ia IIC T6 Ga; Ex ia IIIC T135 Db
		SIL3	TUVNORD: CER-IND 1102822209002001
		3C	SiTiiAS: 2020322307003482
	MLS500	CE	Anbotek: AT011410550E
		ATEX	II2G Ex d IIC T6 Gb ; II2D Ex tb IIIC T85 Db ;IP67
		NEPSI	Ex db IIC T6 Gb; Ex tb IIIC T85 Db / Ex ia IICT6 Ga; Ex ia IIIC T135 Db
		SIL3	TUVNORD: CER-IND 1102822209002001
	MLS800	CE	Anbotek: AT011410550E
		ATEX	II2G Ex d IIC T6 Gb ; II2D Ex tb IIIC T85 Db ;IP67
		NEPSI	Ex db IIC T6 Gb; Ex tb IIIC T85 Db / Ex ia IICT6 Ga; Ex ia IIIC T135 Db
		SIL3	TUVNORD: CER-IND 1102822209002001
		3C	SiTiiAS: 2020322307003482
Air Filter Regulator	MC-22	CE	Anbotek: AT011410549E
		SIL3	TUVNORD: CER-IND 1102822209002004
Pneumatic Control Valve	MC60	SIL3	TUVNORD: CER-IND 1102822209002005

MSP-25 Series Smart Mounting Positioner

CE CNEX Ex TÜV NORD SIL3 CCC HART COMMUNICATION PROTOCOL

MSP-25 Series is a control device that receives the 4~20mA output signal from the controller or control system, then transforms into the air pressure signal driving the pneumatic actuator to control the valve. Mainly used for valve position control of pneumatic linear or rotary valves.

- Use piezoelectric valve electric pneumatic conversion structure.
- Suitable for hazardous area by intrinsically safe electronics.
- Easy to install and auto-calibration.
- LCD display and on board button operation.
- Fail safe function under loss of power, loss of air supply and loss of control signal.

Model No.	MSP-25	
Input signal	4~20mA DC	
Supply pressure	0.14~0.7MPa(20~105psi)	
Stroke	Linear	10~150mm(standard);5~130mm(adaptor)
	Rotary	0~90°
Impedance	450Ω(without HART)，500Ω(with HART)	
Air connection	NPT1/4	
Gauge connection	NPT1/8	
Power connection	G1/2, NPT1/2, M20*1.5	
Repeatability	±0.5%F.S.	
Ambient temp.	Normal:-20~80℃; low: -40~80℃	
Explosive temp.	-40~60℃	
Linearity	±0.5%F.S.	
Hysteresis	±0.5%F.S.	
Sensitivity	±0.5%F.S.	
Flow rate	Fully open：130L/min(@6.0bar)	
Air consumption	Stable condition：<0.0006Nm^3/h	
Output characteristics	Linear (default); Quick open; Equal percentage ; User defined	
Shell material	Aluminum or SS316L	
Ingress protection	IP66	
Explosion-proof	Ex ia IIC T6 Ga; Ex ia IIIC T135℃ Db	
Weight	Aluminum:2.3kg; SS316L: 4.6kg	

99.5
226.0
2-G1/2
116
15
101
0°

4-M6
23
ø50
45°
65
30 35
75
6-M8

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	-	12.
MSP-25	R	S	I	1	1	0	0	0	E	1	L	-	2

Stroke
Linear —— L
Rotary —— R

Acting type
Single —— S
Double —— D

Explosion-proof
Non-explosion —— N
ExiaIICT6 —— I

Feedback lever type
Linear
10~40mm(St.） —— 1
20~100mm(St.） —— 2
90~150mm(St.） —— 3
5~35mm(Ad.） —— 4
40~130mm(Ad.） —— 5
Rotary
NAMUR —— 6

Power connection[1]
G1/2 —— 1
NPT1/2 —— 2
M20*1.5 —— 3

Air connection[2]
NPT1/4 —— 1

Communication
None —— 0
+HART —— 1

Feedback options
None —— 0
+PTM —— 1
+L/S —— 2
+PTM+L/S —— 3

Fail option
Fail Safe —— E
Hold position —— H

Additional options
No gauge —— 0
Pressure gauge —— 1
Mounting bracket —— 2

Ambient Temp.
-30~80℃ —— S
-40~80℃ —— L

Housing Material
Aluminum —— NONE
SS316L —— 2

PTM: positioner transmitting module; L/S: limit switch.

CE | CNEX | Ex | TÜV NORD | SIL3 | CCC | HART COMMUNICATION PROTOCOL

MSP-25 series Smart Valve Positioner is a control device that receives 4 ~ 20 mA command signal output from controller or control system and output air pressure signal to drive pneumatic actuator to control valve opening. This model is a split remote transmission structure, sensor and body separation, suitable for high temperature and space limited installation environment。

■ Use piezoelectric valve electric / pneumatic conversion structure.
■ Suitable for hazardous area by intrinsically safe electronics.
■ Easy to install and auto-calibration.
■ LCD display and on board button operation.
■ Fail safe function under loss of power, loss of air supply and loss of control signal.

Model No.	MSP-25
Input signal	4~20mA DC
Supply pressure	0.14~0.7MPa(20~105psi)
Stroke — Linear	10~150mm(standard);5~130mm(adaptor)
Stroke — Rotary	0~90°
Impedance	450Ω(without HART)，500Ω(with HART)
Air connection	NPT1/4
Gauge connection	NPT1/8
Power connection	G1/2, NPT1/2, M20*1.5
Repeatability	±0.5%F.S.
Ambient temp.	Normal:-20~80℃; low: -40~80℃
Explosive temp.	-40~60℃
Linearity	±0.5%F.S.
Hysteresis	±0.5%F.S.
Sensitivity	±0.5%F.S.
Flow rate	Fully open：130L/min(@6.0bar)
Air consumption	Stable condition：<0.0006Nm^3/h
Output characteristics	Linear (default); Quick open; Equal percentage；User defined
Shell material	Aluminum or SS316L
Ingress protection	IP66
Explosion-proof	Ex ia IIC T6 Ga; Ex ia IIIC T135℃ Db
Weight	Aluminum:2.3kg; SS316L: 4.6kg

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	-	13.
MSP-25	R	S	I	1	1	1	1	0	0	E	1	L	2	- R2

Stroke
Linear —— L
Rotary —— R

Acting type
Single —— S
Double —— D

Explosion-proof
Non-explosion —— N
ExiaIICT6 —— I

Feedback lever type
Linear
10~40mm(St.) —— 1
20~100mm(St.) —— 2
90~150mm(St.) —— 3
5~35mm(Ad.) —— 4
40~130mm(Ad.) —— 5
Rotary
NAMUR —— 6

Power connection[1]
G1/2 —— 1
NPT1/2 —— 2
M20*1.5 —— 3

Air connection[2]
NPT1/4 —— 1

Communication
None —— 0
+HART —— 1

Feedback options
None —— 0
+PTM —— 1
+L/S —— 2
+PTM+L/S —— 3

Fail option
Fail Safe —— E
Hold position —— H

Additional options
No gauge —— 0
Pressure gauge —— 1
Mounting bracket —— 2

Ambient Temp.
-30~80℃ —— S
-40~80℃ —— L

Housing Material
Aluminum —— NONE
SS316L —— 2

Cabel Length
5m —— R1
10m —— R2
15m —— R3
20m —— R4

PTM: positioner transmitting module; L/S: limit switch.

99.5 | 226.0 | 101 | 2-G1/2 | 101

4-M6 | 23 | Ø50 | 45 | 65 | 30 | 35 | 6-M8 | 75

MSP-32 Series Smart Positioner

MSP-25 Series is a control device that receives the 4~20mA output signal from the controller or control system, then transforms into the air pressure signal driving the pneumatic actuator to control the valve. Mainly used for valve position control of pneumatic linear or rotary valves.

■ Use piezoelectric valve electric pneumatic conversion structure.
■ Suitable for hazardous area by intrinsically safe electronics.
■ Easy to install and auto-calibration.
■ LCD display and on board button operation.
■ Fail safe function under loss of power, loss of air supply and loss of control signal.

Model No.	MSP-32	
Input signal	4~20mA DC	
Supply pressure	0.14~0.7MPa(20~105psi)	
Stroke	Linear	10~150mm(standard);5~130mm(adaptor)
	Rotary	0~90°
Impedance	450Ω(without HART)，500Ω(with HART)	
Air connection	NPT1/4	
Gauge connection	NPT1/8	
Power connection	NPT1/2, M20*1.5	
Repeatability	±0.5%F.S.	
Ambient temp.	Normal:-20~80℃; low: -40~80℃	
Explosive temp.	-40~60℃	
Linearity	±0.5%F.S.	
Hysteresis	±0.5%F.S.	
Sensitivity	±0.5%F.S.	
Flow rate	Fully open：130L/min(@6.0bar)	
Air consumption	Stable condition：<0.0006Nm³/h	
Output characteristics	Linear (default); Quick open; Equal percentage；User defined	
Shell material	Aluminum	
Ingress protection	IP66	
Explosion-proof	Ex db IIC T6 Gb；Ex tb IIIC T85℃ Db	
Weight	4.0kg	

Dimensions: 286.0 / 145 / 145 / 15 / 65 / 65 / 23 / 106

Conduit Φ50 / 4-M6*10 / 6-M8*14

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
MSP-32	R	S	C	1	1	0	0	0	E	0	L

Stroke
Linear — L
Rotary — R

Acting type
Single — S
Double — D

Explosion-proof
ExdIICT6 — C

Feedback lever type
Linear
  10~40mm(St.） — 1
  20~100mm(St.） — 2
  90~150mm(St.） — 3
  5~35mm(Ad.） — 4
  40~130mm(Ad.） — 5
Rotary
  NAMUR — 6

Power connection[1]
NPT1/2 — 1
M20*1.5 — 2

Air connection[2]
NPT1/4 — 1

Communication
None — 0
+HART — 1

Feedback options
None — 0
+PTM — 1
+L/S — 2
+PTM+L/S — 3

Fail option
Fail Safe — E
Hold position — H

Additional options
None — 0
Mounting bracket — 2

Ambient Temp.
-30~80℃ — S
-40~80℃ — L
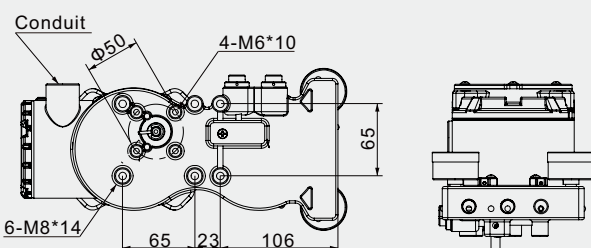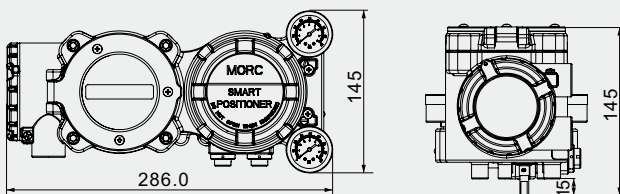
[1]：The default power connection is G1/2, please consult MORC for other interfaces.

[2]：The default air connection is NPT1/4, please consult MORC for other interfaces.

PTM: positioner transmitting module；L/S: limit switch.

MEP-10L Electro-pneumatic positioner delivers fast and accurate positioner used and general purpose. Long life service assured by robust and simple design, delivering maximum reliability in all environments while maintaining precise, accurate positioning of the control element.

- Use mechanical nozzle baffle structure
- High vibration resistance - no resonance between 5 to 200 Hz.
- Direct and reverse acting, single and double acting are interchangeable.
- Robust, simple and low maintenance design.
- 1/2 Split-range control can be achieved by changing the stroke spring.

Model No.	MEP-10L
Input signal	4~20mA DC
Supply pressure	0.14~0.7MPa
Pressure output	0~0.7MPa
Stroke	10~150mm
Impedance	250Ω±15Ω
Air connection	NPT1/4, G1/4
Gauge connection	NPT1/8
Power connection	G1/2, NPT1/2, M20*1.5
Repeatability	±0.5%F.S.
Ambient temp.	Normal temp.	-20~60℃
	High temp.	-20~120 (Only for Non-explosive)
	Low temp.	-40~60℃
Linearity	±1.0%F.S.(Single); ±2.0%F.S.(Double)
Hysteresis	±1.0%F.S.
Sensitivity	±0.5%F.S.
Flow rate	80L/min(@1.4bar)
Air consumption	2.5L/min(@1.4bar)
Output characteristics	Linear (default)
Shell material	Aluminum
Ingress protection	IP66
Explosion-proof	Ex db IIC T6 Gb; Ex tb IIIC T85℃ Db Ex ia IIC T6 Ga; Ex ia IIIC T135℃ Db
Weight	2.7kg

	1.	2.	3.	4.	5.	6.	7.
MEP-10L	S	N	1	3	2	S	1

Acting type
- Single — S
- Double — D

Explosion-proof
- Non-explosion — N
- ExiaIICT6 — I
- ExdmbIICT6 — M

Feedback lever type
- 10~40mm — 1
- 30~70mm — 2
- 50~100mm — 3
- 100~150mm — 4

Power connection
- G1/2 — 1
- NPT1/2 — 2
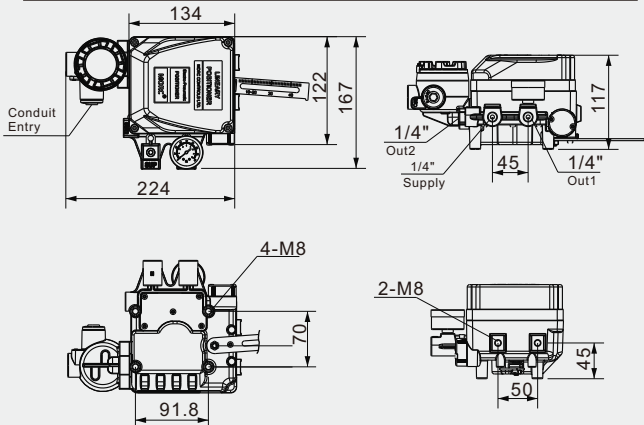- M20*1.5 — 3

Air connection
- NPT1/4 — 1
- G1/4 — 2

Ambient temperature[1]
- -20~60℃ — S
- -20~120℃ — H
- -40~60℃ — L

Feedback Options
- None — 0
- +PTM — 1
- +PTM External explosion-proof split-body type — 2

[1]: H Only available for Non-explosion and no feedback.

134
122
167
224

Conduit Entry

117
1/4" Out2
1/4" Supply
45
1/4" Out1

4-M8
70
91.8

2-M8
45
50

MEP-10R Series Electro-pneumatic Positioner

CE ⟨Ex⟩ NEPSI TÜV NORD SIL3

MEP-10R Electro-pneumatic positioner delivers fast and accurate positioner used and general purpose. Long life service assured by robust and simple design, delivering maximum reliability in all environments while maintaining precise, accurate positioning of the control element.

- Use mechanical nozzle baffle structure
- High vibration resistance - no resonance between 5 to 200 Hz.
- Direct and reverse acting, single and double acting are interchangeable.
- Robust, simple and low maintenance design.
- 1/2 Split-range control can be achieved by changing the stroke spring.

