



ABB INSTRUMENTATION

RHA-M/RS-M SERIES INTELLIGENT ELECTRICAL ACTUATORS



ABB 公司

RHA-M/RS-M

系列智能电动执行机构

重庆川仪总厂有限公司执行器记录仪分公司
CHONGQING SICHUAN INSTRUMENT COMPLEX CO.,LTD. ACTUATOR & RECORDER FILIALE



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SURVEY



重庆川仪总厂有限公司重庆川仪四厂是中国四联仪器仪表集团公司（国内规模最大、产品门类最全、系统成套能力最强的综合性自动化仪表制造企业，国家工业500强之一）所属分厂，主要生产工业过程测量和控制系统用记录仪和电动执行机构。长期以来为冶金、化工、石油、电站、国防、科研院所、大专院校提供性能优良、质量可靠、品种齐全的工业用记录仪和实验室用记录仪以及现场控制电动执行机构。我们愿为您提供优质的产品，周到的服务、诚实的信誉。

我厂建成投产后，生产逐年发展。1984年引进了日本横河(YOKO-GAWA)的模拟记录仪技术，经消化吸收、移植应用，使工厂插上了腾飞的翅膀。1992年又引进了横河公司智能记录仪技术，使技术水平更上一层楼。1994年，ER100系列记录仪返销日本，这是我国仪器仪表行业引进国外整机技术经国产化后返销的首例，我们随后开发的AR系列彩色无纸记录仪也深受国内用户的青睐。1994年引进德国H&B哈特曼·布朗公司的RHA/RS系列电动执行机构，扩大了我厂产品的适应领域，接着开发出的新一代智能电动执行机构，以其可靠的质量，合适的价格赢得了客户的厚爱。现在正开发质量更高，价格更廉的产品，我们愿极力满足客户的需求，和客户一起携手共创美好明天。

Chongqing Sichuan Instrument Complex. Co.,Ltd. Factory No.4 is a subcompany of China silian instrument group Ltd.,Co. which is the strongest integrated automatic instruments manufacturer in reference with its scale, product catalogue and system engineering capacity, is also one of the largest national 500 industrial enterprises. Chongqing Sichuan Instrument Complex. Co.,Ltd. Factory No.4 manufactures records and actuators for use in industrial-process measurement and control systems. It has provided lots of high quality productions for metallurgy, chemical, petrol and electrical industries. We offer better products, perfect service and good credit for all users.

Our factory has achieved great developments since it set up. In 1984,we introduced analog recorder technology from YOKOGAWA. We not only digested and mastered the technology, but also developed it. Now we have developed AR series color paperless recorders. We also introduced RHA/RS series electrical actuators from H&B company in 1994.Now we also have developed the new intelligent actuator. More and more high quality and low price actuators will be developed. We do our best to increase our products catalogue to meet more



信心实力为您创造更多的效益

Our confidence and strength should create
more benefit for you without fail

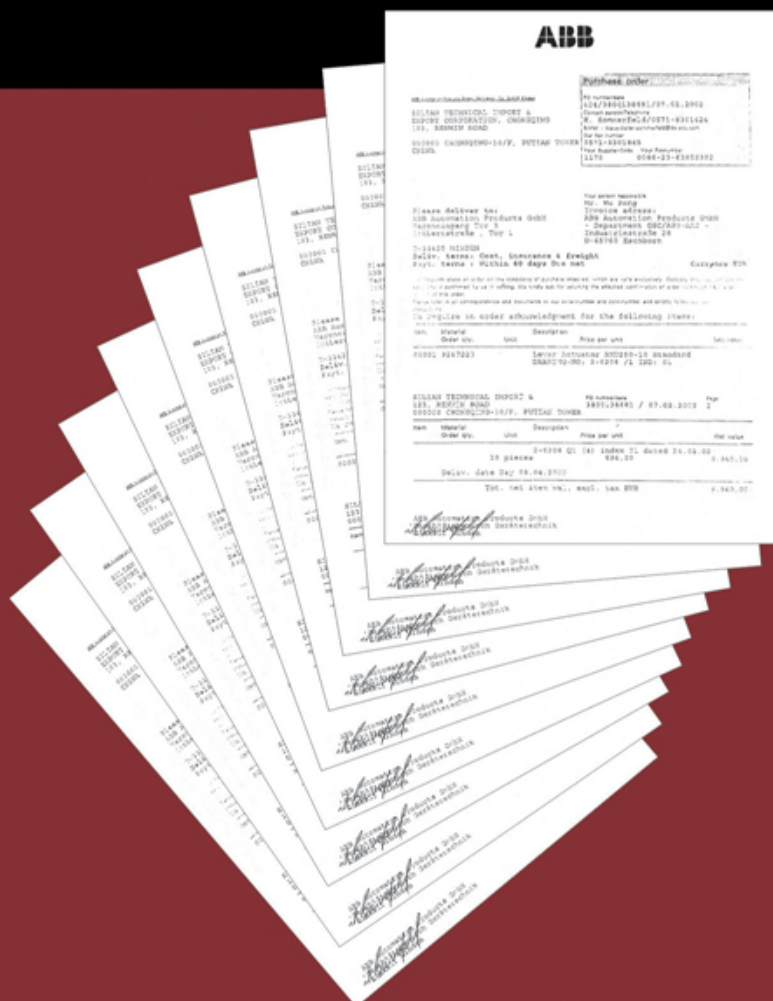
GERMANY





大量 返 销 ABB

SELL RETURN ABB LARGELY



中德双方订货合同
Order contract between
China and Germany



RHA-M/RS-M系列新一代智能电动执行机构是我们员工经过艰苦不懈的努力，潜心开发的高可靠性、高品质的电动执行机构，它以优异的性能，卓越的品质，简便的操作遥遥领先于国内市场，和国际市场上高档执行机构相媲美，同时它又以优惠的价格取胜，赢得国内国际市场的青睐。

RHA-M/RS-M series new generation intelligent electrical actuators are high reliability and high quality electrical actuators designed by our engineers with their great concentration and hardly efforts. They keep ahead a long time in internal market because of their excellent performance, preeminent quality and easiest operation, they can compare beauty with top grade actuators in international market, and at the same time they also get victory with their preferential price, so they are be well-thought-of internal and international market.

重庆川仪总厂有限公司在长期与国际高知名度的ABB公司合作的过程中，通过改进技术，革新理念，开拓创新来不断的提高自己。采取“引进来，走出去”战略，不但成功的吸收了ABB公司的RHA、RS系列电动执行机构技术，同时更上一层楼，开发出更高端、更优质的产品，并返销国际市场。我们会始终本着客户的要求，开发出更卓越、更物美价廉的产品，开拓更广阔的国内国际市场，方便更多的客户。

During the long term cooperation with world well-known ABB company, Chongqing Sichuan instrument complex Ltd.,Co. bend themselves to improve constantly by ameliorating technology, reforming notion, exploiting and inaugurating. We not only have absorbed the technology of RHA、RS series electrical actuators of ABB company, but also have designed more advanced and higher grade products, and have sold to international market successfully. We will pay attention to customer's needs all the time, try our best to design more excellent and less expensive products, extend internal and international market, supply advantage for more and more customers.



应用篇 Application section

我公司研发的新一代RHA-M/RS-M智能电动执行机构不仅具有高效率、高精度、高可靠性，同时智能化，操作方便化，适用MODBUS、PROFIBUS-DP现场总线通信，与计算机连接后，可方便及时地从远端对控制对象进行操作。该产品广泛应用于电力、冶金、石油、化工、供热供水系统及污水处理等系统，对阀门进行精确可靠的开关控制和调节，达到用户满意的效果。我公司生产的智能电动执行机构规格齐全，角行程执行机构的额定力矩从125N.m到8000N.m，直行程执行机构的额定推力从4kN到50kN，不仅可用于中小型控制系统，而且能满足大型控制系统的要求，并使整个系统协调，简化。川仪以领先的技术，用户在川仪心中的服务，愿与广大用户携手共创美好未来。

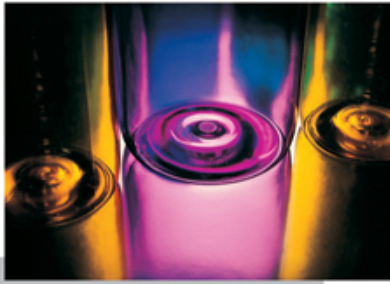
RHA-M/RS-M series new generation intelligent electrical actuators have high efficiency, high precision and high reliability, operation is also very convenient. They apply MODBUS、PROFIBUS-DP fieldbus communication, can remote control the object timely after be connected to the computer. They are widely applied to electric power, metallurgy, oil industry, chemical industry, heat supply or water supply system and sewage treatment system etc. .Opening/closing control or continuous control the valves accurately and reliably, achieve satisfactory positioning effect of which customers expected. The specification of the intelligent electrical actuators produced by our factory is all ready, the rated positioning torque of lever actuators is from 125N.m to 8000N.m, the rated positioning force of linear actuators is from 4kN to 50kN, they not only can use to pint-sized and medium-sized control system, but also can use to large-sized control system, and make the complete control system unisonous and simple. We are very glad to service for our consumers with all our hearts, let's make great prospects hand in hand.





