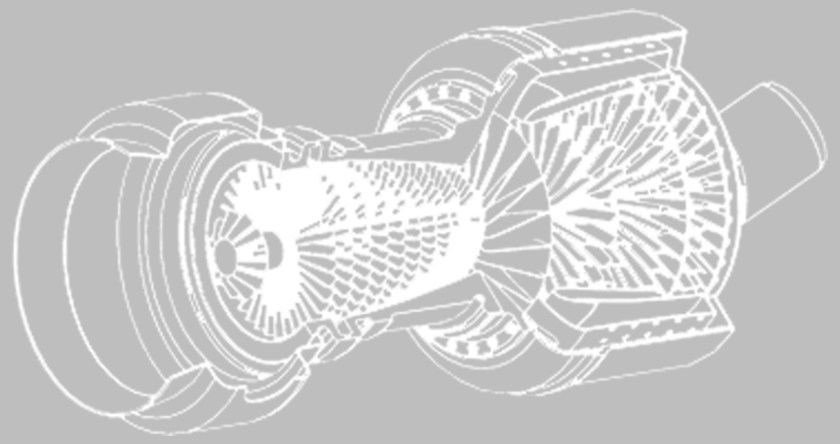
大同市欧特讯动力控制有限公司
Datong Autosun Power Control Co.,LTD



燃气动力控制系统
GAS POWER CONTROL SYSTEM

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▶ 公司简介
关于欧特讯





大同市欧特讯动力控制有限公司位于山西省大同市，成立于2002年，是一家从事发动机电控产品开发、生产、销售于一体的专业化科技公司。公司2004年通过ISO9001：2000质量管理体系认证，2005年被政府认定为山西省高新技术企业，2008年通过ISO/TS16949：2002汽车行业质量管理体系认证。

欧特讯公司所生产的控制系统适用于天然气、沼气、秸秆气、液化石油气、煤矿瓦斯气等可燃气体发电机组，可广泛用于气田、油田、煤矿、酒厂、发酵厂、养猪场及污水处理厂等有可燃气的工矿企业。本公司所生产的点火控制系统、空燃比控制系统及调速控制系统，所适用于发电机组功率范围从30KW～3500KW，产品操作简单、运行可靠、维护成本低，是节能减排、保护我们绿色家园的优选产品。

多年来，欧特讯公司一直秉承质量第一、用户至上的理念，可为用户定制各种用途的燃气机组控制系统。不断进取，求实创新是欧特讯不懈的追求，欧特讯竭诚为国内外客户提供一流的产品与优质的服务。

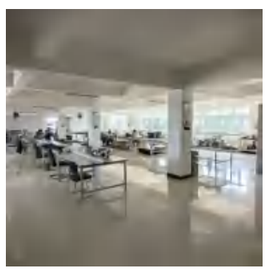
COMPANY PROFILE

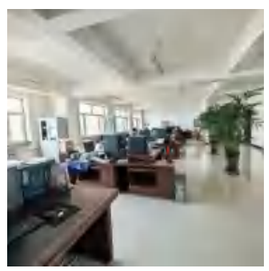
Datong Autosun Power Control Co., LTD is located in datong city, Shanxi Province, was founded in 2002, is engaged in the engine electronic control product development, production, sales in the integration of professional technology company. The company passed the ISO9001:2004 quality management system certification in 2004, the government identified as high-tech enterprises in Shanxi Province in 2005, and passed the ISO/TS16949:2002 automotive industry quality management system certification in March 2008.

The generator sets of natural gas, biogas, straw gas, liquefied petroleum gas, coal gas etc control system produced by Autosun, is widely used in gas, oil, coal, distillery, fermentation plant, pig farms and sewage treatment plants and other gas operating enterprises. Our company produced ignition control system, air-fuel ratio and speed control system is used for generator set power range from 30kW ~ 3500kW. Simple operation, reliable operation, low cost, is energy-saving emission reduction and the protection of the best products of our green home.