Model No.	MEP-10L
Input signal	4~20mA DC
Supply pressure	0.14~0.7MPa
Pressure output	0~0.7MPa
Stroke	0~90°
Impedance	250Ω±15Ω
Air connection	NPT1/4,G1/4
Gauge connection	NPT1/8
Power connection	G1/2，NPT1/2, M20*1.5
Repeatability	±0.5%F.S.
Ambient temp. — Normal temp.	-20~60℃
Ambient temp. — High temp.	-20~120℃(Only for Non-explosive)
Ambient temp. — Low temp.	-40~60℃
Linearity	±1.0%F.S.(Single); ±2.0%F.S.(Double)
Hysteresis	±1.0%F.S.
Sensitivity	±0.5%F.S.
Flow rate	80L/min(@1.4bar)
Air consumption	2.5L/min(@1.4bar)
Output characteristics	Linear (default)
Shell material	Aluminum
Ingress protection	IP66
Explosion-proof	Ex db IIC T6 Gb; Ex tb IIIC T85℃ Db / Ex ia IIC T6 Ga; Ex ia IIIC T135℃ Db
Weight	2.8kg

	1.	2.	3.	4.	5.	6.	7.	8.
MEP-10R	S	N	1	3	2	S	0	1

Acting type
Singel —— S
Double —— D

Explosion-proof
Non-explosion —— N
ExiaIICT6 —— I
ExdmbIICT6 —— M

Feedback lever type
M6*34L —— 1
M8*34L —— 2
M6*63L —— 3
M8*63L —— 4
NAMUR —— 5

Power connection
G1/2 —— 1
NPT1/2 —— 2
M20*1.5 —— 3

Air connection
NPT1/4 —— 1
G1/4 —— 2

Ambient temperature[1]
-20~60℃ —— S
-20~120℃ —— H
-40~60℃ —— L

**Indicator[2]**
Standard —— 0
Dome Cover —— 1

Feedback Options
None —— 0
+PTM (inside Non-explosion) —— 1
+PTM (outside explosion-proof) —— 2
+L/S (inside Non-explosion) —— 3
+L/S (outside explosion-proof) —— 4
+PTM+L/S (inside Non-explosion) —— 5
+PTM+L/S (outside explosion-proof) —— 6

[1]: H only available for Non-explosion and no feedback.

[2]: Dome Cover only available for outside of L/S.

[3]: Non-explosion-proof type optional only

PTM: positioner transmitting module; L/S: limit switch.

122
167
224

1/4" Out2
1/4" Supply
45
1/4" Out1
117

4-M8
70
26.5
91.8

2-M8
45
50
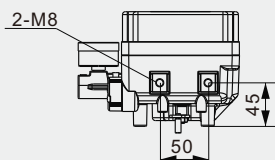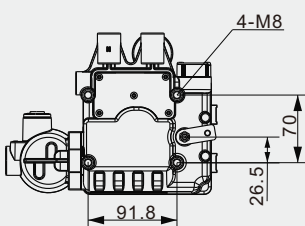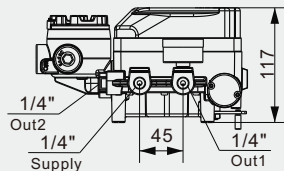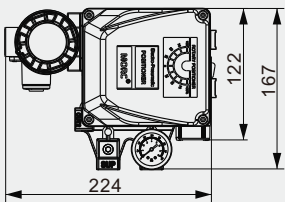
MEP-12 series Pneumatic-pneumatic positioner

The MPP-12 series is a device that receives 0.02~0.1MPa signal from the controller or control system to control the valve.

■ Use mechanical nozzle baffle structure

■ High vibration resistance - no resonance between 5 to 200 Hz.

■ Direct and reverse acting, single and double acting are interchangeable.

■ Robust, simple and low maintenance design.

■ 1/2 Split-range control can be achieved by changing the stroke spring

MPP-12L   MPP-12R

Model No.	MPP-12L	MPP-12R
Input signal	0.02~0.1MPa	
Supply pressure	0.14~0.7MPa	
Stroke	10~150mm	0~90°
Air connection	PT(NPT)1/4	
Gauge connection	PT(NPT)1/ 8	
Repeatability	±0.5%F.S .	
Ambient temp.	-20~60℃(-4~158℉)	
Linearity	±1%F.S.(Double Act is ±2%)	
Hysteresis	±1%F.S.	
Sensitivity	±0.2%F.S. (Double Act is ±0.5%)	
Air consumption	2.5LPM(sup=0.14MPa)	
Flow rate	80LPM(sup=0.14MPa)	
Output characteristics	Linear	
Shell material	Aluminum	
Ingress protection	IP66	
Weight	1.7kg(3.1lb)	
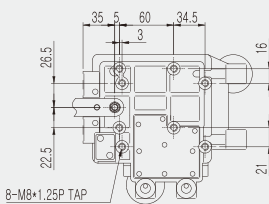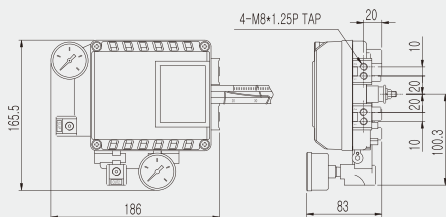
	1.	2.	3.	4.	5.	6.
MPP-12	R	S	1	3	2	S

Stroke
Linear —— L
Rotary —— R

Acting type
Singel —— S
Double —— D

Feedback lever type
Linear
10~40mm —— 1
30~70mm —— 2
60~100mm —— 3
100~150mm —— 4
Rotary
M6×34L —— 1
M6×63L —— 2
M8×34L —— 3
M8×63L —— 4
NAMUR —— 5

Orifice Type
None —— 1
Φ1 —— 2
Φ2 —— 3

Air connection
NPT1/4 —— 1
G1/4 —— 2

Ambient temperature
-20~60°C —— S
-20~120°C —— H
-40~60°C —— L

4-M8*1.25P TAP   20
165.5   10   120 120   100.3
186   83

35 5 60 34.5
3
26.5   16
22.5   21
8-M8*1.25P TAP

- Pilot-operated type;
- Convertible from 3-way(3/2) to 5-way(5/2). For 3-way, normally closed type is default option.
- Adopt Namur mounting standard, directly mounted to actuator, or by tubing.
- Sliding spool valve with good seal and fast response.
- Low starting pressure, long lifespan.
- Manual override.
- Body material aluminum or SS316L.

3/2NC   5/2 Single coil   5/2Double coil
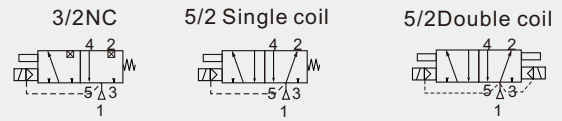
Model No.	MC50-XXN	MC50-XXM
Voltage	12/24/48V DC ；110/220/240VAC	
Acting type	Single coil, Double coil	
Power Consumption	220VAC: 5.5VA; 24VDC: 3W	
Insulation class	F class	
Working medium	Clean air (after 40 um filtration)	
Air pressure	0.15~0.8MPa	
Port connection	G1/4, NPT1/4	
Power connection	DIN connector	Flying leads
Ambient Temp.	Normal temp.	-20~70℃	
	High temp.	-20~120℃	
Explosion-proof	Non-explosion	Ex mb II T4
Ingress protection	IP65	
Installation	32*24Namur or Tubing	
Section area / Cv	25mm^2/1.4	
Body material	Aluminum or SS316L	
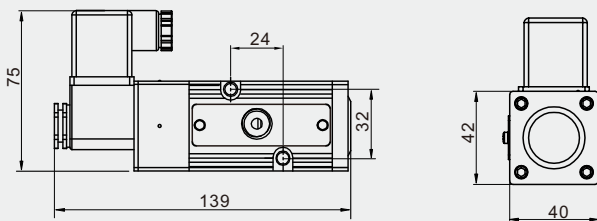
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
MC50-	1	2	N	1	0	0	1	G	0	S

Acting type
Single coil — 1
Double coil — 2

Control voltage[1]
220VAC — 1
24VDC — 2
110VAC — 3
12VDC — 4
240VAC — 5
48VDC — 6

Coil Type[1]
Non-explosion — N
ExmbIIT4 — M

Body material
Aluminum — 1
SS316L — 2

Body type
General type — 0

Installation
General type — 0

Port connection
1/4" — 1

Port Standard
G1/4 — G
NPT1/4 — N

Power connection[2]
Standard type (DIN type) — 0
Flying leads — 4

Ambient temperature
-20~70℃ — S
-20~120℃ — H

75
24
32
42
139
40

[1] : Non-explosion-proof coil default without indicator, if you need to wear led coil please indicate.
[2] Non-explosion only optional standard type, Pouring seals explosion only optional flying leads.

- Pilot-operated type;
- Convertible from 3-way(3/2) to 5-way(5/2). For 3-way, normally closed type is default option.
- Adopt Namur mounting standard, directly mounted to actuator, or by tubing.
- Sliding spool valve with good seal and fast response.
- Low starting pressure, long lifespan.
- Manual override.
- Body material aluminum or SS316L.

3/2NC   5/2 Single coil   5/2Double coil
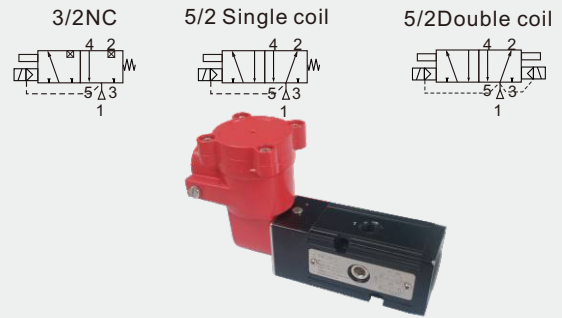
Model No.	MC50-XXN	MC50-XXB
Voltage	24V DC；220VAC	
Acting type	Single coil, Double coil	
Power Consumption	220VAC: 5.0VA; 24VDC: 3.5W	
Insulation class	F class	
Working medium	Clean air (after 40 um filtration)	
Air pressure	0.15~0.8MPa	
Port connection	G1/4, NPT1/4	
Cable Entry	NPT1/2，M20*1.5，G1/2	
Ambient Temp. — Normal temp.	-20~70℃	
Ambient Temp. — High temp.	-40~70℃	
Explosive temp.	-40~60℃	
Explosion-proof	Non-explosion	Ex dm IIB T6 Gb Ex tb ⅢC T85℃ Db
Ingress protection	IP66	
Installation	32*24Namur or Tubing	
Section area / Cv	25mm^2/1.4	
Body material	Aluminum or SS316L	

Cable Entry

91.5
24
32
42
40
161
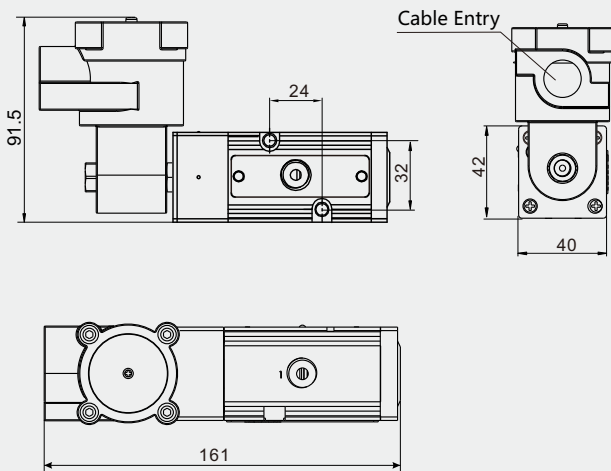
MC50-	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
	1	2	N	1	0	0	1	G	1	S

Acting type
  Single coil — 1
  Double coil — 2

Control voltage[1]
  220VAC ——— 1
  24VDC ——— 2
  12VDC ——— 4

Coil Type[1]
  Non-explosion ——— N
  ExmbIIT4 ——— B

Body material
  Aluminum ——— 1
  SS316L ——— 2

Body type
  General type ——— 0

Installation
  General type ——— 0

Port connection
  1/4" ——— 1

Port Standard
  G ——— G
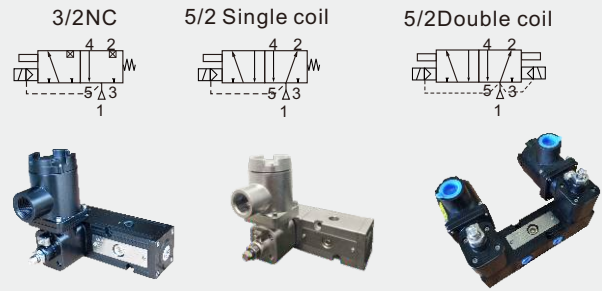 NPT ——— N

Power connection
  NPT1/2 ——— 1
  G1/2 ——— 2
  M20*1.5 ——— 3

Ambient temperature
  -20~70℃ ——— S
  -40~70℃ ——— L

[1] Non-explosion-proof coil default without indicator, if you need to wear led coil please indicate.
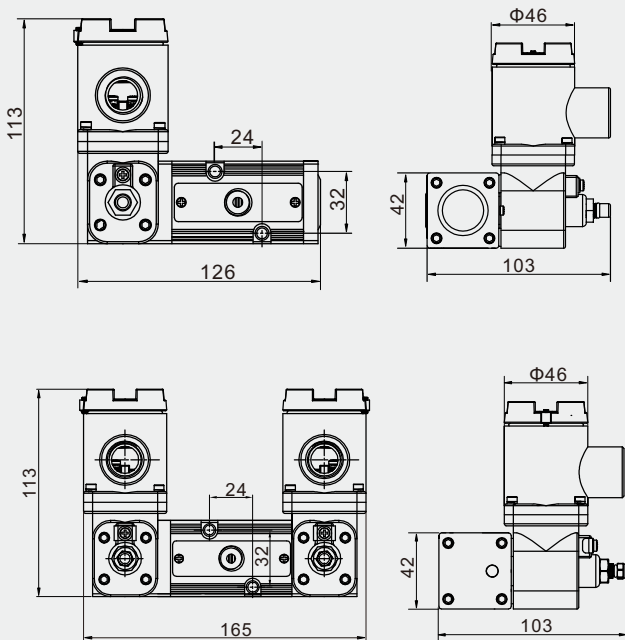
- Pilot-operated type;
- Convertible from 3-way(3/2) to 5-way(5/2). For 3-way, normally closed type is default option.
- Adopt Namur mounting standard, directly mounted to actuator, or by tubing.
- Sliding spool valve with good seal and fast response.
- Low starting pressure, long lifespan.
- Manual override.
- Body material aluminum or SS316L.

3/2NC   5/2 Single coil   5/2Double coil

| Model No.	MC50-XXD
Voltage	24V DC ; 220VAC
Acting type	Single coil, Double coil
Power Consumption	220VAC: 5.0VA; 24VDC: 3.5W
Insulation class	F class
Working medium	Clean air (after 40 um filtration)
Air pressure	0.15~0.8MPa
Port connection	G1/4, NPT1/4
Cable Entry	NPT1/2 , M20*1.5 , G1/2
Ambient Temp. — Normal temp.	-20~70℃
Ambient Temp. — High temp.	-40~70℃
Explosive temp.	-40~60℃
Explosion-proof	Ex db IIC T6 Gb ; Ex tb III CT85℃ Db
Ingress protection	IP66
Installation	32*24Namur or Tubing
Section area / Cv	25mm²/1.4
Body material	Aluminum or SS316L

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
MC50-	1	2	D	1	0	0	1	G	1	S

Acting type
Single coil — 1
Double coil — 2

Control voltage[1]
220VAC — 1
24VDC — 2
110VAC — 3
12VDC — 4
240VAC — 5
48VDC — 6
110VDC — 7
125VDC — 8

Coil Type[1]
Flame proof — D

Body material
Aluminum — 1
SS316L — 2

Body type
General type — 0

Installation
General type — 0

Port connection
1/4" — 1

Port Standard
G1/4 — G
NPT1/4 — N

Power connection
NPT1/2 — 1
G1/2 — 2
M20*1.5 — 3

Ambient temperature
-20~70℃ — S
-40~70℃ — L

Φ46
113
24
32
126
42
103

Φ46
113
24
32
165
42
103

[1] Non-explosion-proof coil default without indicator, if you need to wear led coil please indicate.

MC50 Series Low-Power Explosion-proof Solenoid 1/4"

- Pilot-operated type;
- Convertible from 3-way(3/2) to 5-way(5/2). For 3-way, normally closed type is default option.
- Adopt Namur mounting standard, directly mounted to actuator, or by tubing.
- Sliding spool valve with good seal and fast response.
- Low starting pressure, long lifespan.
- Manual override.
- Body material aluminum or SS316L.