新一代智能电动执行机构

New generation intelligent electrical actuators



化工 Chemical industry

电厂 Power plant



污水处理系统 Water treatment system



供水系统 Water supply system



冶金 Metallurgy



新一代智能电动执行机构

New generation intelligent
electrical actuators

特征篇

Characteristic section

特点：

Characteristic

- 智能式电子一体化、适用于多种控制模式，既可接受连续0/4~20 mA d.c.控制信号，也可接受24 V d.c.和220 V a.c.开关量信号，还可接受总线控制信号。
Intelligent electron integrative structure, be the same with various control modes, can accept continuous 0/4~20mA control signal, or 24V d.c. and 220 V a.c. binary signal, or fieldbus control signal.
- 使用本地操作按钮调试方便，无须开盖。
Debugging is very convenient without opening the cover by using the local operation buttons.
- 点阵液晶显示器，中文英文菜单显示，人机界面更为直观,操作方便。
Matrix LCD display menu display in Chinese or English, man-machine interface is more intuitionistic, and operation is more convenient.
- 独有的动态平衡控制技术。
Particular dynamic balance control technology.
- S9连续工作模式、抗堵转电机。
S9 continuous running mode, the motor is "stallproof".
- 采用磁性非接触性开关，防水性能好，可靠性高。
Using magnetism non-contact switch, good waterproof capability and high reliability.

功能概况：

Function survey

- 0~20mA d.c.、4~20mA d.c.连续控制
0~20 mA d.c.、4~20 mA d.c. continuous control
- 两线控制：控制方式为非常简单的两根导线控制，可将程序设定为两根导线断开，执行机构向开方向运行；两根导线短接，执行机构向关方向运行。

Two-wire-control: Two-wire-control is very simple control mode, the program can be set as: actuator run to open direction in case of disconnection the two wires and actuator run to close direction in case of short connection the two wires.

- 0/4~20 mA d.c.三态控制：用户可将电流输入划分为开、关、停三个区域，每个区域均可方便地用程序进行调整。

0/4~20 mA d.c. three status control: consumer can divide the current into open, close and stop segment, each segment can be adjusted by program expediently.

- “开”、“关”、“停”和“紧急”4个24V d.c.开关量输入控制。

"open", "close", "stop" and "urgency" four 24V d.c. binary input control.

- MODBUS、PROFIBUS总线“开”、“关”、“停”控制。

"open", "close", "stop" control by MODBUS、PROFIBUS bus.

- MODBUS、PROFIBUS总线连续控制。

Continuous control by MODBUS、PROFIBUS bus.

- 本地操作按钮：可进行“开”、“关”、“停”控制，“本地/远程”切换，参数设置调整。

Local operation buttons: have "open", "close", "stop" control function, "local/remote" switch function, parameter setting and adjusting function.

- 红外遥控：可直接用红外遥控器输入数据进行阀位控制。

Infrared remote control: input data with infrared controller indirectly to control the position of valve.

主要技术指标：

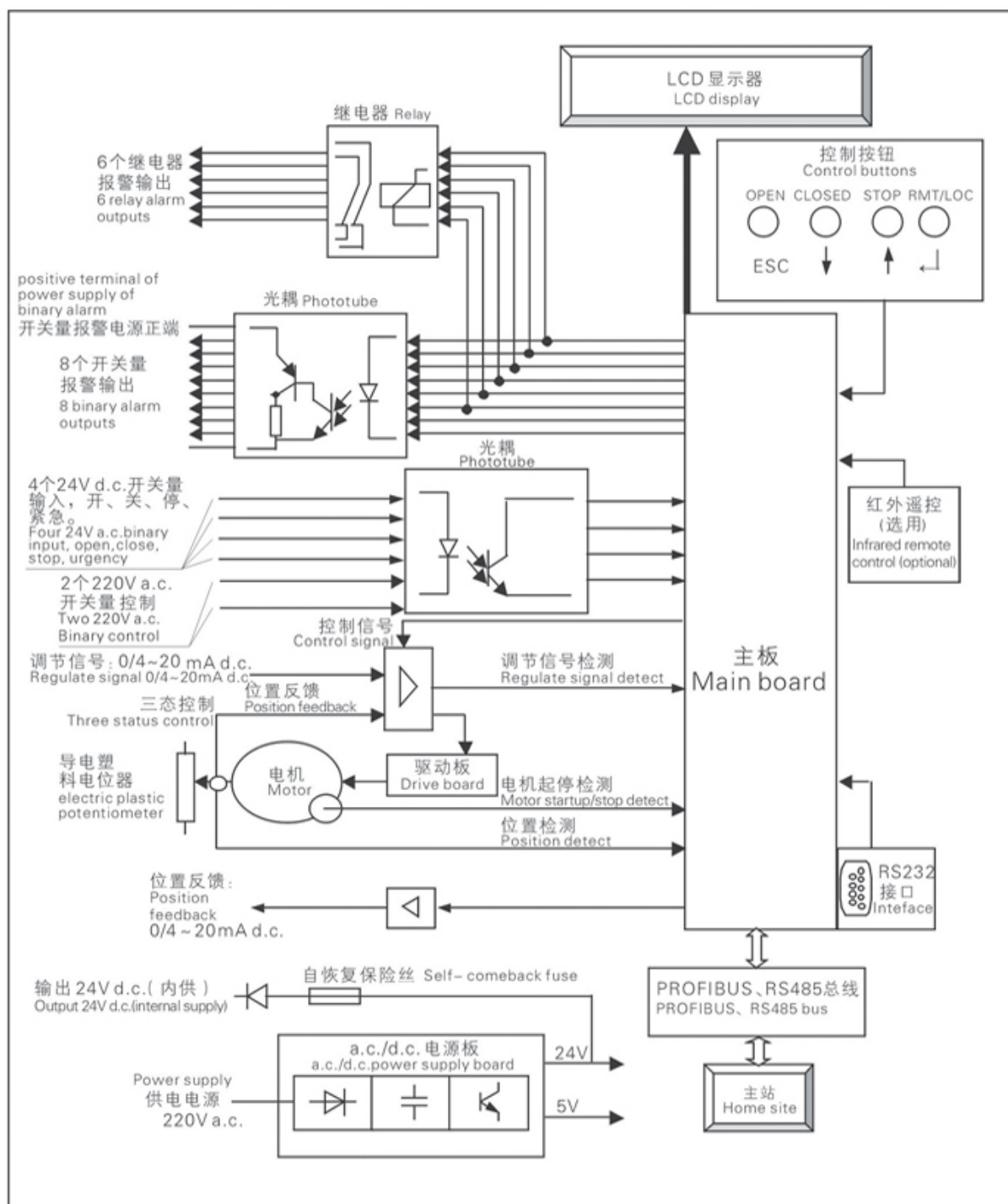
Main technical indexes

基本误差限 Base error limit	$\pm 1\%$
回差 Hysteresis	$\leq 1\%$
死区 Dead band	0.5%~9.9%可调 0.5%~9.9% Adjustable
阻尼特性 Damping characteristic	无振荡 No damping
环境温度 Ambient temperature	-20℃~+70℃
相对湿度 Relative humidity	$\leq 95\%$ (年平均值Annual mean)
防护等级 Degree of protection	IP66
供电电源 Power supply	单相220V a.c. Single-phase 220V a.c.
输入信号 Input signal	0/4~20mA d.c., 开关信号: (+24V d.c.或220V a.c.) 0/4~20mA d.c., binary signal: (+24V d.c. or 220V a.c.)
反馈输出信号 Feedback output signal	0/4~20mA d.c.模拟信号, 四组位置开关信号 0/4~20mA d.c. analogue signal, four groups of binary signal



Electric principle fig.

电气原理框图





P parameter setting menu display

参数设置菜单显示

(1) Close Adj
C 63.128

全开位置调整，可进行粗调或细调。
Complete close position coarse adjusting or fine adjusting.

(2) Open Adj
C 63.128

全开位置调整，可进行粗调或细调。
Complete open position coarse adjusting or fine adjusting.

(3) Dump Adj
Val.128 Dtr

阻尼调整，调整执行机构柔性定位时间。
Damping adjusting, adjust the flexible positioning time of actuator.

(5) Control Mod
Con. 4~20mA

控制模式选择：
1、0/4~20mA d.c.电流控制。
2、两线控制。
3、三态控制。
4、开关量控制。
5、总线控制。
Control mode selection:
1.0/4~20mA d.c. current control.
2.Two-wire-control.
3.Three status control.
4.Binary control.
5.Bus control.