Over the years, we has been adhering to idea of the quality first ,customer first .Our company control system is able to be customization of a variety of purposes. Enterprising according to user's request. Enterprising, strives for realism the innovation is the unremitting pursuit, the Autosun provide wholeheartedly for the domestic and foreign customers with first-class products and quality service.











销售市场覆盖国内外
Sales overseas and abroad

公司产品远销全球30多个国家，如俄罗斯、加拿大、巴西、马来西亚、印度、沙特阿拉伯、土耳其等，公司以质量为本，从设计研发到测试、调试到成品，经过一系列稳定测试，如高低温、振动等，确保产品在最恶劣的环境下表现出最佳性能，同时提供最优的可操作性和可维护性，产品均享受全国保修政策，令客户高枕无忧！

The company's products are exported to more than 30 countries around the world .For example Russia,Canada,Brazil,Malaysia,India,Saudi Arabia,Turkey etc .The company is quality-oriented, from design and development to testing, commissioning to finished products, and after a series of stable tests like high/low temperature test and vibration test to ensure that products perform best in the harshest environments while providing the optimal operability and maintainability, the products enjoy the national warranty policy, so that customers can rest easy!

总部 HEADQUARTER
山西•大同 DATONG,SHANXI

办事处 OFFICE
山东 SHAN DONG
深圳 SHEN ZHEN
重庆 CHONG QING
上海 SHANG HAI
……



燃气发动机控制系统
CONTROL SYSTEM OF GAS ENGINE

- **A** 空燃比控制系统 AFR Control System
- **B** 点火控制系统 Ignition control system
- **C** 调速控制系统 Speed control system
- **D** 燃气发动机控制系统 Integrated control system of gas engine
- **E** 燃气发动机节气门 Gas engine throttle

A 空燃比控制系统 Air fuel ratio control system



配套部件	Supporting parts
LK系列流量控制阀	LK series flow control valve
OT981系列	OT981 actuator series
文丘里混合器	Venturi mixer

B 高能点火控制系统 High energy Ignition control system



配套部件	Supporting parts
点火线圈	Ignition coil
信号盘	Signal panel
点火信号传感器	Ignition signal sensor
火花塞	Spark plug
高压线	Connection wire

C 调速控制系统 Speed control system



配套部件	Supporting parts
执行器：OT981系列	Actuator: OT981 series
OT961系列	OT961 series
KZ系列	KZ series