3/2NC　　5/2 Single coil　　5/2Double coil

Model No.	MC50-XXDLP
Voltage	24V DC
Acting type	Single coil, Double coil
Power Consumption	1.8W
Insulation class	F class
Working medium	Clean air (after 40 μm filtration)
Air pressure	0.15~0.8MPa
Port connection	G1/4, NPT1/4
Power connection	NPT1/2，M20*1.5，G1/2
Ambient Temp. — Normal temp.	-20~70℃
Ambient Temp. — Low temp.	-40~70℃
Explosive temp.	-40~60℃
Explosion-proof	Ex db IIC T6 Gb；Ex tb IIIC T85℃ Db
Ingress protection	IP66
Installation	32*24Namur or Tubing
Section area / Cv	25mm^2/1.4
Body material	Aluminum or SS316L

Note: The insulation level is F, and H can bespecially ordered.

Φ46

113   24   32

126   103   42

Φ46

113   24   32

165   103   42
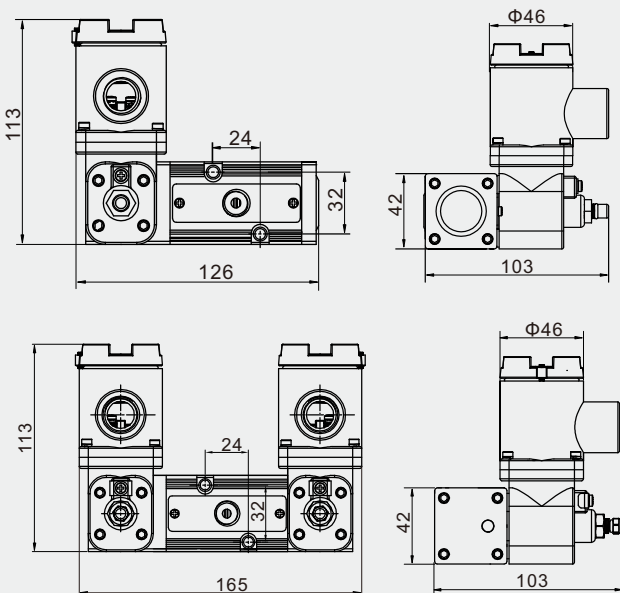
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
MC50-	1	2	D	LP	1	0	0	1	G	1	S

Acting type
Single coil —— 1
Double coil —— 2

Control voltage[1]
24VDC —— 2

Coil Type
ExdIICT6 —— D

Low power option
1.8W —— LP

Body material
Aluminum —— 1
SS316L —— 2

Body type
General type —— 0

Installation
General type —— 0

Port connection
1/4" —— 1

**Port Standard**
G1/4 —— G
NPT1/4 —— N

Power connection
NPT1/2 —— 1
G1/2 —— 2
M20*1.5 —— 3

Ambient temperature
-20~70℃ —— S
-40~70℃ —— L

[1]The default voltage is 24VDC. Please consult MORC for additional voltages.

MORC MORC CONTROLS LTD.

MC50 Series Flameproof Solenoid Valve 1/4"

- Pilot-operated type;
- Convertible from 3-way(3/2) to 5-way(5/2). For 3-way, normally closed type is default option.
- Adopt Namur mounting standard, directly mounted to actuator, or by tubing.
- Sliding spool valve with good seal and fast response.
- Low starting pressure, long lifespan.
- Manual override.
- Body material aluminum or SS316L.

3/2NC 5/2 Single coil 5/2Double coil
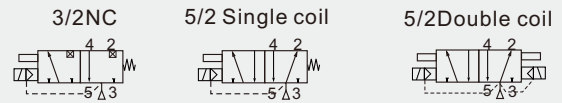
Model No.	MC50-XXDH
Voltage	24V DC ；220VAC
Acting type	Single coil, Double coil
Power Consumption	220VAC: 5.0VA; 24VDC: 2.5W
Insulation class	H class
Working medium	Clean air (after 40 μm filtration)
Air pressure	0.15~0.8MPa
Port connection	G1/4 NPT1/4
Power connection	NPT1/2 ，M20*1.5 ，G1/2
Ambient Temp. Normal temp.	-20~70℃
Ambient Temp. Low temp.	-40~70℃
Explosion-proof	Ex db IIC T6 Gb ；Ex tb IIIC T85℃ Db
Ingress protection	IP66
Installation	32*24Namur or Tubing
Section area / Cv	25mm^2/1.4
Body material	Aluminum

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
MC50-	1	2	D	H	1	0	0	1	G	1	S

Acting type
Single coil — 1
Double coil — 2

Control voltage
220VAC — 1
24VDC — 2

Coil Type
ExdIICT6 — D

Insulation Type
H Class — H

Body material
Aluminum — 1

Body type
General type — 0

Installation
General type — 0

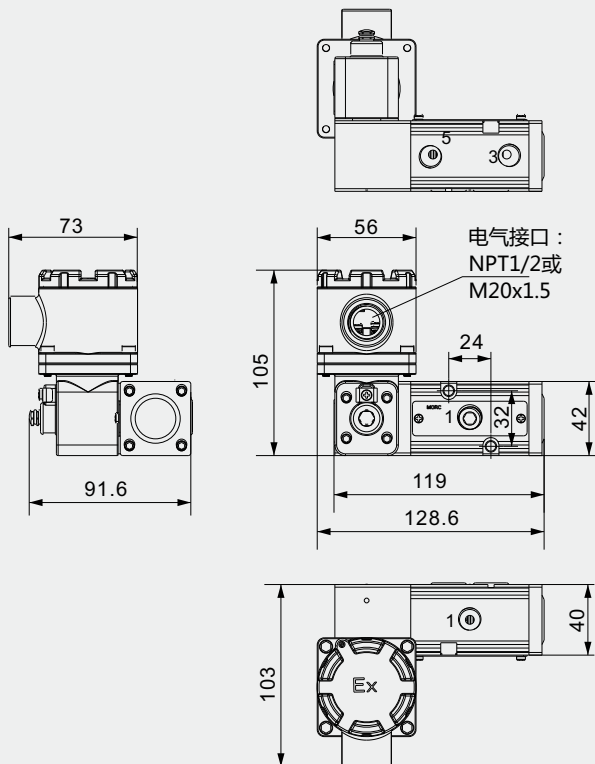**Port connection**
1/4" — 1

Port Standard
G1/4 — G
NPT1/4 — N

Power connection
NPT1/2 — 1
G1/2 — 2
M20*1.5 — 3

Ambient temperature
-20~70℃ — S
-40~70℃ — L

73

91.6

56

105

24

32

42

119

128.6

电气接口：
NPT1/2或
M20x1.5

40

103

Ex

- Pilot-operated type;
- Convertible from 3-way(3/2) to 5-way(5/2). For 3-way, normally closed type is default option.
- Adopt Namur mounting standard, directly mounted to actuator, or by tubing.
- Sliding spool valve with good seal and fast response.
- Low starting pressure, long lifespan.
- Manual override.
- Body material aluminum or SS316L.

3/2NC   5/2 Single coil
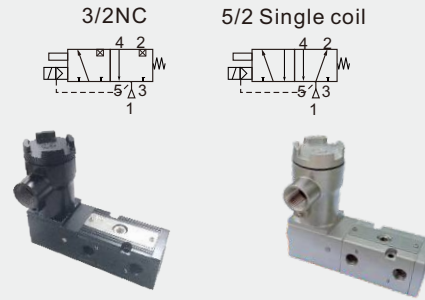
Model No.	MC50-XXA
Voltage	24V DC
Acting type	Single coil
Power Consumption	≤1.0W
Working medium	Clean air (after 40 μm filtration)
Air pressure	0.15~0.8MPa
Port connection	G1/4　NPT1/4
Power connection	NPT1/2，M20*1.5，G1/2
Ambient Temp.	-20~70℃
Explosion Temp.	-20~60℃
Explosion-proof	Ex ia IIC T6 Gb
Ingress protection	IP66
Installation	32*24Namur or Tubing
Section area / Cv	25mm^2/1.4
Body material	Aluminum or SS316L
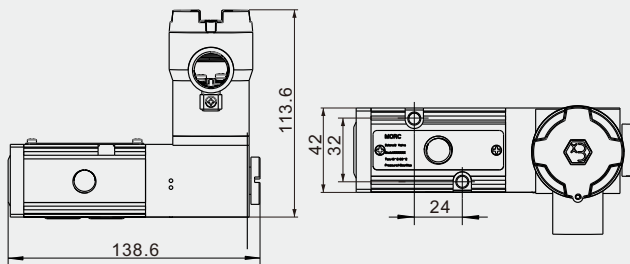
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
MC50-	1	2	A	1	0	0	1	G	1	S

Acting type
　Single coil — 1

Control voltage
　24VDC ———— 2

Coil Type
　ExiaIICT6 ———— A

Body material
　Aluminum ———— 1
　SS316L ———— 2

Body type
　General type ———— 0

Installation
　General type ———— 0

Port connection
　1/4" ———— 1

Port Standard
　G1/4 ———— G
　NPT1/4 ———— N

Power connection
　NPT1/2 ———— 1
　G1/2 ———— 2
　M20*1.5 ———— 3

Ambient temperature
　-20~70℃ ———— S

113.6
42
32
24
138.6

MC50 Series Non-explosion 3/2 or 5/2 Solenoid 1/8"~1/2"
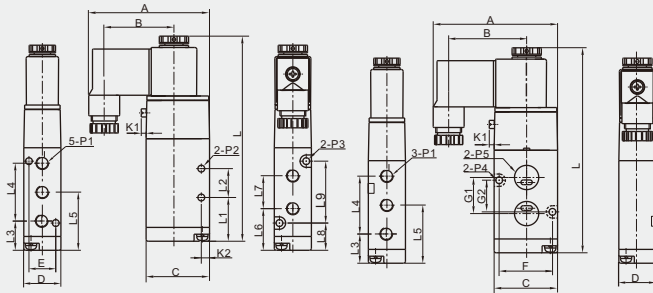
CE TÜV NORD SIL3

- Pilot-operated, normally closed type is default option.
- Sliding spool valve with good seal and fast response.
- Low starting pressure, long lifespan.
- Manual override.
- Direct mount to pneumatic actuator or tubing connection.

3/2NC   3/2Double coil   5/2 Single coil   5/2Double coil

Port Size	1/8"	1/4"	3/8"	1/2"
Voltage	12/24/48VDC；110/220/240VAC			
Acting type	Single coil, Double coil			
Power Consumption	220VAC: 5.5VA; 24VDC: 3W			
Insulation class	F class			
Working medium	Clean air (after 40 μm filtration)			
Air pressure	0.15~0.8MPa			
Port connection	DIN connector			
Ambient Temp. — Normal temp.	-20~70℃			
Ambient Temp. — High temp.	-20~120℃			
Ingress protection	IP65			
Installation	Namur or Tubing			
Section area / Cv	14mm^2/0.78	25mm^2/1.4	30mm^2/1.68	50mm^2/2.79
Body material	Aluminum			

Note: The insulation level is F, and H can bespecially ordered.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
MC50-	1	2	N	1	1	1	1	G	0	S

Acting type
Single coil — 1
Double coil — 2

Control voltage[1]
220VAC — 1
24VDC — 2
110VAC — 3
12VDC — 4
240VAC — 5
48VDC — 6

Coil Type[2]
Non-explosion — N

Body material
Aluminum — 1

Body type
3/2 — 1
5/2 — 2

Installation
NAMUR — 1
Tubing — 2

Inlet/outlet - Exhaust port connection
1/4"-1/4" — 1
1/2"-1/2" — 2
1/8"-1/8" — 3
1/4"-1/8" — 5
3/8"-1/4" — 6

Port Standard
G — G
NPT — N

Power connection
Standard type (DIN type) — 0

Ambient temperature
-20~70℃ — S
-20~120℃ — H

二位五通单电控管接   二位五通单电控板接

尺寸表   单位：mm

项目 接口	A	B	C	D	E	F	L	L1	L2	L3	L4	L5
1/8"	66.5	40	35	22	17	29	116.5	21.5	20	13.5	36	31.5
1/4"	69	40	35	27	20	32	134.5	28	24	17.5	45	40
3/8"	69	40	40	27	20	32	134.5	28	24	17.5	45	40
1/2"	74	-	50	34	27	45	168	43	28	25.5	63	57

| 项目 接口	L6	L7	L8	L9	G1	G2	K1	K2	P1	P2/P3	P4	P5
1/8"	22.5	16	12.5	36	23	20	3	8	G1/8	Φ3.2	Φ3.2	Φ18深1.4
1/4"	29	22	15	50	-	24	2.4	6.5	G1/4	Φ4.3	Φ4.3	Φ20深1.4
3/8"	29	22	15	50	-	24	2.4	6.5	G3/8	Φ4.3	Φ5.5	Φ20深1.4
1/2"	39	36	21	72	-	40	2.5	13.5	G1/2	Φ4.3	Φ5.5	-

注：此表仅列出进/出/排气口尺寸一致的外形尺寸，如需其它型号尺寸请联系MORC公司。

[1]: Please consult MORC for additional voltage specifications.
[2]：Non-explosion-proof coil default without indicator,If you need to LED indicators please indicate.

MC50 Series Non-explosion 5/3 Solenoid 1/8"～1/2"

CE TUV NORD SIL3

- Pilot-operated, normally closed type is default option.
- Sliding spool valve with good seal and fast response.
- Low starting pressure, long lifespan.
- Manual override.
- Direct mount to pneumatic actuator or tubing connection.

Seal off Exhaust Press

Port Size	1/8"	1/4"	3/8"	1/2"
Voltage	12/24/48VDC；110/220/240VAC			
Acting type	Double coil			
Power Consumption	220VAC: 5.5VA; 24VDC: 3W			
Insulation class	F class			
Working medium	Clean air (after 40 μm filtration)			
Air pressure	0.15~0.8MPa			
Port connection	DIN connector			
Ambient Temp.	Normal temp.	-20~70℃		
	High temp.	-20~120℃		
Ingress protection	IP65			
Installation	Namur or Tubing			
Section area / Cv	14mm²/0.78	25mm²/1.4	30mm²/1.68	50mm²/2.79
Body material	Aluminum			

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
MC50-	2	2	N	1	3C	1	1	G	0	S

Acting type
Double coil — 2

Control voltage[1]
220VAC — 1
24VDC — 2
110VAC — 3
12VDC — 4
240VAC — 5
48VDC — 6

Coil Type[2]
Non-explosion — N

Body material
Aluminum — 1

Body Type
5/3(Seal) — 3C
5/3(Press) — 3P
5/3(Exhause) — 3E

Installation
NAMUR — 1
Tubing — 2

Inlet/outlet - Exhaust port connection
1/4"-1/4" — 1
1/2"-1/2" — 2
1/8"-1/8" — 3
1/4"-1/8" — 5
3/8"-1/4" — 6

Port Standard
G — G
NPT — N

Power connection
Standard type (DIN type) — 0

Ambient temperature
-20~70℃ — S
-20~120℃ — H
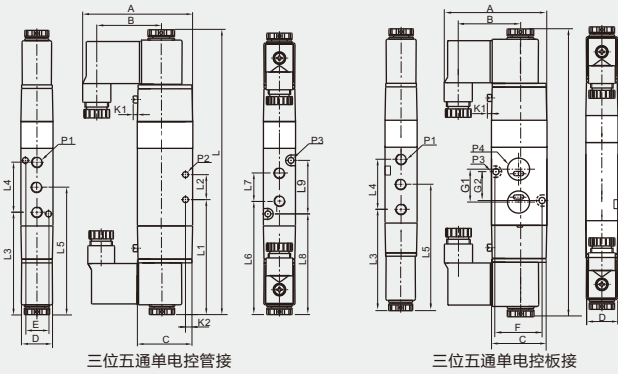
三位五通单电控管接   三位五通单电控板接

尺寸表   单位：mm

项目 接口	A	B	C	D	E	F	L	L1	L2	L3	L4	L5
1/8"	66.5	40	35	22	17	29	169.8	75	20	57	36	85
1/4"	69	40	35	27	20	32	188.8	82.4	24	71.9	45	94.4
3/8"	69	40	40	27	20	32	188.8	82.4	24	71.9	45	94.4
1/2"	74	-	50	34	27	45	222	97	28	79.5	63	111

项目 接口	L6	L7	L8	L9	G1	G2	K1	K2	P1	P2/P3	P4	P5
1/8"	76	16	66	36	23	20	3	8	G1/8	Φ3.2	Φ3.2	Φ18深1.4
1/4"	83.4	22	69.4	50	-	24	2.4	6.5	G1/4	Φ4.3	Φ4.3	Φ20深1.4
3/8"	83.4	24	69.4	50	-	24	2.4	6.5	G3/8	Φ4.3	Φ5.5	Φ20深1.4
1/2"	93	36	75	72	-	40	2.5	13.5	G1/2	Φ4.3	Φ5.5	-

注：此表仅列出进/出/排气口尺寸一致的外形尺寸，如需其它型号尺寸请联系MORC公司。

[1]: Please consult MORC for additional voltage specifications.