(6) Feedback pos.
0~20mA

0/4~20mA d.c.位置反馈电流信号。
0/4~20mA d.c. position feedback current signal.

(7) Alarm Output
1. Ready 1

8路报警输出，每路有14种选择，报警电平可设定。
8 alarm outputs, each has 14 selections, alarm level can be set.

(8) Position Alarm
1. 20%

4个位置报警设置。
4 position alarms setting.

(9) Emergency Pos
50%

24V d.c.开关量输入中，紧急位置的设定。
24V d.c. Binary is inputting, urgency position setting.

(10) Break Pos
Keep Pos

信号断线，执行机构可设定为保持原位，或运行到指定位置。
Set the actuator to keep position or run to specified position when signal is broken.

(11) Dead Area Adj
0.5%

死区调整，调整范围0.5%~9.9%。
Dead band adjusting, adjustable range:0.5%~9.9%

(12) Maint Per.
Oper.T Start. 75

维护极限，设定电机启动次数，和运行时间。
Maintenance limit, set the start times and run time of motor.

(13) Bus Address
Channel:

MODBUS、PROFIBUS总线地址设定。
MODBUS、PROFIBUS bus address setting.

(14) Comm Rate.
96000 BP

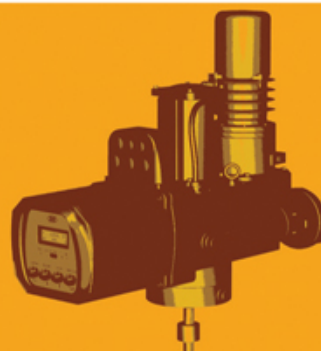
MODBUS通信波特率设定
MODBUS communication baud rate setting

(15) Comm. Type
RTU 8,N,2

MODBUS通信格式设定。
MODBUS communication format setting

(16) Language
English

中/英文语言切换
Chinese/English language switching



Structure section

结构篇

喷漆 Painting

采用国际先进工艺，以独特的底漆、中间层和面漆喷涂技术，实现了漆层的三防要求（防酸碱、防盐雾、防湿）。喷漆质量达到国际先进水平，倍受世界知名企业ABB公司的赞誉。

Introduce international advanced spray-painting technics, apply inimitable prime, middle and surface paint, realize the three-resist requirements (resist acid-alkali, salt-mist and humidity) of coating. The quality of painting has reached international advanced level, has got recognition from world well known enterprise ABB company.

结构 Structure

采用高效率的经典行星差动传动结构，传动机构中的齿轮是经精心选材、精加工而成的，直行程执行机构还采用高效率高精度的滚珠丝杆，使整机的传动效率远远高于国内同类产品。

Adopt high efficiency typical planetary differential gear train structure, gears are finish machining with well-chosen material. Linear actuators also adopt high efficiency and high precision ball-bearing screws, so the transmission efficiency of complete actuator goes beyond internal same product by a long way.

选料 Material

精心选料：关键元器件和关键零件都是采用国外进口，其余元器件和零件也是选择有实力的供货商，以保证每一个元器件和零件的可靠性和寿命，从而保证整台执行机构的可靠性和寿命，让客户用得放心，用得满意。

Well-chosen material: pivotal components and pivotal parts are all imports, the suppliers of other components and parts all have strength, so the reliability and life of each components and parts can be ensured, therefore the reliability and life of complete actuator can be ensured, you can feel very reassurance and satisfaction if

检验 Inspection

按ISO 9001:2000进行过程质量控制，从零件、部件到成品均经过层层检验和严格把关，不合格品决不出厂。真正使用户用得满意放心。

Perform process quality control according to ISO9001:2000, inspection has been done strictly from parts, assembly to finished product, only eligible products can leave factory, you can authentically feel very reassurance and satisfaction if you use our actuators.



机械原理: THEORY OF MACHINES

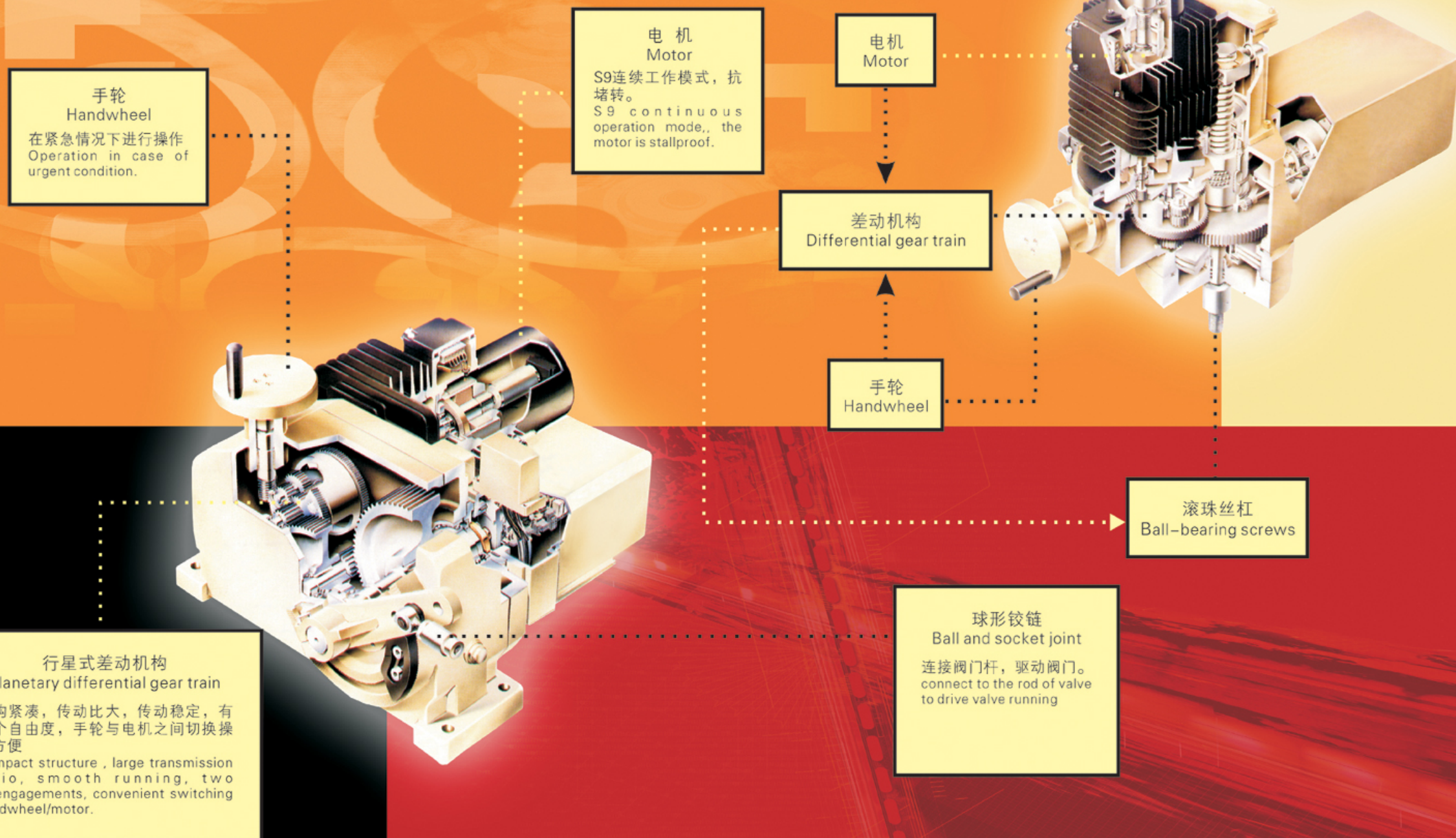
执行机构工作原理 Operation theory of actuators

——（电机驱动）电机将电能转化成转动的机械能，传动至行星差动机构的第一级齿轮，然后通过行星差动机构进行大减速比的降速，再传至减速器其它级齿轮。具有高效率和高精度的特征。

——(motor driving) the motor transform the electrical energy into rotational mechanical energy, drive the first stage gear of planetary differential gear train, then speed-down with large reduce ratio via planetary differential gear train, and transfer to other stage gears of reducers. This transmission has high efficiency and high precision.

——（手轮驱动）由于行星差动机构有两个自由度，在紧急情况或无电源情况下，电机将另一自由度锁死。通过手轮转动，驱动差动机构，然后传至其他级齿轮或丝杠，保证系统的安全。传动比较大，手轮可以轻松转动，而且手轮驱动和电机驱动之间的切换方便快捷。

——(handwheel driving) because there are two disengagements on the planetary differential gear train, in case of urgency or no power supply, the motor will lock another disengagement. By turning the handwheel, drive the differential gear train, then transfer to other stage gears or ball-bearing screws, assure the safety of system. The transmission ratio is large, so the handwheel can be turned easily, furthermore the switch between handwheel driving and motor driving is convenient and speedy.