[2]: Non-explosion-proof coil default without indicator,If you need to LED indicators please indicate.

MC50 Series Explosion-proof Solenoid 1/2"

CE Ex Ex NEPSI TÜV NORD SIL3 CCC

■ Pilot-operated, normally closed type is default option.

■ Sliding spool valve with good seal and fast response.

■ Low starting pressure, long lifespan.

■ Manual override.

■ Direct mount to pneumatic actuator or tubing
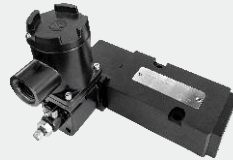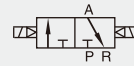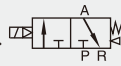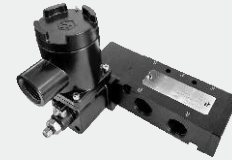
connection.

NAMUR   Tubing

Model No.	MC50-XXD
Voltage	24V DC ; 220VAC
Acting type	Single coil, Double coil
Power Consumption	220VAC: 5.0VA; 24VDC: 3.5W
Insulation class	F class
Working medium	Clean air (after 40 μm filtration)
Air pressure	0.15~0.8MPa
Port connection	G1/2
Power connection	NPT1/2, M20*1.5, G1/2
Ambient Temp. — Normal temp.	-20~70℃
Ambient Temp. — Low temp.	-40~70℃
Explosion-proof	Ex db IIC T6 Gb ; Ex tb IIIC T85℃ Db
Ingress protection	IP66
Installation	45*40Namur or Tubing
Section area / Cv	50mm²/2.79
Body material	Aluminum

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
MC50-	1	2	D	1	0	0	1	G	1	S

Acting type
Single coil — 1
Double coil — 2

Control voltage[1]
220VAC — 1
24VDC — 2
110VAC — 3
12VDC — 4
240VAC — 5
48VDC — 6
110VDC — 7
125VDC — 8

Coil Type
ExdIICT6 — D

Body material
Aluminum — 1

Body type
3/2 — 1
5/2 — 2

Installation
NAMUR — 1
Tubing — 2

Port connection
1/2" — 2

Port Standard
G1/2 — G
NPT1/2 — N

Power connection
NPT1/2 — 1
G1/2 — 2
M20*1.5 — 3

Ambient temperature
-20~70℃ — S
-40~70℃ — L

5/2 板接式

5/2 式
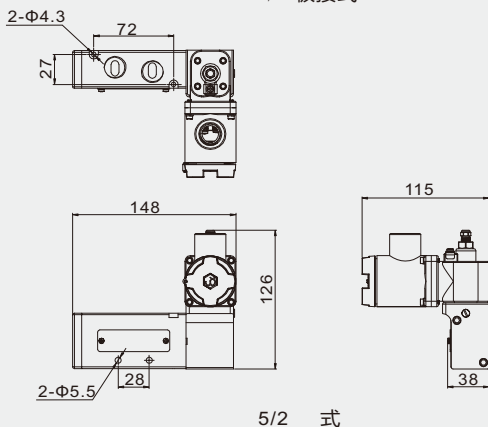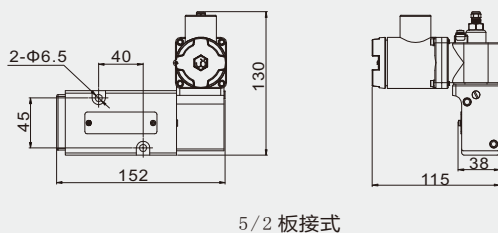
[1]: Please consult MORC for additional voltage specifications.

■ Pilot-operated, normally closed type is default option.

■ Sliding spool valve with good seal and fast response.

■ Low starting pressure, long lifespan.

■ Manual override.

■ Direct mount to pneumatic actuator or tubing

connection.

3/2NC   5/2 Single coil   5/2 Double coil
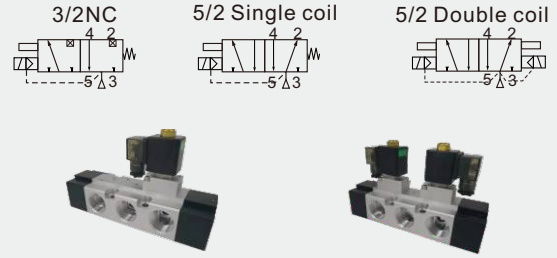
Model No.	MC50	
Voltage	110VAC, 220VAC(50/60Hz); 24V DC	
Acting type	Single coil	Double coil
Power Consumption	AC: 13/11VA; DC: 10W	
Insulation class	H class	
Working medium	Clean air (after 40 μm filtration)	
Air pressure	0.2~0.7MPa	
Port connection	G1"	
Power connection	DIN connector	
Ambient Temp.	-20~70℃	
Explosion-proof	Non-explosion	
Ingress protection	IP65	
Installation	Namur or Tubing	
Section area	100mm²	
Body material	Aluminum	
Weight	1817 g	2102 g

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
MC50-	1	2	N	1	2	1	1	G	1	S

Acting type
Single coil — 1
Double coil — 2

Control voltage
220VAC — 1
24VDC — 2
110VAC — 3

Coil Type
Non-explosion — N

Body material
Aluminum — 1

Body type
3/2 — 1
5/2 — 2

Installation
Tubing — 1

Port connection
1" — 8

Port Standard
G1 — G

Power connection
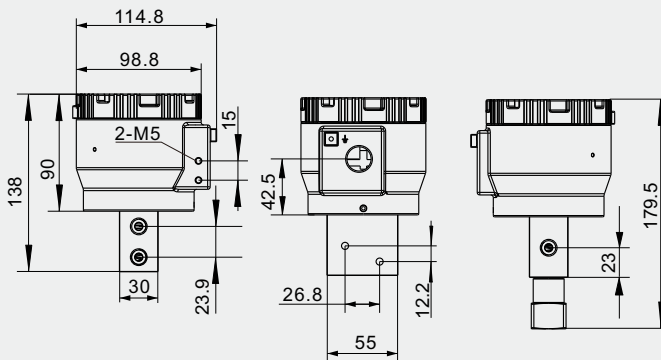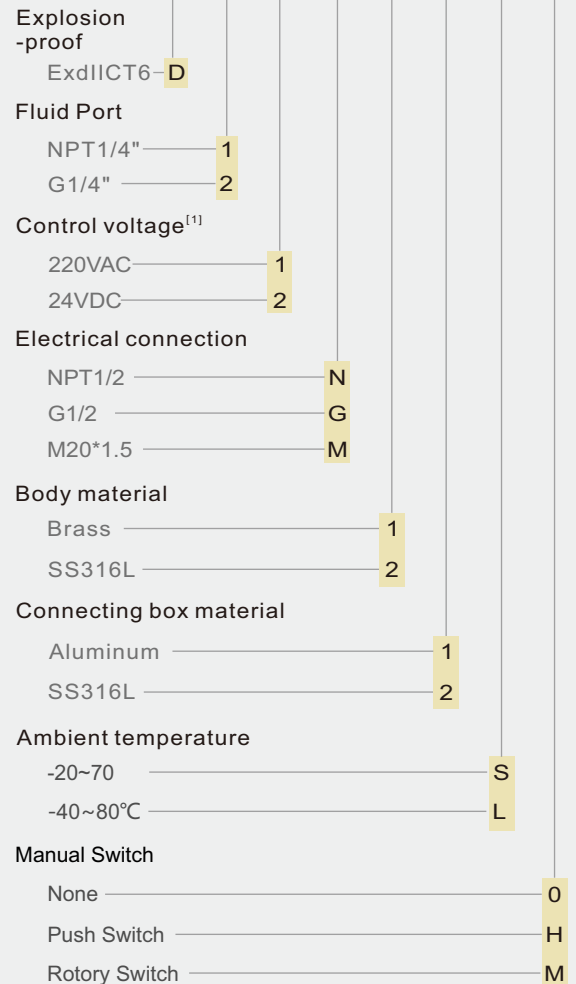Standard type (DIN type) — 1

Ambient temperature
-20~70℃ — S

单电控

双电控
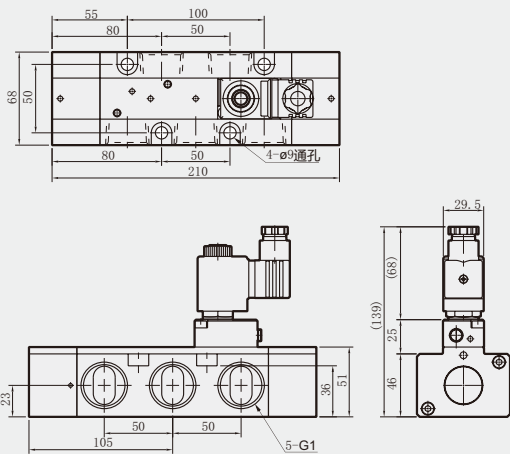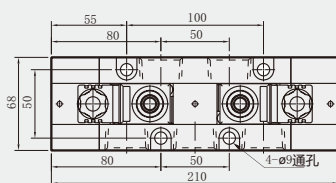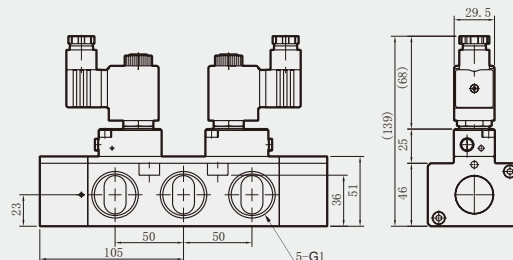
■ Used for single acting actuator control, wide working pressure range, no minimum operating pressure difference.
■ PTFE rider rings and graphite-filled PTFE seals reduce friction and eliminate sticking.
■ Coils used in metal enclosures have class F insulation materials.
■ Low-power design.
■ Normally open and normally closed is universal.
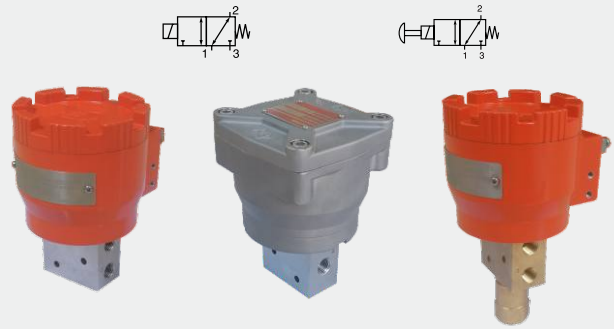
Model No.	MC51
Voltage	DC : 24V ; AC : 220V
Power Consumption	24VDC: 3.6W ; 220VAC : 5.5VA
Insulation class	F Class
Working medium	Air, Inert gas, Water, Light oil
Differential pressure	0~1.0MPa
Fluid Port	G1/4, NPT1/4
Electrical connection	NPT1/2 , M20*1.5 , G1/2
Ambient Temp.	-20~70℃/-40~80℃
Explosion-proof	Ex db IIC T6 Gb ; Ex tb IIIC T85℃ Db
Ingress protection	IP67
Installation	Tubing
Flow rate	7.5LPM
Body material	Brass or 316L

	1.	2.	3.	4.	5.	6.	7.	8.
MC51-	D	2	1	N	1	1	S	0

Explosion-proof
ExdIICT6 — D

Fluid Port
NPT1/4" — 1
G1/4" — 2

Control voltage[1]
220VAC — 1
24VDC — 2

Electrical connection
NPT1/2 — N
G1/2 — G
M20*1.5 — M

Body material
Brass — 1
SS316L — 2

Connecting box material
Aluminum — 1
SS316L — 2

Ambient temperature
-20~70 — S
-40~80℃ — L

Manual Switch
None — 0
Push Switch — H
Rotory Switch — M

[1]The default AC voltage is 220VAC and DC voltage is 24VDC. For other voltages, Please consult MORC for additional voltages.

MC-22 Series Air Filter Regulator

CE ⬛ TÜV NORD ⬛ SIL3

MC-22 series air filter regulator ables to accurately control pressure, as well as filter solid particles above 5 microns, and liquids from compressed air. Provide clean air source for air receiving equipment.

■ Die-cast aluminum body material with a polyester coating, which gives a long life and protects against corrosion. SS316L material is optional, suitable for severe corrosive environment.
■ Quick response, stable pressure output even when inlet pressure and flow fluctuate.
■ Filter solid particles with a minimum diameter of 5 microns and self-cleaning function.
■ Designed with 3 air outlets, installation direction can be easily adjusted.
■ Manual or auto drain function is available.

Manual drain

Auto drain

Model No.	MC-22
Max.input pressure	1.5MPa
Output pressure	0~1.0MPa[1]
Working medium	Compressed air
Ambient temp.	-20~70℃；-20~120℃；-40~70℃
Min. filtering size	5μm
Air connection	NPT1/4；G1/4
Body material	Die-cast Aluminum；SS316L
Weight Aluminum	Manual drain: 0.6kg; Auto drain: 0.65kg;
Weight SS316	Manual drain: 1.95kg

[1]: The pressure gauge range is 0~1.0 MPa, for other specifications please consult MORC .

185(MAX)
57.5
80.5
69
IN PORT
GAUGE PORT
OUT PORT
DRAIN
30
60
68
76

Manual drain

OUT PORT
GAUGE PORT
IN PORT
215(MAX.)
30
G1/8
76
68
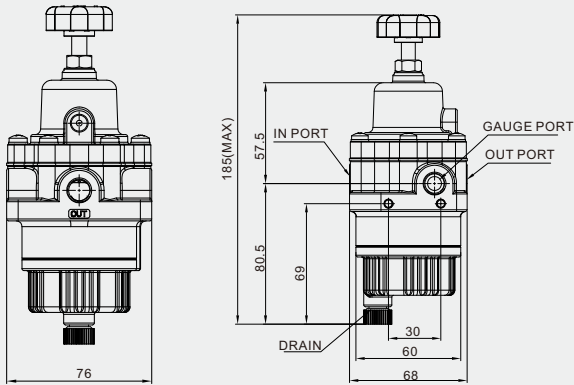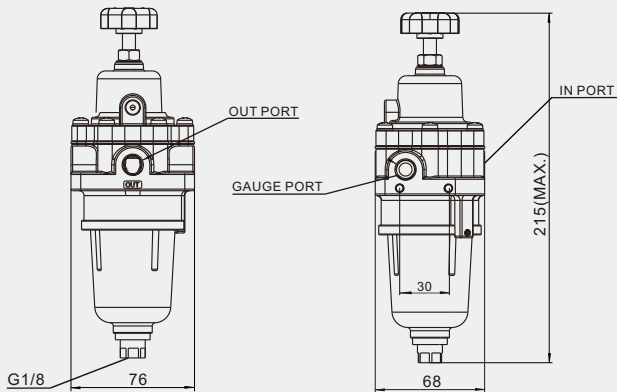
Auto drain

		1.	2.	3.	4.	5.	6.	7.
MC-22		N	1	0	S	0	1	0

Port Standard[2]

NPT ——— N
G ——— G

Port connection

1/4" ——— 1
1/2" ——— 2

Body material

Die-cast Aluminum ——— 0
SS316L ——— 1

Ambient temperature

-20~70℃ ——— S
-20~120℃ ——— H
-40~70℃ ——— L

Copper option

Copper ——— 0
Non-copper ——— 1

Gauge

None ——— 0
Normal type ——— 1
Stainless steel ——— 2

Drain option

Manual drain ——— 0
Auto drain ——— 1

[2]: The default screw standard is NPT, please consult MORC for other standards.