Software section 软件篇



PROFIBUS DP总线接口

PROFIBUS Bus interface

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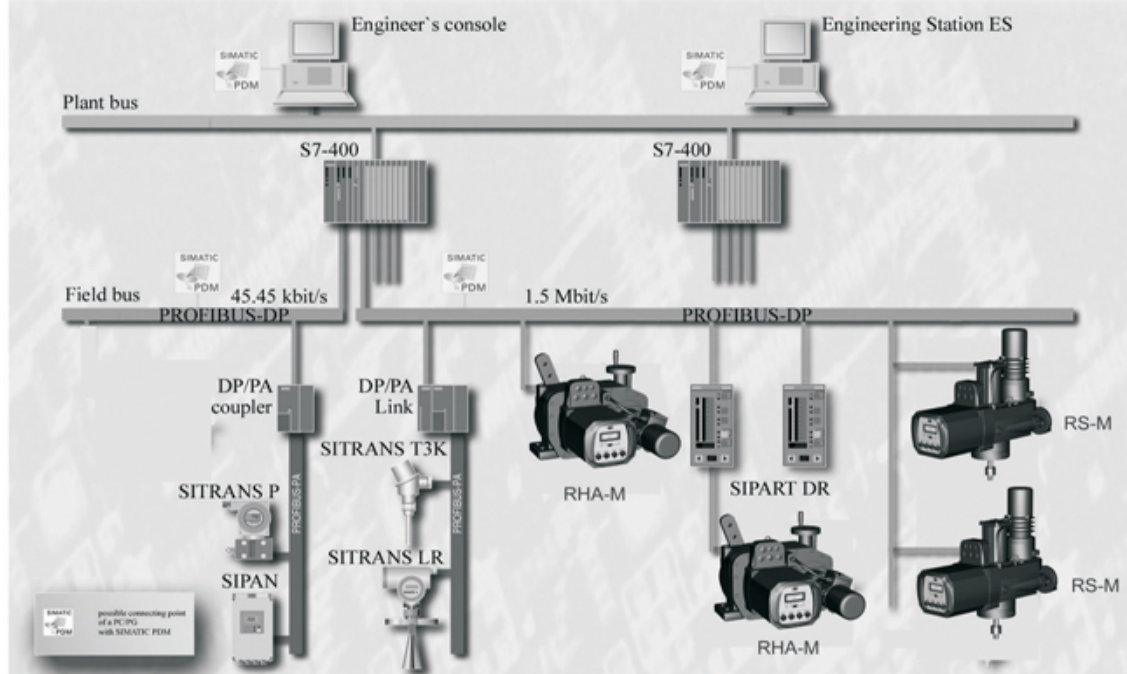
现场仪表必须和控制系统连接起来才能发挥作用。集成在一个完整的过程控制系统中的仪表彼此之间还需要进行通信。如采用传统的控制技术，那么在现场仪表和控制系统之间需要很多输入和输出信号，从而需要大量的电缆和I/O模块。如采用标准的现场总线技术（如PROFIBUS DP），那么可省去大量耗时、费力且容易出错的接线工作。并且，现场总线还可以对执行机构进行远距离的参数设置和监控。经过严格的测试，RHA-M/RS-M已通过PROFIBUS用户组织（PNO）的认证。

Field instrument can bring into play only when it is connected to control system, the instruments integrated in one complete process control system need communicate with each other. If adopt traditional control technology, there need a lot of input and output signals between field instruments and control system, thereby there need a lot of cables and I/O modules. If adopt standard fieldbus technology (e.g. PROFIBUS DP), you can leave out a lot of time-consuming, laborious and fallible connection task. Furthermore, you can remote set parameters and monitor the actuator per field bus. RHA-M/RS-M have got the certificate of PROFIBUS user organization(PNO) after been tested strictly.

优点 Excellence

- 可省去大量耗时、费钱的接线工作
- 可进行远距离参数设置和故障自诊断
- 可提供全方位的技术服务
- Leave out a lot of time-consuming, costly connection task
- Remote set parameters, failure self-diagnosis
- Supply circumspect technical service



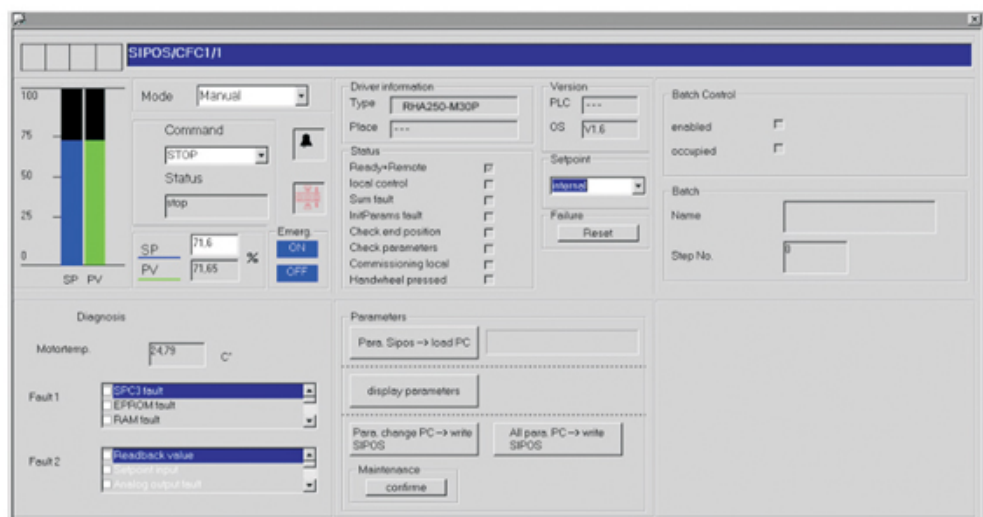


执行机构的参数可以通过 PROFIBUS的周期服务进行读和写。
The parameters of actuator can read/write with periodic service of PROFIBUS.

标准的总线接口 STANDARD BUS INTERFACE

可实现与 Siemens SIMATIC PCS7 过程控制系统的通信。通过SIMATIC PCS7-400，可提供友好的组态和操作界面。总线节点数为126个,通信速率从9600bit/s~12Mbit/s。

Can communicate with Siemens SIMATIC PCS7 process control system. Can supply friendly configuration and operation interface through SIMATIC PCS7-400. Have 126 bus nodes, communication rate from 9600bit/s to 12Mbit/s.



SIMATIC PCS7 操作界面
SIMATIC PCS7 Operation interface

MODBUS总线接口 MODBUS Bus interface

采用MODBUS通讯协议(RTU格式)，可以通过PC机方便的对执行机构进行编程设置，设定执行机构动作，使之满足系统的控制要求。

Adopt MODBUS communication protocol (RTU format), you can set the operation status of actuator by writing program on PC, so let the actuator meet the requirements of control system.

通讯速率从4.8kbit/s~38.4kbit/s。

Communication rate is from 4.8kbit/s to 38.4kbit/s.



当操作者想在本地操作，但又不能靠近执行机构，便可使用红外遥控器。它可以直接输入阀门位置进行阀位控制。

有效距离3米,必须正对红外接收窗口。

When the operator want to local operate, but can not approach the actuator, he can use the infrared remote controller. It can input the position of valve directly so to control the position of valve.

The effective distance is 3m, and you must aim at the infrared receiving

72芯矩形连接器说明

Explanation of rectangular plug 72-pole

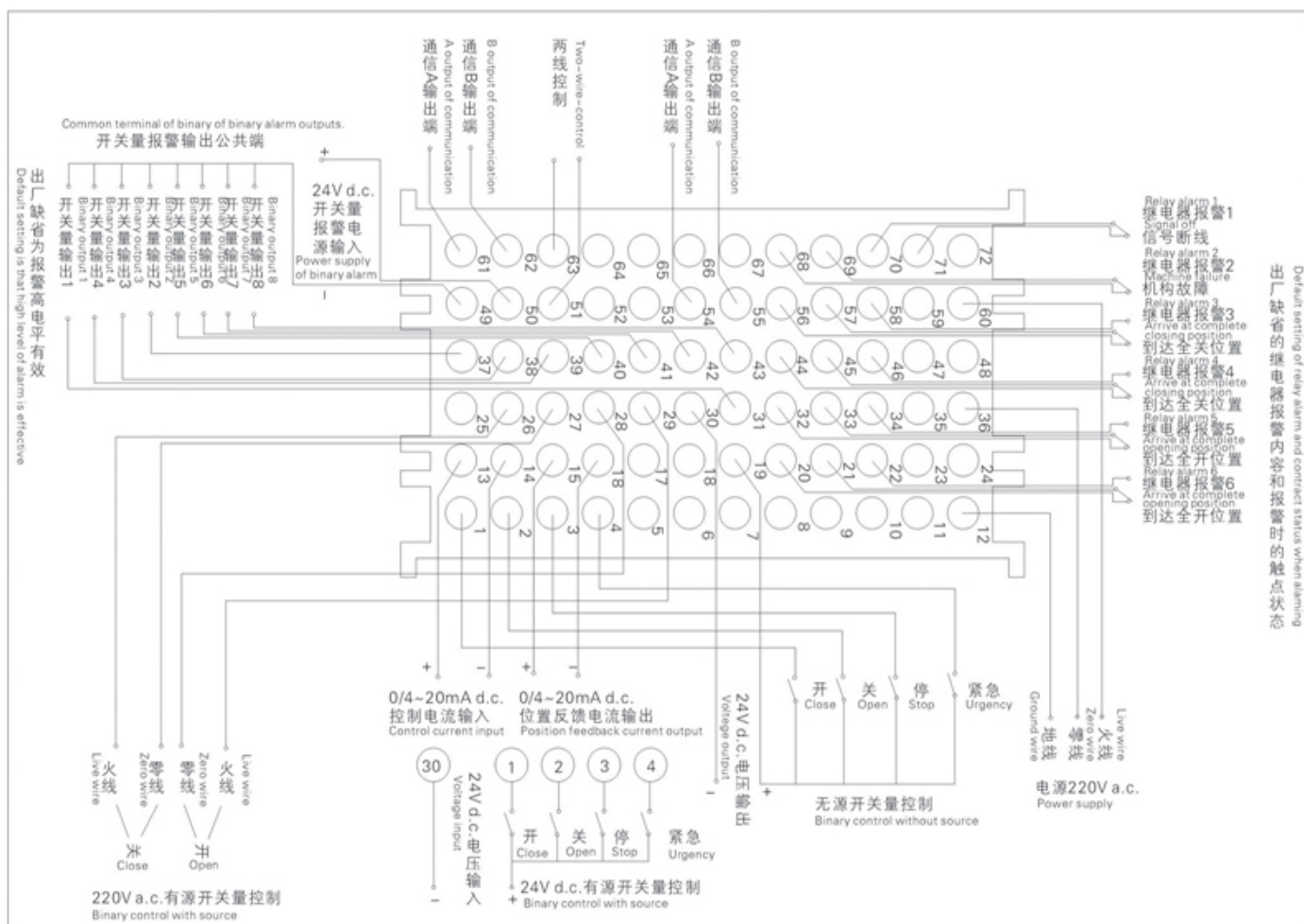
端子编号 Terminal No	说明 Explanation
1	24 Vd.c.开关量输入1正端 (开) Positive terminal of 24 V d.c. binary input 1 (open)
2	24 Vd.c.开关量输入2正端 (关) Positive terminal of 24 V d.c. binary input 2 (close)
3	24 Vd.c.开关量输入3正端 (停) Positive terminal of 24 V d.c. binary input 3 (stop)
4	24 Vd.c.开关量输入4正端 (紧急) Positive terminal of 24 V d.c. binary input 4 (urgency)
13	输入电流正端 Positive terminal of input current
14	输入电流负端 Negative terminal of input current
15	位置反馈电流正端 Positive terminal of position feedback current
16	位置反馈电流负端 Negative terminal of position feedback current
19	24 Vd.c.输出正端 Positive terminal of 24 V d.c. output
25	24 Vd.c.输出正端 Positive terminal of 24 V d.c. output
26	220 Va.c.开关量输入 (关) 220 V a.c. binary input (close)
27	220 Va.c.开关量输入 (公共) 220 V a.c. binary input (common)
28	220 V a.c.开关量输入 (公共) 220 V a.c. binary input (common)
29	220 V a.c.开关量输入 (开) 220 V a.c. binary input (open)
30	24 V d.c.输出负端, 24 Vd.c.开关量输入公共端 Negative terminal of 24 V d.c. output, common terminal of 24 V d.c. binary input
31	开关量报警输出1 Binary alarm output 1
37	开关量报警输出2 Binary alarm output 2
38	开关量报警输出3 Binary alarm output 3
39	开关量报警输出4 Binary alarm output 4
40	开关量报警输出5 Binary alarm output 5
41	开关量报警输出6 Binary alarm output 6

端子编号 Terminal No	说明 Explanation
42	开关量报警输出7 Binary alarm output 7
43	开关量报警输出8 Binary alarm output 8
49	开关量报警电源负端(外供) Negative terminal of external power supply of binary alarm
50	开关量报警电源正端(外供) Positive terminal of external power supply of binary alarm
51	两线短接端 Short connection terminal of two wires
54	通信A端输入 A input terminal of communication
55	通信B端输入 B input terminal of communication
61	通信A端输出 A output terminal of communication
62	通信B端输出 B output terminal of communication
63	24 Vd.c.输出负端, 24 Vd.c.开关量输入公共端, 两线短接端 Negative terminal of 24 V d.c. output, common terminal of 24 V d.c. binary input, short connection terminal of two wires
12	机壳 (接地线) ground terminal
36	220 Va.c.交流端 (接零线) Zero wire terminal of 220 V a.c.
60	220 Va.c.交流端 (接火线) Live wire terminal of 220 V a.c.
20、21、22	继电器6报警输出, 中点21 Alarm output terminals of relay 6, midpoint is 21
32、33、34	继电器5报警输出, 中点33 Alarm output terminals of relay 5, midpoint is 33
44、45、46	继电器4报警输出, 中点45 Alarm output terminals of relay 4, midpoint is 45
56、57、58	继电器3报警输出, 中点57 Alarm output terminals of relay 3, midpoint is 57
68、69	继电器2报警输出 Alarm output terminals of relay 2
70、71	继电器1报警输出 Alarm output terminals of relay 1



端子接线图

Terminal connection fig.



17

普通进线电缆直径限定为9~13mm，用PG16出线套！

The diameter of general cables is limited to 9~13mm, thread of cable sealing plug is Pg16.

通信用电线直径限定为5~10mm，用PG11出线套！

The diameter of communication use cables is limited to 5~10mm, thread of cable sealing plug is Pg11.

	第1路报警 The first alarm	第2路报警 The second alarm	第3路报警 The third alarm	第4路报警 The fourth alarm	第5路报警 The fifth alarm	第6路报警 The sixth alarm
出线端子号 Terminal No	71 70	69 68	58 57 56	46 45 44	34 33 32	22 21 20
菜单(7)中，当每一路报警设置为“1”，报警时的端子状态。(出厂缺省状态) In menu(7), the status of terminals when each alarm is set to "1" (default setting)						
菜单(7)中，当每一路报警设置为“0”，报警时的端子状态。 In menu(7), the status of terminals when each alarm is set to "0"						



型号规格

MODEL AND SPECIFICATION

RHA-M智能化角行程电动执行机构型号

RHA-M series intelligent lever electrical actuators

型号规格 Model and Specification	额定转矩(N.m) Rated positioning torque(N.m)	驱动手轮转矩(N.m) Handwheel driving torque(N.m)	停转转矩(N.m) Standstill torque (N.m)	全行程时间 (s/90°) Rated positioning time for 90°	重量 (包括杠杆) (Kg) Weight (lever incl.) (Kg)
RHA125-M40	125	2.9	180	40	37
RHA250-M10	250	2.9	361	10	45
RHA250-M30			344	30	39
RHA250-M70			368	70	37
RHA500-M10	500	2.3	733	10	90
RHA500-M60			729	60	78
RHA800-M15	800	2.3	1096	15	90
RHA800-M35			1112	35	82
RHA1250-M35	1250	1.4	1700	35	128
RHA1800-M40	1800	2.7	2400	40	128
RHA2500-M25	2500	2.7	3400	25	240
RHA2500-M45	2500	2.7	3400	45	240
RHA2500-M70	2500	2.7	3400	70	240
RHA4000-M30	4000	4.5	5800	30	270
RHA4000-M70			5750	70	256
RHA6000-M40	6000	4.5	8500	40	445
RHA6000-M60				60	445
RHA8000-M60	8000	4.5	10400	60	445

角行程型号表述

Model statement of lever actuator

RHA□-M□/□

- 无标记 不带通信 No marking, without communication function
- DP 带PROFIBUS DP总线通信 With PROFIBUS DP communication function
- R 带RS485通信 With RS485 communication function
- 全行程时间 (s/90°) Rated positioning time for 90°
- 智能化 Intelligent
- 额定转矩 Rated positioning torque(N.m)
- 角行程 Angle stroke actuator