MC-20 Series Air Filter Regulator

MC-20 series air filter regulator ables to accurately control pressure, as well as filter solid particles above 5 microns, and liquids from compressed air. Provide clean air source for air receiving equipment.

■ Die-cast aluminum body material with a polyester coating, which gives a long life and protects against corrosion.
■ Quick response, stable pressure output even when inlet pressure and flow fluctuate.
■ Filter solid particles with a minimum diameter of 5 microns and self-cleaning function.
■ Manual or auto drain function is available.

MC-20A MC-20B MC-20C MC-20D

Parameter

Model No.	MC-20A		MC-20B		MC-20C			MC-20D	
Air connection	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	3/4"	1"
Max. input pressure	1.5MPa								
Regulating Range	Auto drain：0.15~0.9MPa Manual drain：0.05~0.9MPa								
Working medium	Compressed air								
Ambient temp.	-20~70℃								
Min. filtering size	5μm								
Body material	Aluminum								

Flow rate(L/min)

Size \ Model	MC-20A	MC-20B	MC-20C	MC-20D
1/8"	880	–	–	–
1/4"	950	1680	–	–
3/8"	–	1850	4160	
1/2"	–	–	4560	–
3/4"	–	–	4650	5000
1"	–	–	–	5500

		1.	2.	3.	4.	5.	6.
MC-20		A	1	N	1	1	1

Model
A Type —— A
B Type —— B
C Type —— C
D Type —— D

Air connection
1/8" —— 1
1/4" —— 2
3/8" —— 3
1/2" —— 4
3/4" —— 5
1" —— 6

Connection Standard
NPT —— N
G —— G
PT —— P

Cup Type
Metal cup —— 1
Transparent cup with metal cover —— 2

Drain Option
Manual drain —— 1
Auto drain —— 2

Gauge
None —— 0
Normal type —— 1

Note1: Only 1/8" and 1/4" are available for A type, only 1/4" and 3/8" are available for B type , only 3/8", 1/2" and 3/4" are available for C type, only 3/4" and 1" are available for D type.
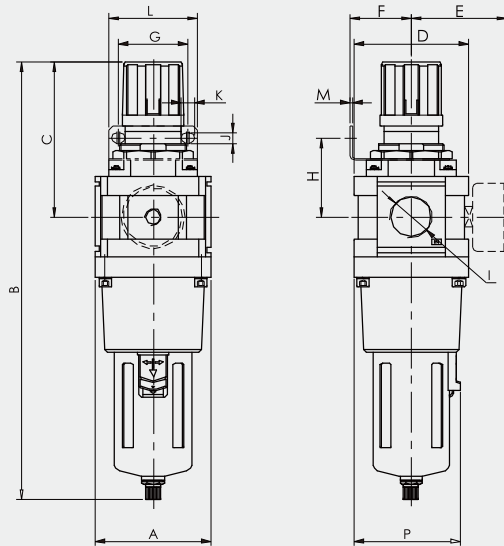
Note2: Type A with metal cup can not be used to Auto drain.

Dimensions
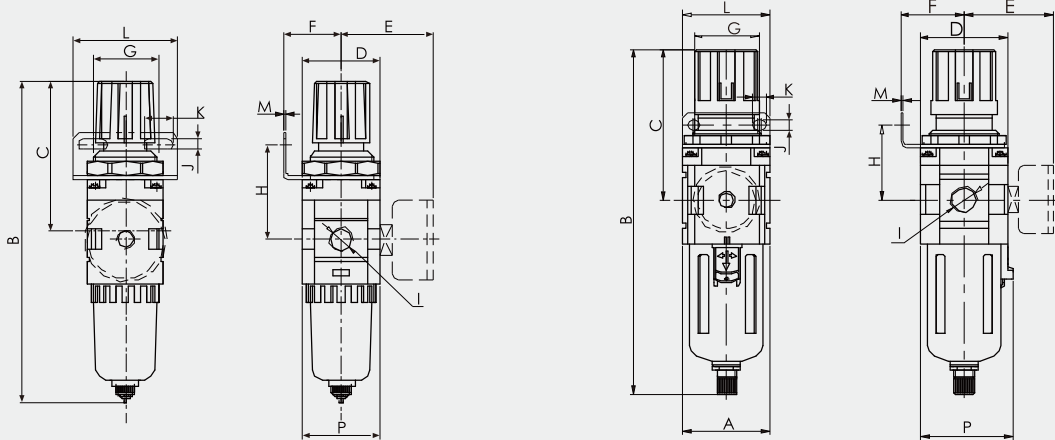
MC-20A

MC-20B/MC-20C

MC-20D

Size

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	P
MC-20A1	40	164.5	78	40	56.8	30	34	43.5	G1/8"	5.4	15.4	55	2.3	40
MC-20A2	40	164.5	78	40	56.8	30	34	43.5	G1/4"	5.4	15.4	55	2.3	40
MC-20B2	53	211	92.5	53	60.8	39	40	46	G1/4"	6.5	8	53	2.3	56
MC-20B3	53	211	92.5	53	60.8	39	40	46	G3/8"	6.5	8	53	2.3	56
MC-20C3	70	262	112	70	70.5	49.2	54	53.5	G3/8"	8.5	10.5	70	2.3	73
MC-20C4	70	262	112	70	70.5	49.2	54	53.5	G1/2"	8.5	10.5	70	2.3	73
MC-20C5	75	267	114	70	70.5	49.2	54	55.5	G3/4"	8.5	10.5	70	2.3	73
MC-20D5	90	338	116	90	75.5	49.2	54	62	G3/4"	8.5	10.5	70	2.3	90
MC-20D6	90	338	116	90	75.5	49.2	54	62	G1"	8.5	10.5	70	2.3	90

MLS100 series limit switch box have a proven track record for accurate and reliable signaling in linear and rotary applications. Providing both visual and remote electrical position indications, these cost-effective, compact unit unparalleled performance with ease of installation and calibration.

■ Lightweight, dome shaped visual indicator with contrast color design.
■ Rotary position indicator with NAMUR standard.
■ Anti-detachment bolt, it will never missed during disassembly..
■ Two cable entries for easy installation.
■ IP67 and UV resistance, suitable for outdoor use.

Model No.	MLS100
Body material	Die-cast Aluminum
Outer coating	Polyester coating
Power connection	M20*1. 5, NPT1/2, or G1/2
Ingress protection	IP67
Stroke	90°
Switch type	Mechanical switch or proximity switch
Mechanical switch rating	16A 125VAC/250VAC， 0.6A 125VDC， 10A 30VDC
Proximity switch rating	Intrinsically safe : 8VDC , NC Non-explosion proof : 10~30VDC， ≤150mA
Reed proximity switch rating	24V 0.3A
Ambient temp.	-20~70℃，-20~120℃，or -40~80℃

	-	1.	2.	3.	4.
MLS100	-	M0	1	0	S

Switch type

Mechanical switch
2-SPDT ——————— M0

Proximity switch[1]
2-Intrinsically safe ——— P0
2-Non-explosion(2wire)– P1
2-Non-explosion (3wire)– P2

Reed proximity switch
2-SPDT——————— P3
2-SPST——————— P4

Power connection
2-G1/2 ——————— 0
2-NPT1/2 —————— 1
2-M20*1.5 ————— 2

Option
None ——————— 0

Ambient temperature[2]
-20~80℃———— S
-20~120℃———— H
-40~70℃———— L
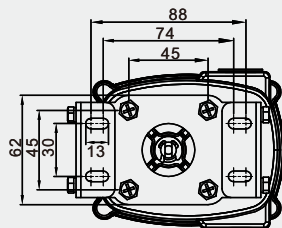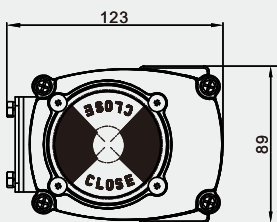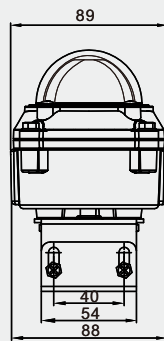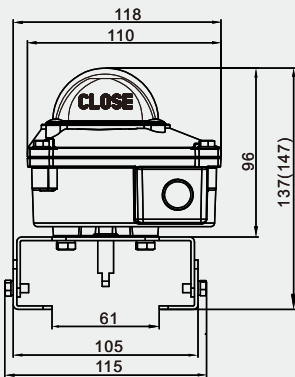
118
110
96
137(147)
61
105
115

89
40
54
88

123
89

88
74
45
62 45 30 13

Note 1: By default, two wires intrinsically safe proximity switch(P0) at normally closed status; two wires non-explosion proof proximity switch (P1) at normally open status; three wires non-explosion proof proximity switch (P3) requires customer to select normally open or normally close.
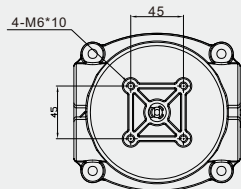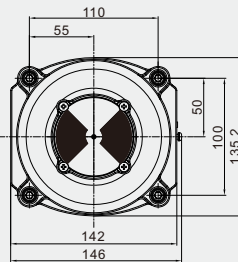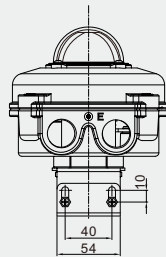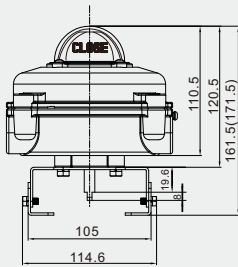Note 2: High Ambient temperature only mechanical switch is available. Low Ambient temperature only mechanical switch and intrinsically safe proximity switch (P0) is available.

MLS300 Series Limit Switch Box

MLS300 series limit switch box have a proven track record for accurate and reliable signaling in linear and rotary applications. Providing both visual and remote electrical position indications, these cost-effective, compact unit unparalleled performance with ease of installation and calibration. Rugged, corrosion-resistant enclosures have multiple switch options and meet IP67 standards. Intrinsically safe and explosion proof designs ensure safe reliable operation in hazardous environment.

■ Lightweight, dome shaped visual indicator with contrast color design.
■ Rotary position indicator with NAMUR standard.
■ Anti-detachment bolt, it will never missed during disassembly.
■ Two cable entries for easy installation.
■ IP67 and UV resistance, suitable for outdoor use.

Model No.	MLS300
Body material	Die-cast Aluminum
Outer coating	Polyester coating
Power connection	M20*1.5、NPT1/2, NPT3/4,G3/4 or G1/2
Explosion-proof	Ex db IIC T6 Gb ; Ex tb IIIC T85℃ Db
Ingress protection	IP67
Stroke	90°
Switch type	Mechanical switch or proximity switch
Mechanical switch rating	16A 125VAC／250VAC , 0.6A 125VDC , 10A 30VDC
Proximity switch rating	Intrinsically safe : 8VDC , NC Non-explosion proof : 10～30VDC, ≤150mA
Reed proximity switch rating	24V 0.3A
Position transmitter	4~20mADC
Ambient temp.	-20~70℃，-20~120℃，or -40~80℃
Explosive temp.	-20~60℃

Ordering code

MLS300	-	1. M0	2. 1	3. 0	4. S

Switch type

Mechanical switch
2-SPDT —————— M0
3-SPDT —————— M1
4-SPDT —————— M2
2-DPDT —————— M3

Proximity switch[1]
2-Intrinsically safe ——— P0
2-Non-explosion(2wire)- P1
2-Non-explosion(3wire)- P2

Reed proximity switch
2-SPDT —————— P3
2-SPST —————— P4

Power connection
2-G1/2 —————— 0
2-NPT1/2 ————— 1
2-M20*1.5 ———— 2
2-G3/4 —————— 4
2-NPT3／4 ———— 5

Option
None —————————— 0
Position transmitter module ——— 1

Ambient temperature[2]
-20~70℃ ————————— S
-40～80℃ ————————— L

Note 1: By default, two wires intrinsically safe proximity switch(P0) at normally closed status; two wires non-explosion proof proximity switch (P1) at normally open status; three wires non-explosion proof proximity switch (P3) requires customer to select normally open or normally close.
Note 2: Only mechanical switch (M0) can be used in high ambient temperature. Only intrinsically safe proximity switch (P0) can be used in high ambient temperature.
Note 2: High Ambient temperature only mechanical switch is available. Low Ambient temperature only mechanical switch and intrinsically safe proximity switch（P0）is available.

MLS300 Series Limit Switch Box (With Solenoid Valve)

MLS300 series limit switch box have a proven track record for accurate andreliable signaling in linear and rotary applications. Providing both visual and remote electrical position indications, these cost-effective, compact unit unparalleled performance with ease of installation and calibration. Rugged, corrosion-resistant enclosures have multiple switch options and meet IP67 standards. Intrinsically safe and explosion proof designs ensure safe reliable operation in hazardous environment.

■ Lightweight, dome shaped visual indicator with contrast color design.
■ Rotary position indicator with NAMUR standard.
■ Anti-detachment bolt, it will never missed during disassembly.
■ Two cable entries for easy installation.
■ IP67 and UV resistance, suitable for outdoor use.

Model No.	MLS300
Voltage	Die-cast Aluminum
Outer coating	Polyester coating
Power connection	M20*1. 5、NPT1/2, NPT3/4,G3/4 or G1/2
Explosion-proof	Ex db IIC T6 Gb ; Ex tb IIIC T85℃ Db
Ingress protection	IP67
Stroke	90°
Switch type	Mechanical switch or proximity switch
Mechanical switch rating	16A 125VAC/250VAC, 0.6A 125VDC, 10A 30VDC
Proximity switch rating	Intrinsically safe : 8VDC, NC Non-explosion proof : 10~30VDC, ≤150mA
Reed proximity switch rating	24V 0.3A
Solenoid valve Body Type	3/2 or 5/2
Solenoid valve Voltage	24VDC or 220VAC
Ambient temp.	-20~70℃
Explosive temp.	-20~60℃

	-	1.	2.	3.	4.
MLS300	-	M0	1	2	S

Switch type

Mechanical switch
2-SPDT ———————— M0
3-SPDT ———————— M1
4-SPDT ———————— M2
2-DPDT ———————— M3

Proximity switch[1]
2-Intrinsically safe —— P0
2-Non-explosion(2wire) – P1
2-Non-explosion(3wire) – P2

Reed proximity switch
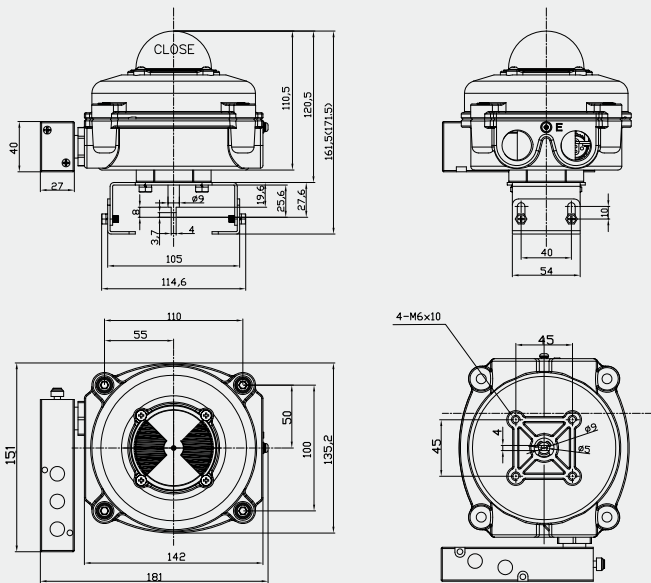2-SPDT ———————— P3
2-SPST ———————— P4

Power connection
2-G1/2 ———————— 0
2-NPT1/2 ——————— 1
2-M20*1.5 —————— 2
2-G3/4 ———————— 4
2-NPT3/4 ——————— 5

Solenoid Valve[2]
Integrated Solenoid Valve ———— 2

Ambient temperature
-20~70℃ ———————— S

Note [1]: By default, two wires intrinsically safe proximity switch (P0)at normally closed status; two wires non-explosion proof proximity switch (P1) at normally open status; three wires non-explosion proof proximity switch (P3) requires customer to select normally open or normally close.