RS-M智能化直行程电动执行机构型号

RS-M series intelligent linear electrical actuators

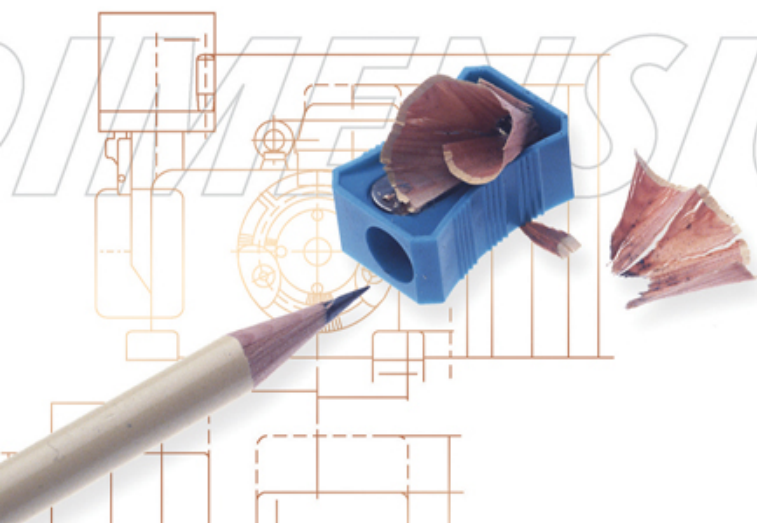
型号规格 Model and specification	配用电机 Motor type	额定推 力 (KN) Rated positioning force (KN)	行程 (mm) stroke (mm)	定位速度 (mm/s) Rated positioning speed(mm/s)	输出额定推 力时的手轮 转矩 (Nm) Handwheel torque when output rated force (Nm)	输出轴允许 外部转矩 连续/短时 (Nm) Outshaft allowable external torque continuous/short time (Nm)	重量(kg) Weight (kg)
RS10-M1.3	M163L/LT	10	Min0~25/max0~50 Min0~50/max0~100 Min0~100/max0~300	1.3	2	40/80	57/82
RS10-M5.0	M753L/LT			5.0			65/90
RS20-M1.5	M403L/LT	20		1.5	4		61/86
RS20-M4.0	M1203L/LT			4.0			69/94
RS50-M1.5			50	Min0~30/max0~60 Min0~60/max0~120 Min0~120/max0~300	1.5	4.6	120/240

直行程型号表述

Model statement of linear actuator



DIMENSIONAL

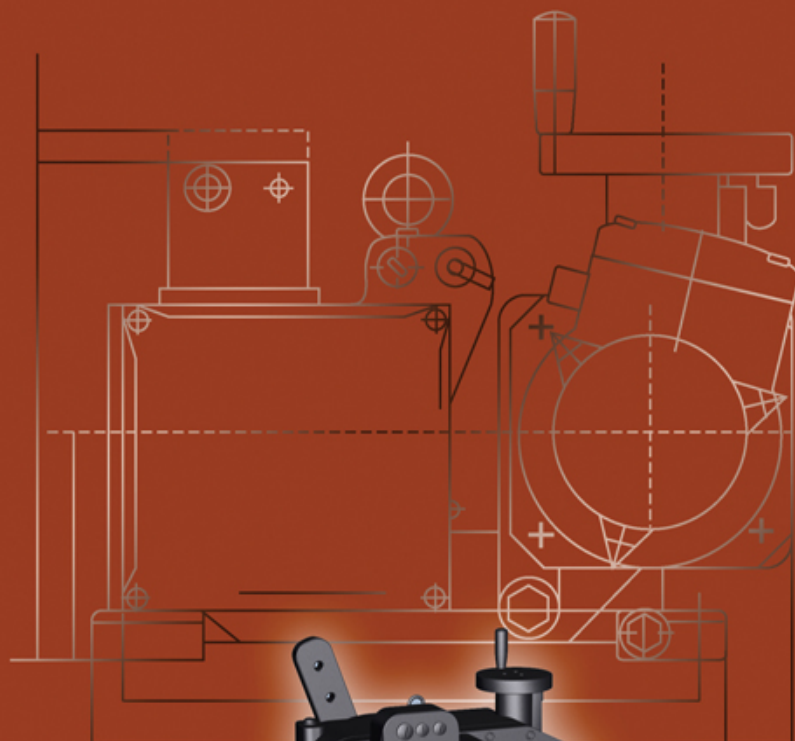


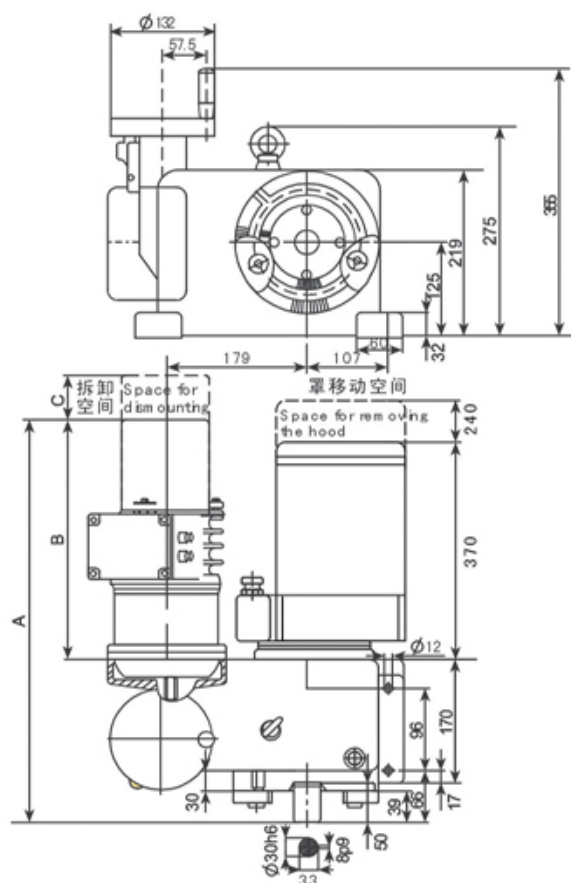
安 装

DIMENSIONAL DRAWING

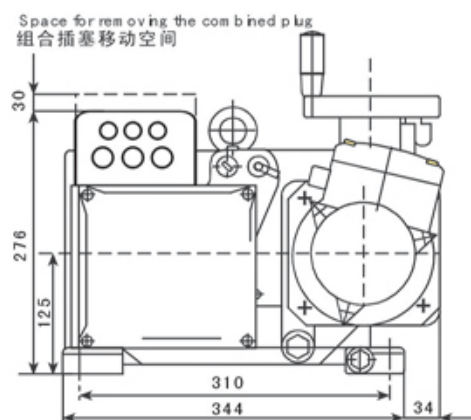
尺 寸

DRAWING

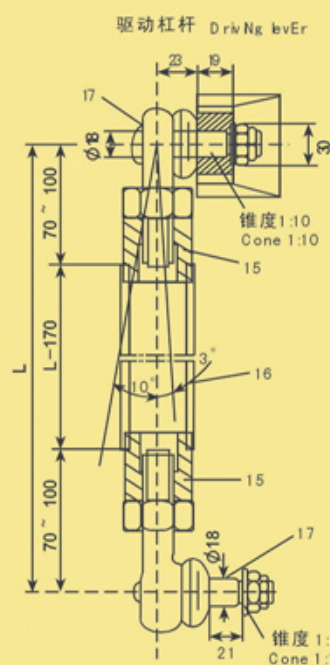




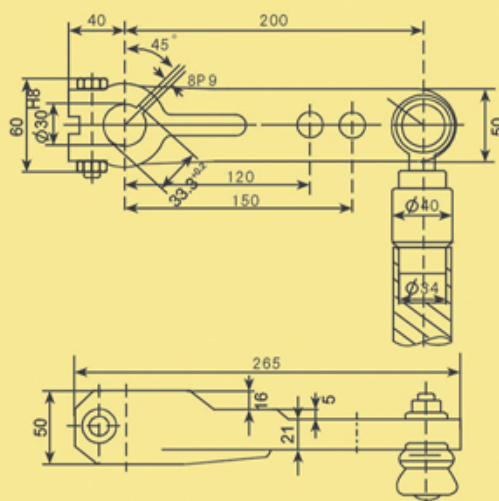
执行机构 型号 Actuator Type	尺寸 Dimension (mm)		
	A	B	C
RHA125-M40	515	291	120
RHA250-M10	537	319	120
RHA250-M30	515	291	120
RHA250-M80	515	291	120