Note [2]: See A series selection code of integrated solenoid valve, which shall be determined when ordering.

Example : MLS300-M012S+A25N11

With 5/2 solenoid valve

Model No.	A23	A25
Body type	3/2	5/2
Body material	Aluminum	
Outer coating	Black oxide	
Air Connect	NPT1/4 or G1/4	
Voltage	24VDC or 220VAC	
Power Consumption	DC: 1W, AC:2.5VA	

	1.	2.	3.	4.	5.
A	23	N	1	1	NO

Body type

3/2 ———— 23

5/2 ———— 25

Coil Type

Non-Explosion ———— N
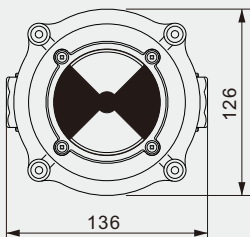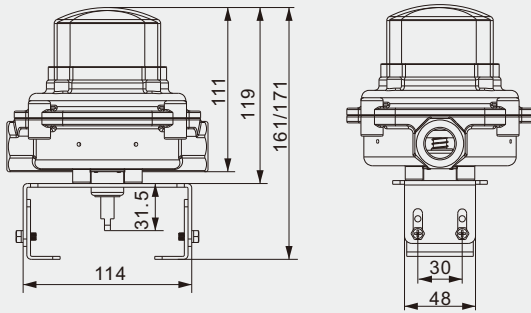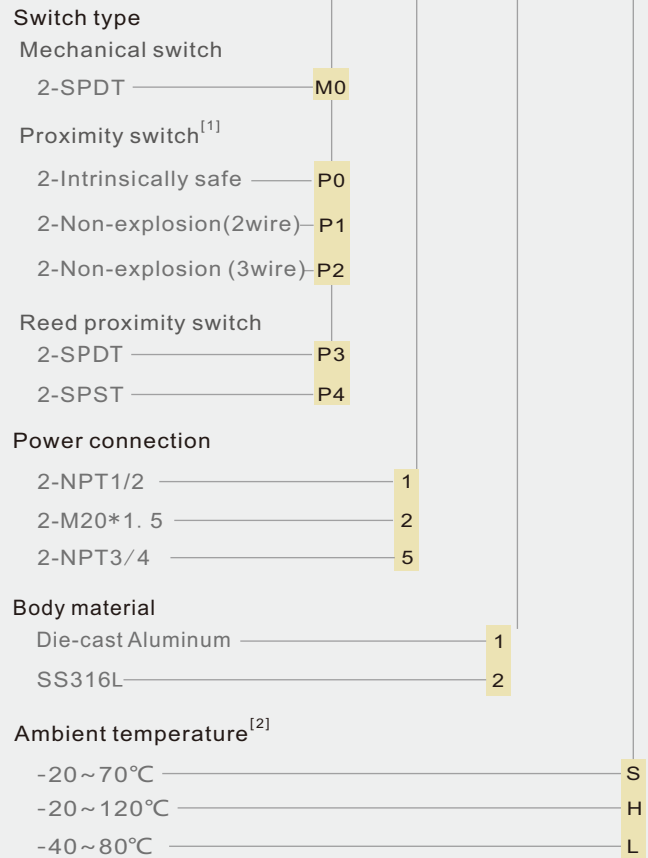
ExiaIICT6 ———— A

Air connection

G1/4 ———— 1

NPT1/4 ———— 2

Voltage[1]

24VDC ———— 1

220VAC ———— 2

Fail option(Only 3/2)

Normally open ———— NO

Normally close ———— NC

[1]ExiaIICT6 is available for 24VDC only.

CLOSE

110,5
120,5
161,5(171,5)
40
27
19,6
25,6
27,6
Ø9
8
3,7
4
105
114,6

E
40
54
10

110
55
50
100
135,2
151
142
181

4-M6x10
45
45
4
Ø9
Ø5
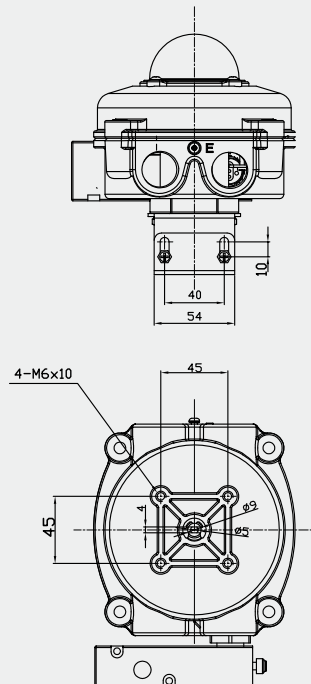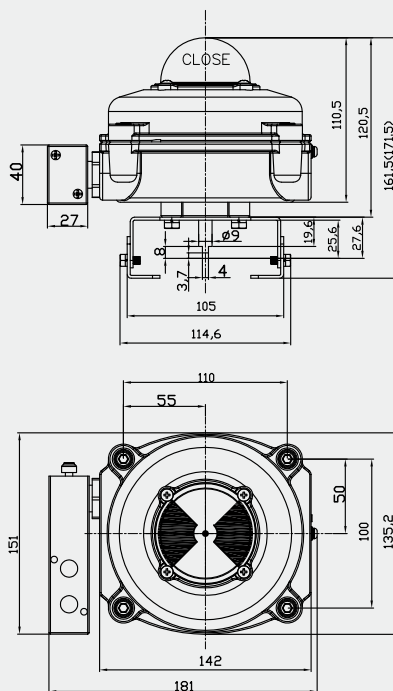
with 3/2 solenoid valve

MLS300-S series limit switch box have a proven track record for accurate and reliable signaling in linear and rotary applications. Providing both visual and remote electrical position indications, these cost-effective, compact unit unparalleled performance withease of installation and calibration. Rugged, corrosion-resistant enclosures have multiple switch options and meet IP67 standards. Intrinsically safe and explosion proof designs ensure safe reliable operation in hazardous environment.

■ Lightweight, dome shaped visual indicator with contrast color design.
■ Rotary position indicator with NAMUR standard.
■ Anti-detachment bolt, it will never missed during disassembly.
■ Two cable entries for easy installation.
■ IP67 and UV resistance, suitable for outdoor use.

Model No.	MLS300-S
Body material	Die-cast Aluminum or SS316L
Power connection	NPT3/4, or NPT1/2
Explosion-proof	Ex db IIC T6 Gb ; Ex tb IIIC T85℃ Db
Ingress protection	IP67
Stroke	90°
Switch type	Mechanical switch or proximity switch
Mechanical switch rating	16A 125VAC/250VAC, 0.6A 125VDC; 10A 30VDC
Proximity switch rating	Intrinsically safe: 8VDC, NC Non-explosion proof: 10~30VDC, ≤150mA
Reed proximity switch rating	24V 0.3A
Ambient temp.	-20~70℃, -20~120℃, or -40~80℃
Explosive temp.	-20~60℃

	-	1.	2.	3.	4.
MLS300-S	-	M0	1	1	S

Switch type
Mechanical switch
  2-SPDT — M0
Proximity switch[1]
  2-Intrinsically safe — P0
  2-Non-explosion(2wire) — P1
  2-Non-explosion (3wire) — P2
Reed proximity switch
  2-SPDT — P3
  2-SPST — P4

Power connection
  2-NPT1/2 — 1
  2-M20*1.5 — 2
  2-NPT3/4 — 5

Body material
  Die-cast Aluminum — 1
  SS316L — 2

Ambient temperature[2]
  -20~70℃ — S
  -20~120℃ — H
  -40~80℃ — L

Note 1: By default, two wires intrinsically safe proximity switch (P0) at normally closed status; two wires non-explosion proof proximity switch (P1) at normally open status; three wires non-explosion proof proximity switch (P3) requires customer to select normally open or normally close.
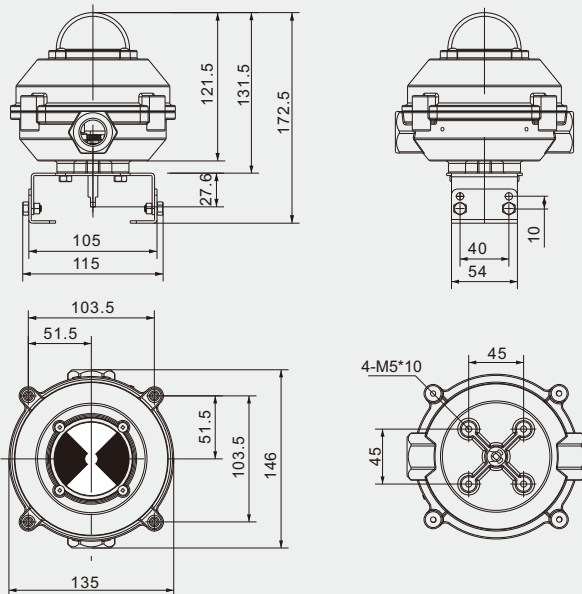Note 2: Only mechanical switch (M0) can be used in high ambient temperature. Only intrinsically safe proximity switch (P0) can beused in high ambient temperature.

MLS500 Series Limit Switch Box

CE Ⓔx TÜV NORD SIL3

MLS500 series limit switch box have a proven track record for accurate and reliable signaling in linear and rotary applications. Providing both visual and remote electrical position indications, these cost-effective, compact unit unparalleled performance with easeof installation and calibration. Rugged, corrosion-resistant enclosures have multiple switch options and meet IP67 standards. Intrinsically safe and explosion proof designs ensure safe reliable operation in hazardous environment.

■ Lightweight, dome shaped visual indicator with contrast color design.
■ Rotary position indicator with NAMUR standard.
■ Anti-detachment bolt, it will never missed during disassembly.
■ Two cable entries for easy installation.
■ IP67 and UV resistance, suitable for outdoor use.

Model No.	MLS500
Body material	SS 316L
Power connection	NPT3/4, or NPT1/2
Explosion-proof	ExdIICT6
Ingress protection	IP67
Stroke	90°
Switch type	Mechanical switch or proximity switch
Mechanical switch rating	16A 125VAC/250VAC, 0.6A 125VDC, 10A 30VDC
Proximity switch rating	Intrinsically safe: 8VDC, NC Non-explosion proof: 10~30VDC, ≤150mA
Reed proximity switch rating	24V 0.3A
Position transmitter	4~20mADC
Ambient temp.	-20~70℃, -20~120℃, or -40~80℃
Explosive temp.	-20~60℃

	-	1.	2.	3.	4.
MLS500	-	M0	1	0	S

Switch type

Mechanical switch

2-SPDT —————— M0
3-SPDT —————— M1
4-SPDT —————— M2
2-DPDT —————— M3

Proximity switch[1]

2-Intrinsically safe ———— P0
2-Non-explosion(2wire)— P1
2-Non-explosion(3wire)— P2

Reed proximity switch

2-SPDT —————— P3
2-SPST —————— P4

Power connection

2-NPT1/2 —————— 1
2-M20*1.5 —————— 2
2-NPT3/4 —————— 5

Option

None —————— 0
Position transmitter module —————— 1

Ambient temperature[2]

-20~70℃ —————— S
-20~120℃ —————— H
-40~80℃ —————— L

Note 1: By default, two wires intrinsically safe proximity switch (P0) at normally closed status; two wires non-explosion proof proximity switch (P1) at normally open status; three wires non-explosion proof proximity switch (P3) requires customer to select normally open or normally close.

Note 2: Only mechanical switch (M0) can be used in high ambient temperature. Only intrinsically safe proximity switch (P0) can beused in high ambient temperature.

MLS800 Series Limit Switch Box

MLS800 series limit switch box have a proven track record for accurate and reliable signaling in linear and rotary applications. Providing both visual and remote electrical position indications, these cost-effective, compact unit unparalleled performance with ease of installation and calibration. Rugged, corrosion-resistant enclosures have multiple switch options and meet IP67 standards. Intrinsically safe and explosion proof designs ensure safe reliable operation in hazardous environment.

■ Lightweight, dome shaped visual indicator with contrast color design.
■ Rotary position indicator with NAMUR standard.
■ Anti-detachment bolt, it will never missed during disassembly.
■ Two cable entries for easy installation.
■ IP67 and UV resistance, suitable for outdoor use.

MLS800N　　**MLS800C**　　**MLS800S**　　**MLS800L**

Model No.	MLS800
Body material	Die-cast Aluminum or SS316L
Power connection	NPT3/4, or NPT1/2
Explosion-proof	Ex db IIC T6 Gb ; Ex tb IIIC T85℃ Db
Ingress protection	IP67
Stroke	90°
Switch type	Mechanical switch or proximity switch
Mechanical switch rating	16A 125VAC/250VAC, 0.6A 125VDC; 10A 30VDC
Proximity switch rating	Intrinsically safe : 8VDC, NC Non-explosion proof : 10~30VDC, ≤150mA
Reed proximity switch rating	24V 0.3A
Ambient temp.	-20~70℃, -20~120℃, or -40~80℃
Explosive temp.	-20~60℃

MLS800	1.	-	2.	3.	4.	5.
MLS800	N	-	M0	1	0	S

Body material

Non-explosion —— N
(Aluminum)
Explosion-proof —— C
(Aluminum)
Explosion-proof —— S
(SS316L)

Switch type

Mechanical switch
2-SPDT ———————— M0
3-SPDT ———————— M1
4-SPDT ———————— M2
2-DPDT ———————— M3

Proximity switch[1]
2-Intrinsically safe —— P0
2-Non-explosion(2wire) —— P1
2-Non-explosion(3wire) —— P2

Reed proximity switch
2-SPDT ———————— P3
2-SPST ———————— P4

Power connection
2-G1/2(Only 800N/C) ———— 0
2-NPT1/2 ———— 1
2-M20*1.5(Only 800N/C) ———— 2
2-G3/4(Only 800C) ———— 4
2-NPT3/4(Only 800C/S) ———— 5

Option
None ———————— 0
Position transmitter module ———— 1

Ambient temperature[2]
-20~70℃ ———————— S
-20~120℃ ———————— H
-40~80℃ ———————— L
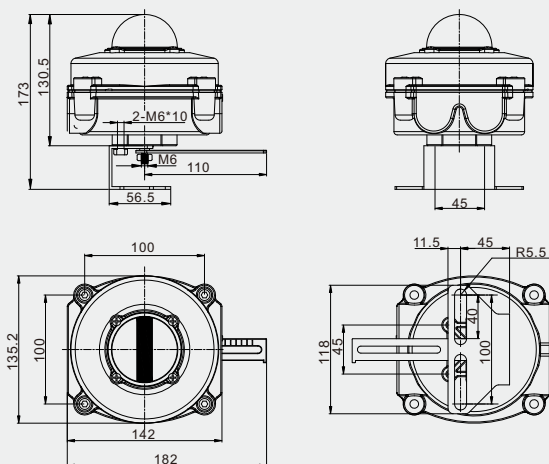
MLS800C外形尺寸图

Note 1: By default, two wires intrinsically safe proximity switch (P0) at normally closed status; two wires non-explosion proof proximity switch (P1) at normally open status; three wires non-explosion proof proximity switch (P3) requires customer to select normally open or normally close.