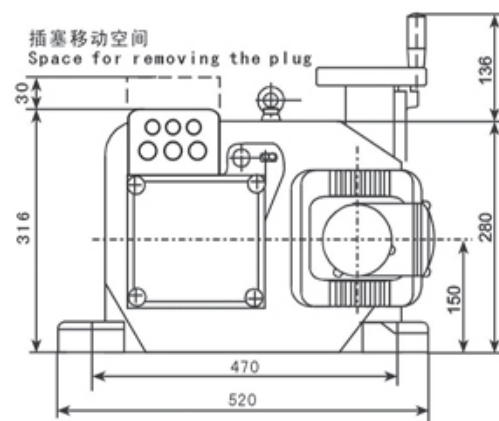


DIMENSIONAL DRAWING



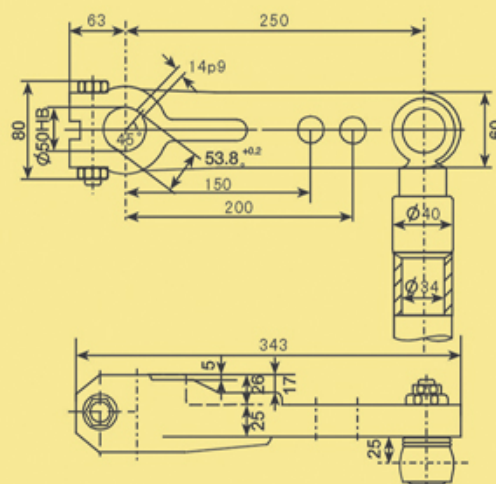
15. 1 1/4 英寸管道的焊套。
Welding bushes for 1 1/4" pipe
16. 1 1/4 英寸的空心管 (符合 DIN2440) 具体长度尺寸 L 根据现场需要定, 连接管外径 × 壁厚: $\phi 40 \times 3$ 或 $\phi 42 \times 4$ 。
Spacing tube 1 1/4"; dimension L must be determined on site, outer diameter and thickness of connective pipe is $\phi 40 \times 3$ or $\phi 42 \times 4$.
17. 球形铰链的连接及转角朝执行机构方向最大 3°, 背离执行机构方向最大 10°。
Ball and socket joint, angular deflection:
Pointing towards actuator: max 3°
Pointing away from actuator: max 10°

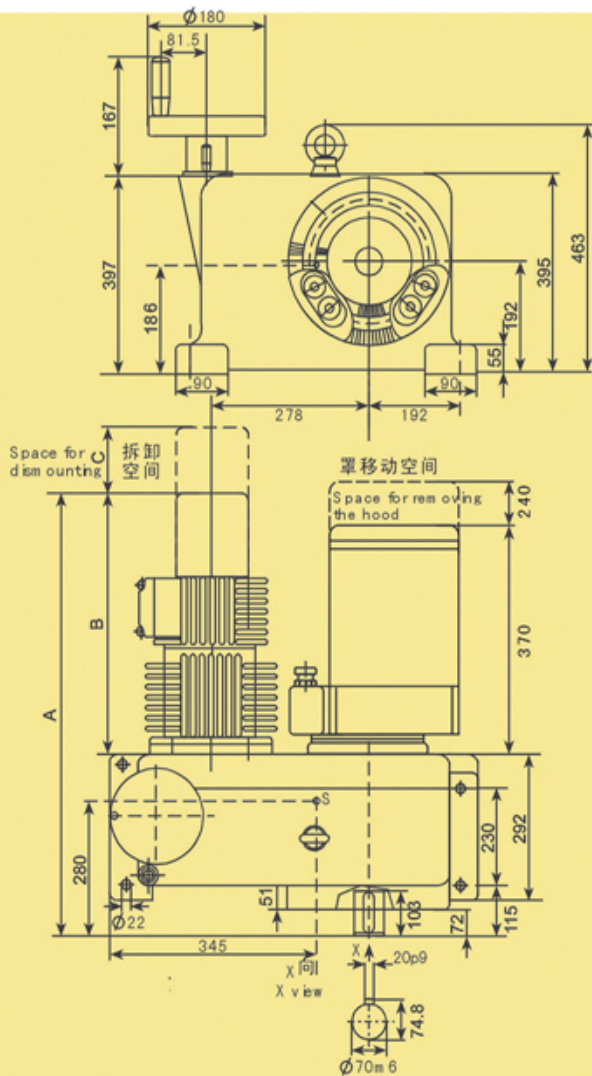




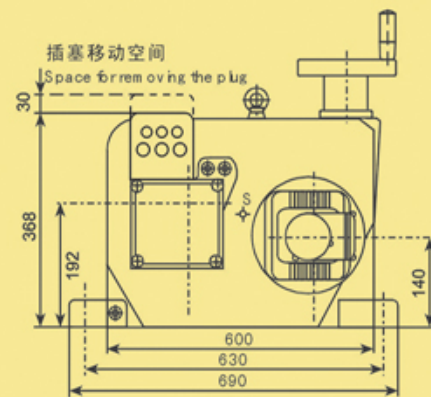
执行机构 型号	尺寸 Dimension (mm)		
Actuator Type	A	B	C
RHA500-M10	635	378	120
RHA500-M60	576	319	120
RHA800-M15	635	378	120
RHA800-M35	576	319	120

Technical drawing of a multi-segmented mechanical shaft assembly. The drawing shows a side view of the shaft with various segments labeled 15, 16, and 17. Dimensions include a total length L, segment lengths of 90, 110, and 200, and a diameter of 22. A detail view of a flange shows a diameter of 99, a width of 70, and a taper of 1:10. A detail view of a nut shows a diameter of 25 and a taper of 1:10.

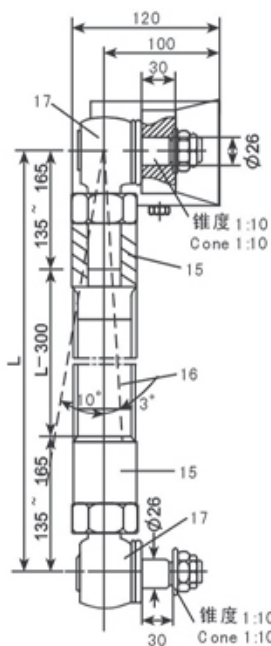




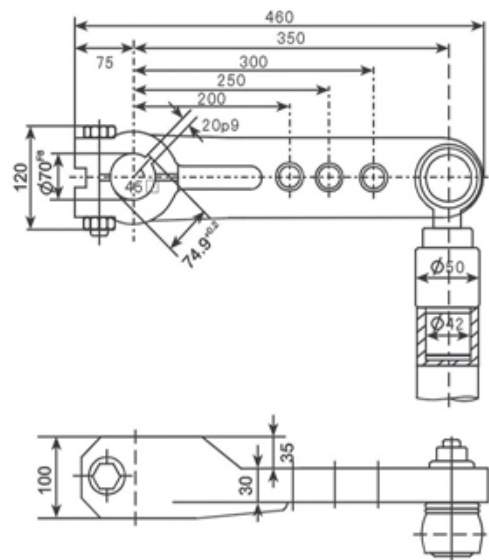
执行机构 型号	尺寸 Dimension (mm)		
Actuator Type	A	B	C
RHA1250-M35	714	348	120
RHA1800-M40	714	348	120
RHA2500-M25	812	446	120
RHA2500-M45	744	378	120
RHA2500-M70	714	348	120



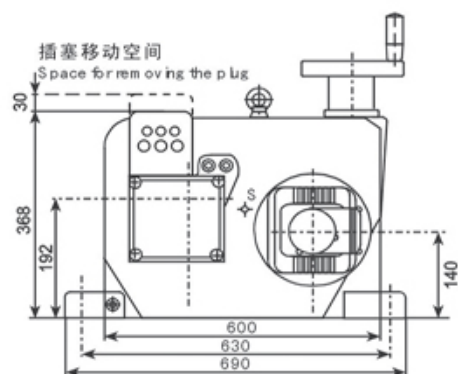
驱动杠杆 Driving lever



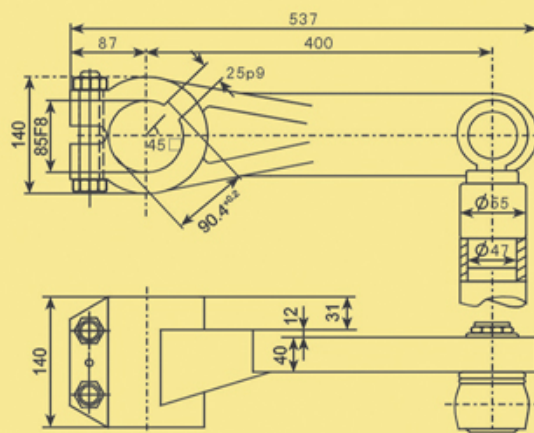
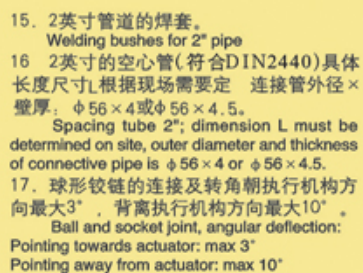
15. 1½ 英寸管道的焊套。
Welding bushes for 1½" pipe
16. 1½ 英寸的空心管 (符合 DIN2440)
具体长度尺寸 L 根据现场需要定, 连接管外径 × 壁厚: $\phi 50 \times 4$ 。
Spacing tube 1½": dimension L must be determined on site, outer diameter and thickness of connective pipe is $\phi 50 \times 4$ 。
17. 球形铰链的连接及转角朝执行机构方向最大 3°, 背离执行机构方向最大 10°。
Ball and socket joint, angular deflection:
Pointing towards actuator: max 3°
Pointing away from actuator: max 10°

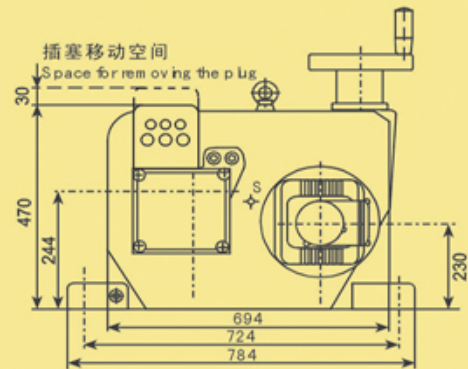


DIMENSIONAL DRAWING



执行机构 型 号 Actuator Type	尺寸 Dimension (mm)		
	A	B	C
RHA4000-M3 0	875	446	65
RHA4000-M7 0	808	378	120



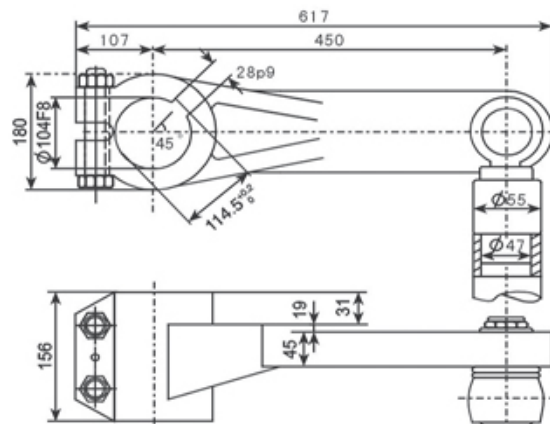


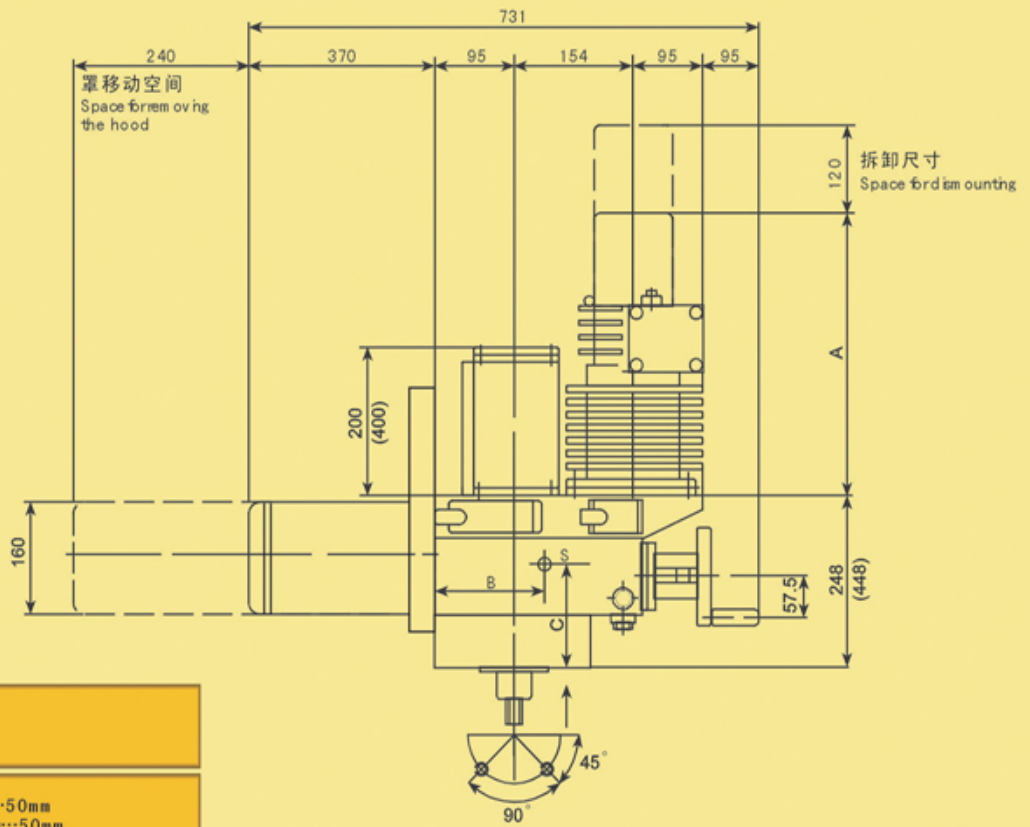
执行机构 型 号 Actuator Type	尺寸 (mm) Dimension (mm)		
	A	B	C
RHA6000-M40	1050	500	120
RHA6000-M60	1000	446	120
RHA8000-M60	1050	500	120



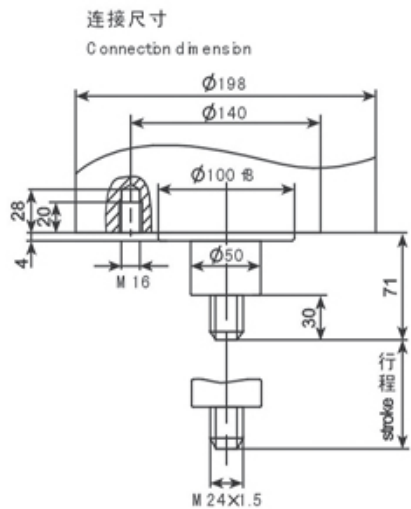
3D DIMENSIONAL DRAWING

15. 2英寸管道的焊条。
Welding bushes for 2" pipe
16. 2英寸的空心管(符合DIN2440)具体长度尺寸根据现场需要定 连接管外径×壁厚: $\phi 56 \times 4$ 或 $\phi 56 \times 4.5$ 。
Spacing tube 2"; dimension L must be determined on site, outer diameter and thickness of connective pipe is $\phi 56 \times 4$ or $\phi 56 \times 4.5$.
17. 球形铰链的连接及转角朝执行机构方向最大3°, 背离执行机构方向最大10°。
Ball and socket joint, angular deflection: Pointing towards actuator: max 3°
Pointing away from actuator: max 10°



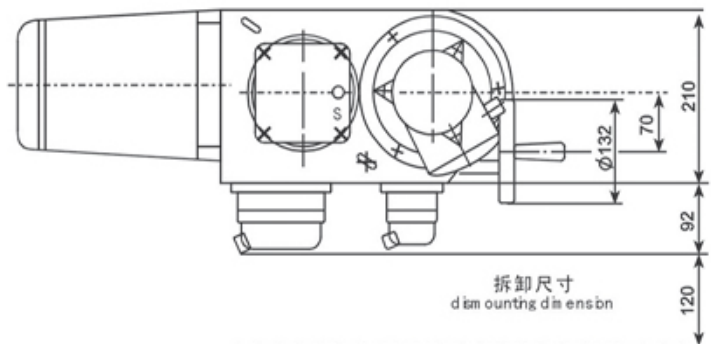


行程 Stroke	范围 Range
50mm	最小0...25mm/最大0...50mm min. 0...25mm/max. 0...50mm
100mm	最小0...50mm/最大0...100mm min. 0...50mm/max. 0...100mm
300mm	最小0...100mm/最大0...300mm min. 0...100mm/max. 0...300mm



执行机构 型号 Actuator Type	尺寸 Dimension (mm)		
	A	B	C
RS10-M1.3	290	114 (101)	169 (315)
RS10-M5.0	384	130 (110)	187 (345)
RS20-M1.5	318	123 (106)	178 (345)
RS20-M4.0	378	137 (115)	203 (360)

注: () 内为300行程的尺寸
Note: () is dimension for 300 stroke





D



行程
Stroke

Stroke

60m m

120mm m

300mm m

範圍
Range

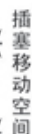
Range

最小0…30mm/最大0…60mm
min. 0…30mm/max. 0…60mm

最小0…60mm/最大0…120mm
min. 0…60mm/max. 0…120mm

最小0…120mm/最大0…300mm
min. 0…120mm/max. 0…300mm

注: () 内为300行程的尺寸
Note: () is dimension for 300 stroke





定货须知

Order notes

Order

当有开关量控制时，应指明开关量控制信号类型(24 V d.c.或220 V a.c.，有源或无源)。

When the actuator you ordered has binary control function, you should indicate the type of binary(24 V d.c. or 220 V a.c., with source or without source.)

直行程执行机构应注明行程范围。

You should indicate its stroke range when you order linear actuator.

直行程执行机构需配连接支座及连接件，请提供调节阀相关尺寸。

Because the linear actuator need be prepared connective pedestal and connective parts, please supply the correlative dimensions of the valve.

角行程执行机构是否需配备铰链连接件，请说明。

When you order the lever actuators, please let us know if you need the coupling rod of ball and socket joint.

红外遥控器的配备需额外指定说明。

Infrared remote controller is optional, you must extra specify if you need it.



重庆川仪总厂有限公司执行器记录仪分公司

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(Recorder)023-67032466

Fax: 023-67032466

<http://www.sicc.com.cn>

川仪在用户身边 用户在川仪心中

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