Note 2: Only mechanical switch (M0) can be used in high ambient temperature. Only intrinsically safe proximity switch (P0) can be used in high ambient temperature.

MC-30/31/32 Volume Booster

MC-30/31/32 series booster the valve function's reaction speed by providing large air flow rate to actuator.

- Improves speed of valve movement.
- Improves stability with by-pass contorl.
- Reacts to sudden change in supply pressure.
- Fixed deadband due to the seat-to-seat type of supply and exhaust pressure.

Model No.		MC-30	MC-31	MC-32
Max. Supply Pressure		1.0MPa		
Max. Output Pressure		0.7MPa		
Signal/Output Pressure Ratio		1:1		
Flow Capacity (Cv)	Output	1.19	2.72	5.24
	Exhaust	1.32	2.08	4.91
Supply Output Connection		PT(NPT)1/4	PT(NPT)1/2	PT(NPT)3/4
Signal Connection		PT(NPT)1/4		NPT1/4
Linearity		±1%F.S.		
Ambient temp.		-20~70℃(-4~158℉)		
Weight	Aluminum	0.5kg(1.1lb)	0.76kg(1.7lb)	2.3kg(5.1lb)
	SS316L	1.3kg(2.9lb)	1.9kg(4.2lb)	5.0kg(11.0lb)

	1.	2.	3.	4.
MC-3	0	P	1	1

Input/ Output Port Size
- 1/4" — 0
- 1/2" — 1
- 3/4" — 2

Connection Standard
- PT — P
- NPT — N

Ambient temp.
- -20~70℃ — 1
- -20~120℃ — 2
- -40~70℃ — 3

Body material
- Die-cast Aluminum — 1
- SS316L — 2
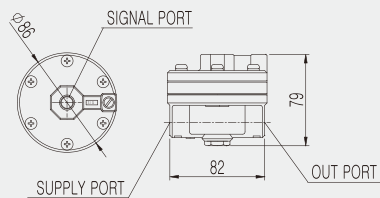
MC-30
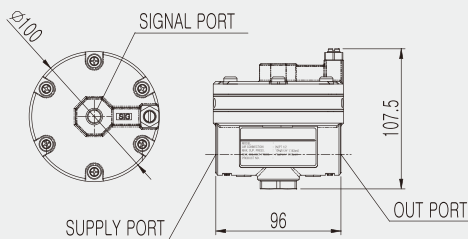
MC-31
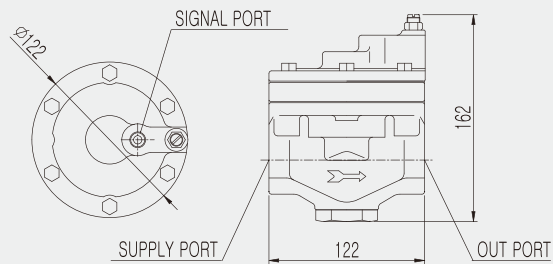
MC-32

MC-40/41 Series Lock-up Valve

MC-40/41 series lock-up valve senses the main supply pressure and shuts down the air flow when the pressure is lower than setting.

■ Compact size - NO bracket is required.
■ Detcts small variation of the pressure - below 0.01MPa.

MC-40S

MC-41S

Model No.	MC-40S	MC-40D	MC-41S	MC-41D
Signal Pressure	0.14~0.7MPa			
Signal Pressure Setting Range	Max.1.0MPa			
Lock-up pressure	Max.0.7MPa			
Hysteresis	Below 0.01MPa			
Flow Capacity(Cv)	0.9		3.6	
Air Connection	PT(NPT)1/4		NPT1/2	
Signal Connection	PT(NPT)1/4		NPT1/4	
Ambient temp.	-20~70℃(-4~158°F)			
Weight Aluminum	0.5kg(1.1lb)	0.7kg(1.6lb)	1.3kg(2.9lb)	2.3kg(5.1lb)

	1.	2.	3.	4.
MC-4	0	S	D	1

Input/Output connection
1/4" —— 0
1/2" —— 1

Action Type
Single Action —— S
Double Action —— D
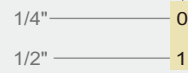
Connection Standard
PT —— P
NPT —— N
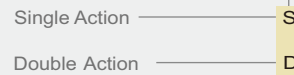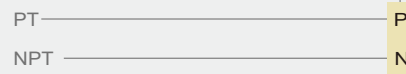
Ambient temp.
-20~70℃ —— 1
-20~120℃ —— 2
-40~70℃ —— 3
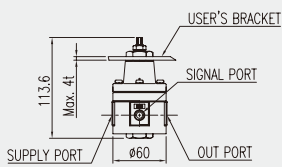
MC-40S
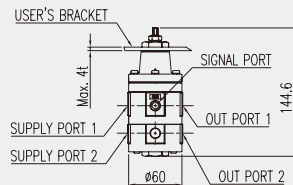
MC-40D
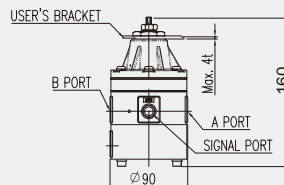
MC-41S
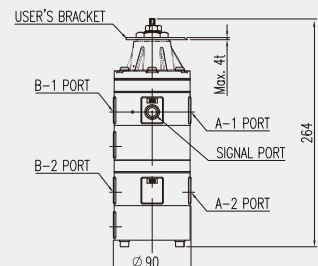
MC-41D

MC-60 series air operated valve is a device to control the on-off or change of the main valve gas channel through the on-off of the pilot pressure.Its characteristics:

■ Pilot-operated type;

■ Sliding spool valve with good seal and fast response.

■ Low starting pressure, long lifespan.

■ Manual override.
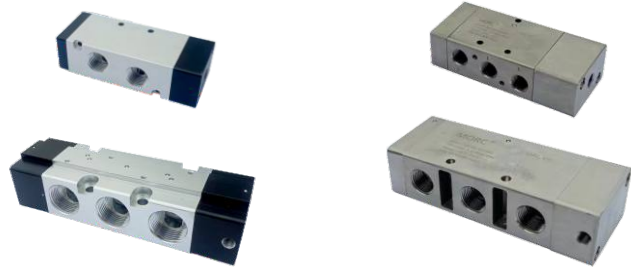
Aluminum   SS316L

Model No.	MC-60
Working medium	Clean air (after 40 µm filtration)
Acting type	Internal guided
Inlet/outlet/exhaust connection	G1/8, G1/4, G1/2, G3/4, G1
Control connection	G1/8
Working Pressure	1.5~8.0bar
Max Operating Pressure	12bar
Life Time	More than 10million times in normal use
Maximum operating frequency	5 times/second
Respornse Time	0.05S
Ambient Temp.	Normal Temp：−20~70℃，High Temp：−20~120℃：Low Temp：−40~70℃

	1.	2.	3.	4.	5.	6.
MC-60	1	1	1	1	S	1

Acting type
- Single Act —— 1
- Double Act —— 2

Body type
- 3/2 —— 1
- 5/2 —— 2

Installation
- NAMUR —— 1
- Tubing —— 2

Port connection[1]
- 1/8" —— 1
- 1/4" —— 2
- 3/8" —— 3
- 1/2" —— 4
- 3/4" —— 5
- 1" —— 6

Ambient temperature
- -20~70℃ —— 1
- -20~120℃ —— 2
- -40~70℃ —— 3

Body material
- Aluminum —— 1
- SS316L —— 2

[1]The maximum diameter of SS316L is 1/2".

2–G1/8

3–G1/4

2–Φ4.3

24

36

30

33

96

2–Φ4.3

10.5

40

48

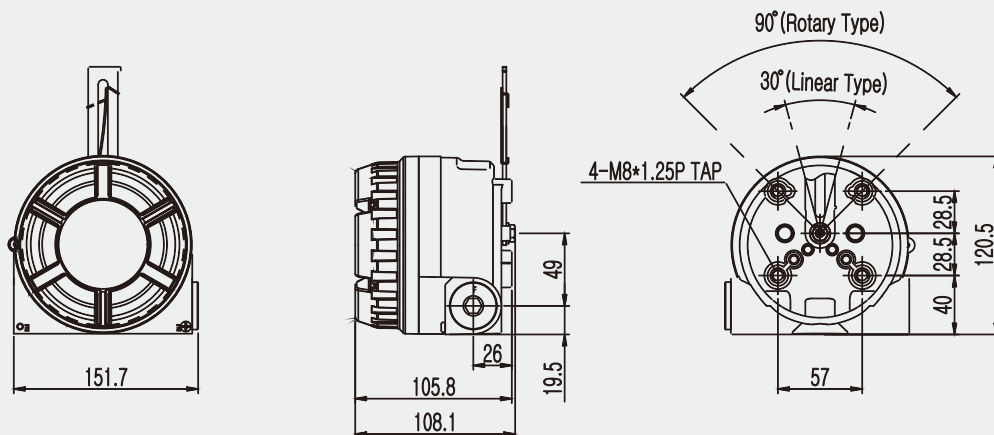35

30.5

20

27
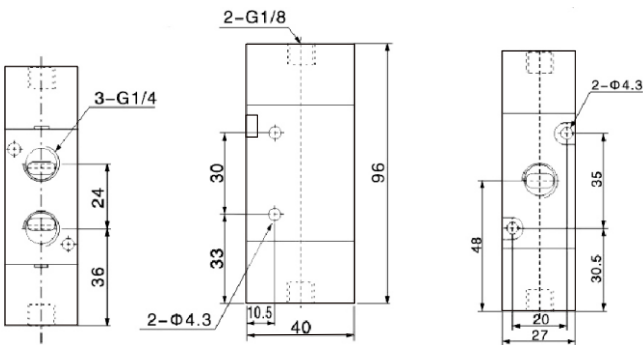
MTR-11 Series Position Transmitter

MTR-11 series position transmitter senses mechanical position change of stem being on the valve or similar device and converses to current signal of DC4~20mA output.

■ Convenient wiring: 2 wire type.

■ High accuracy and reliability.

■ Simple change for RA v.s. DA action setting.
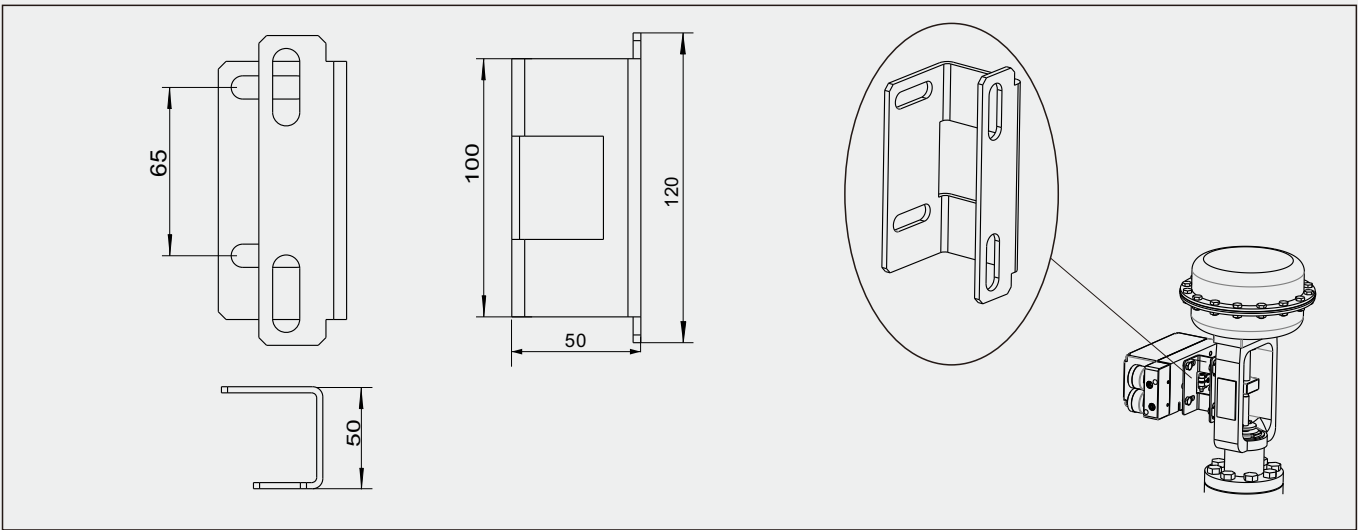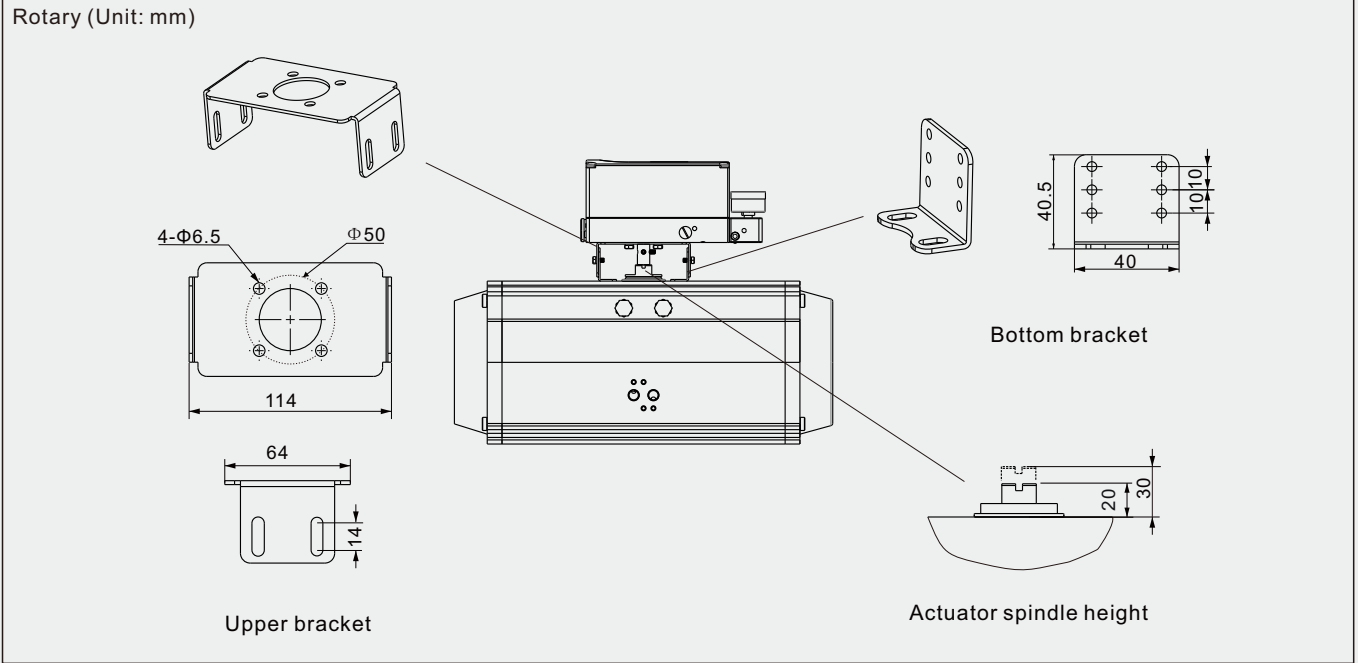
■ Convenient adjustment of zero and span.

Model No.		MTR-11
Input Stroke	Linear	10~150mm
	Rotary	0~90°
Output signal		4~20mADC
Load resistance		Max.880Ω/28VDC
Supply voltage		9~28VDC
Scope of noise		50mV p.p
Power connection		PF3/4(G3/4)
Linearity		±1%F. S.
Hysteresis		±0.2%F.S.
Sensitivity		±0.2%F.S.
Ambient temp.		-20~70℃
Explosion-proof		ExdIICT6
Ingress protection		IP67
Shell material		Aluminum
weight		1.2kg

	1.	2.	3.	4.
MTR-11	L	C	1	L

Stroke Type
Linear —————— L
Rotary —————— R

Explosion-proof
ExdIICT6 ———————————— C

Level Type

Linear
10~40mm ————————————— 1
20~70mm ————————————— 2
50~100mm ———————————— 3
100~150mm ——————————— 4

Rotary
Standard ————————————— 1
NAMUR———————————————— 2

Ambient temp.
-20～70℃ ————————————— S
-40～70℃ ————————————— L

90°(Rotary Type)

30°(Linear Type)

4-M8*1.25P TAP

49

26

19.5

151.7

105.8

108.1

28.5 | 28.5

40 | 28.5

120.5

57

安装附件 Positioner Accessories GA Drawing

MSP-25/32 Bracket

Rotary (Unit: mm)

4-Φ6.5   Φ50

114

64

14

Upper bracket

40.5

40

10 10

Bottom bracket

20

30

Actuator spindle height

65

100

120

50

50

MSP-25/32 Levers

Linear(Standard)

12

L2

L1

20

100 90 80 70 60 50 40 30 20

Unit: mm

反馈杆编号	行程大小	L1	L2
1(标准型)	10~40	40	56
2(标准型)	20~100	80	98
3(标准型)	90~150	85	165

标准反馈杆连接
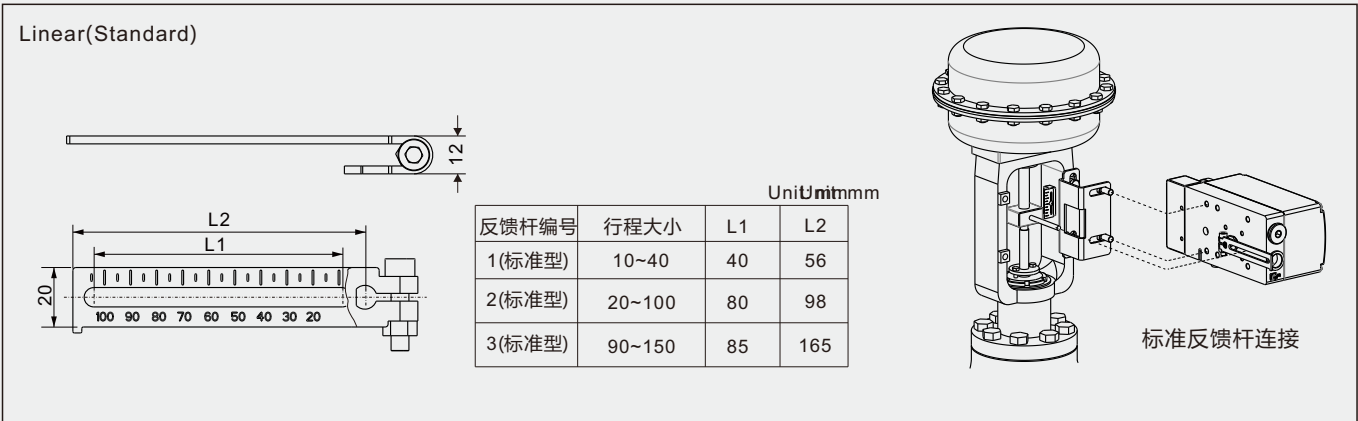
Valve Positioner Accessories GA drawing

MSP-25/32 Bracket

Linear(Adaptor)
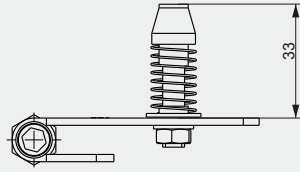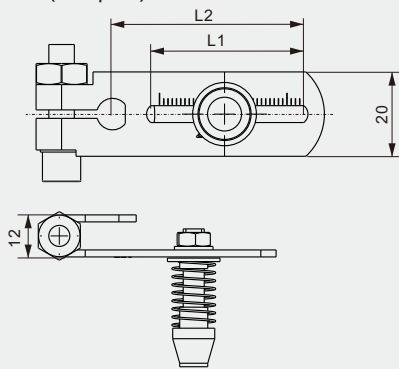
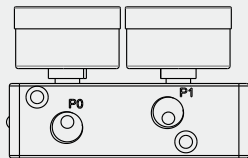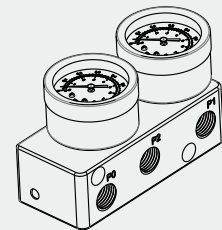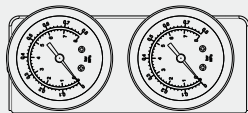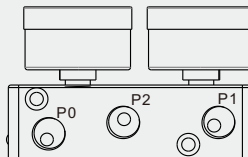| Model No.	Stroke	L1	L2
4(Adaptor)	5~35	25	35
5(Adaptor)	40~130	68	92
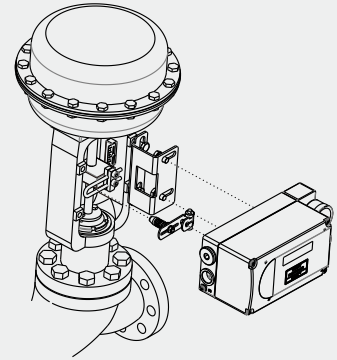
Unit: mm
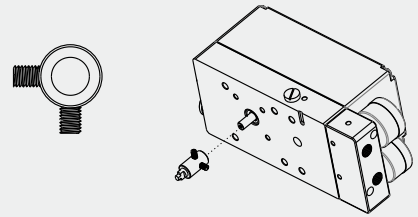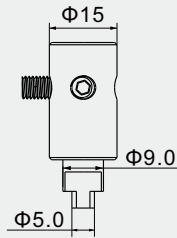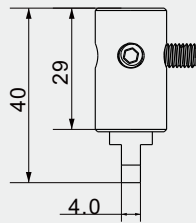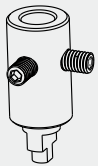
Rotary(Unit: mm)
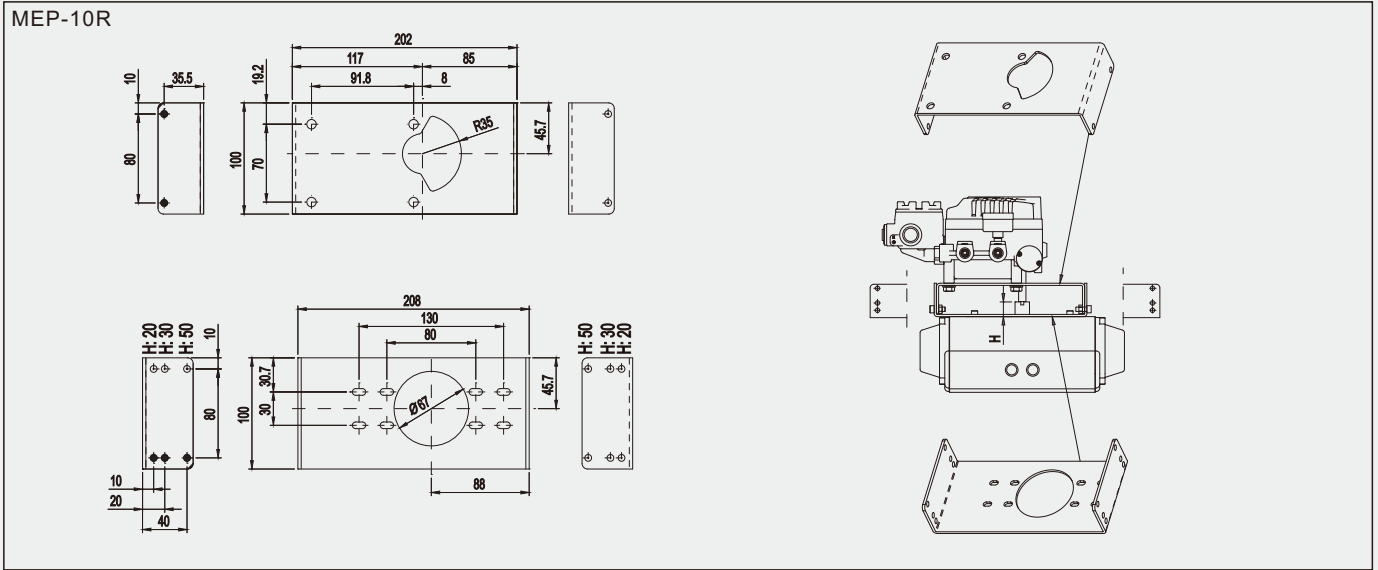
Pressure Gauge Module(MSP-25 only)

(Unit: mm)
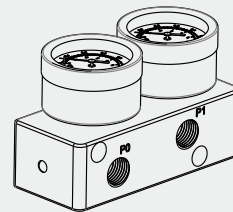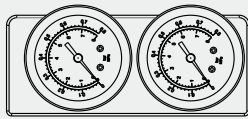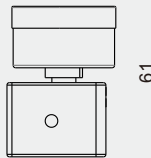
(Unit: mm)

Valve Positioner Accessories GA drawing

MEP-10 Bracket

MEP-10R

MEP-10 Feedback Level

Linear

Type 1, 2, 3

Type 4

Model No.	Stroke	L1	L2	W
1	10~40	121.2	68.2	20
2	30~70	195	120	
3	60~100	277	122	
4	110~150	400		

UNIT : mm

Rotary(Standard)

Model No.	L1	L2	M
1	34	9	M6
2	63	37	
3	34	9	M8
4	63	37	

UNIT : mm

Rotary(NAMUR)

BOTTOM LINE

Model No.	L1	L2
MEP-10R	7	11

UNIT : mm

Service

MORC offers safety, reliability and performance products to our customers. We offer comprehensive services to meet customer demand, which includes pre-sale, after-sale technical support service and field service as well as providing complete valve assembly service.

MORC series cover from assisting on product selection to all stages of the life cycle of our product. It includes simple troubleshooting as well as comprehensive service for entire projects. Our products are designed to perform reliably in many industrial environments. We strive to provide the services our customers need to ensure the plants running smoothly without any disruption. Upgrading and replacement of existing product can be a cost-effective alternative to premier brand product. We assist our customers in modernizing existing installations and replacing the old/obsolete products to minimize cost for customers.

Control Valve Complete Service

MORC has partnered with number of leading valve manufacturer to provide complete valve assembly and calibration service. According to customer requirement, such as valve parts selection, assembly and commissioning of pneumatic control valve, pneumatic on-off valve or electric control valve.

- **Pneumatic regulating valve or proportional control valve**
  Pneumatic control valve or proportional control valve is composed of pneumatic valve ,valve positioner, air filter regulator and other accessories to achieve control of valve opening degree.
- **Pneumatic on-off valve**
  Pneumatic on-off valve is composed of pneumatic valve , pneumatic actuator, solenoid valve, limit switch, air filter regulator and other accessories to achieve fully open and fully close of valve.
- **Electric control valve**
  Electric control valve is a complete set of control valve composed of electric actuator and valve. According to different valve types, such as 90 ° rotary valve, multi-turn valve and linear valve, it can be equipped with rotary electric actuator, multi-turn electric actuator or linear electric actuators for switching or adjustment functions.

Custom labels
We make custom labels for customers who buy in large quantities.

Nameplates
Within in house tag design and CNC engraving machines, we can engrave custom nameplates any information specified by customer.
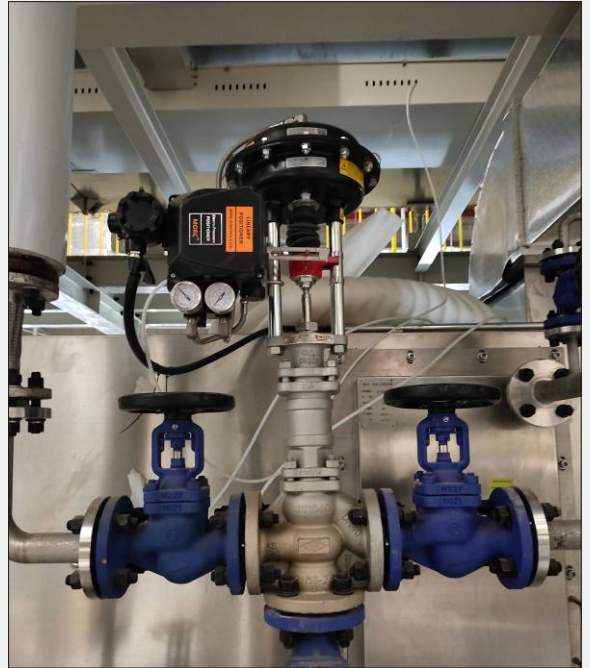
Product Support Service

With more and more MORC products being used in various industries, product support service is vital to ensure the correct selection and implementation of products. If users have any questions, they can contact MORC or their supplier for consultation. Alternatively log onto the MORC company website for downloading supporting documents.

www.morc.com.cn

Pre-sale Service

- Control scheme and product selection.
- Technical consulting.
- Product introduction and technical maintenance training.

After-sale Service

- Installation, calibration and commissioning guidance, technical consultation.
- Phone call or video call remote assistance to solve the problem.
- Repair service, allowing users to send the faulty product to MORC for inspection and repair.
- Replacement parts and upgrade services. Under certain circumstances, MORC can provide spare parts/products to users for direct replacement, users then return faulty parts/products to MORC for repair and upgrade.
- Provide maintenance plan and spare parts plan.

On-site Service to help your operation runs smoothly

- On-site installation, calibration and commissioning training.
- Fault diagnostic and repair.
- Software and hardware upgrade services.

Production Service

- Spare parts and OEM solution.
- Inventory plan.
- Production schedule adjustment to meet customer needs
- Product quality inspection and function test.

On-sale Service.

- Priority support and fast response.
- Identify or replace for alternative solution.
- Provide maintenance advice.

Engineering Service

- Delivers value-added solutions that improve operational performance and increase profitability for its customers.
- Perform system audits to identify operational issues and recommended solutions.
- Engage remotely or on-site to support project planning and design.

Education and Training Service

MORC offers a wide range of education and training programs to help customer and user deepen their understanding of critical equipment and processes. User can submit their requirements and training content to company. MORC can design and deliver tailored training programs on site or in the office.

MORC Quality Assurance

■ Quality is our foundation to long-term existence and success of our company. The quality of our products is the key to achieving customer satisfaction. By listening feedbacks from our customers, we are able to always learn and improve our service and product. Our full suit test equipments, and our product life cycle management ensure material quality for our suppliers, our products meet demand from industrial harsh environment.

■ Quality also means all staff at MORC consider themselves responsible for the quality of our products and service. The continuous improvement process we are convinced that only satisfied customers will do business with us again.

■ All MORC products come with warranty period of 18 months after arrival of goods 12 months after installation of product, whichever comes first.

MORC Social Responsibility

■ The health and safety of MORC staffs is very important, we provide a safe working environment as well as a happy place to be. We also consider it important to contribute and engage positively in local communities and society.

■ MORC is fully committed to reducing its impact on environment by preventing pollution, reducing the consumption of energy, water and waster and recycling.

MORC

®

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Email: info@morc.com.cn

Our vision
Be the world leading brand and successful valve accessories company.
Our Mission
Deliver superior service to our customer and pursue growth through improved and high-quality product;
always strive to exceed our customers' expectations; manage our business with integrity.

General industry
Chemical
Oil & Gas
Pulp & Paper
Food & Pharmaceutical
HVAC & Water system
Petrochemical & Refining
Metals and Mining

MORC can supply not only reliable products to ensure extended service life, but experienced technical
support and unmatched after sales service.