D 燃气发动机控制系统 Gas engine control system



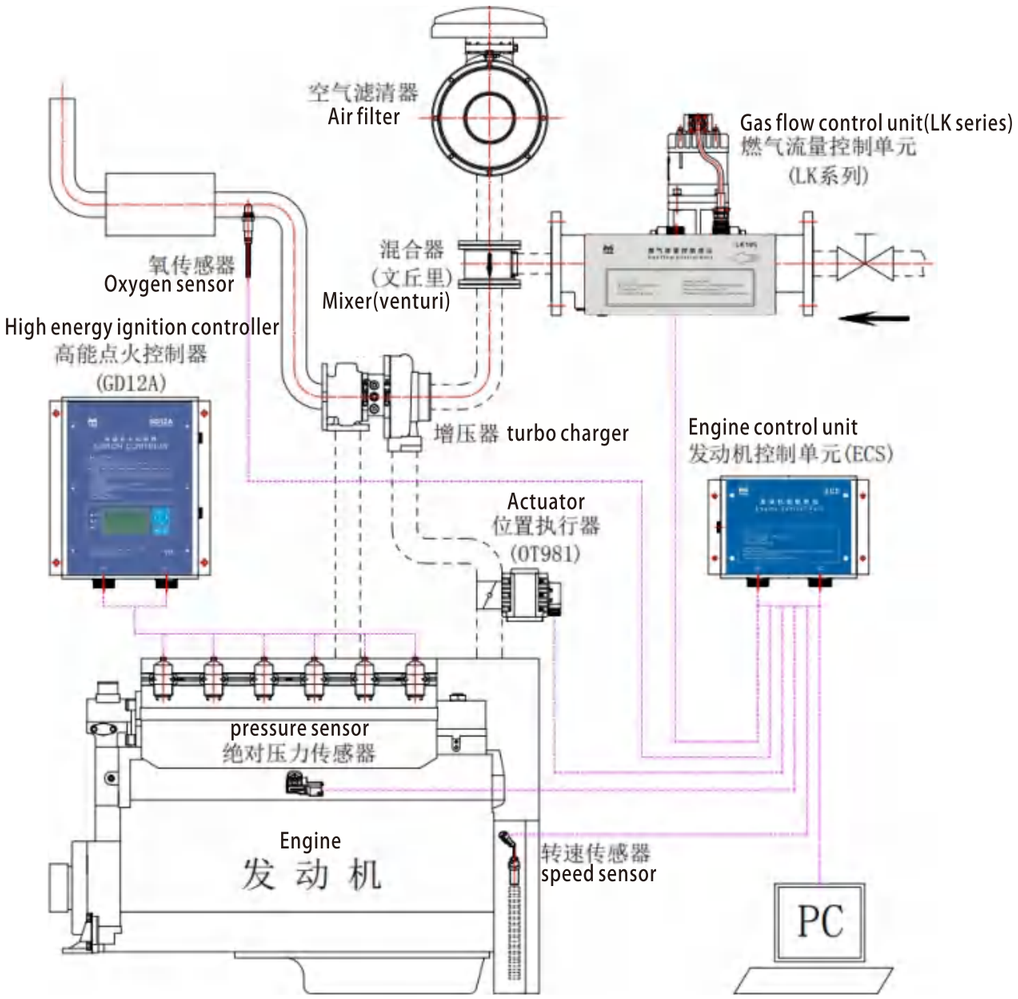
配套部件	Supporting parts
凸轮轴传感器	Camshaft sensor
转速传感器	Speed sensor
氧传感器	Oxygen sensor
点火线圈	Ignition coil
KZ系列	KZ series

E 燃气发动机节气门 Gas engine throttle



A

空燃比控制系统
AFR Control System





ECS发动机控制单元

ECS发动机控制单元采用专业的算法为发动机提供精确的燃气量，适用于各种浓度、不同压力的可燃气源。ECS通过PID算法获得执行器最佳位置，同时与LK系列燃气流量控制单元配合,保证发动机在理想空燃比下发挥出最优性能。本系统的最大优势在于灵活的配置以及对发动机的启动、稳定、瞬态和排放等方面的优化。

ECS Engine control unit

ECS Engine control unit use professional calculation to provide precise gas for engine which is suitable for different concentration and pressure combustible gas. Through PID calculation, ECS get the best position of actuator and at the same time cooperate with LK series gas flow control unit to ensure engine perform best under ideal AFR. The most advantage of this system lies in the flexible configuration and optimize the start, stable, transient and emission of the engine.

ECS主要技术参数

- 电源：20～32V DC，10A最大
- 额定/怠速调速范围：0～9KHz
- 同步控制范围：0～5V
- 输出过流保护：>4A 5s
- 工作温度：-20℃~+70℃
- 防护等级：IP65
- 外形尺寸：258mmX164mmx65.8mm

ECS Main Specifications

Supply voltage: 20VDC~32VDC, 10A maximum
Rated/idle speed range:0~9KHz
Synchronous control range:0~5V
Output over protection: >4A 5s
Working temperature: -20°C~+70°C
Protection degree: IP65
Outline dimension: 258mm*164mm*65.8mm

配套部件 Supporting parts

LK系列燃气流量控制单元

LK系列燃气流量控制单元用于对进入发动机的燃气进行精确测量控制，实现对发动机空燃比的灵活控制，广泛用于天然气、沼气、低浓度瓦斯气、秸秆气等燃气发电机组。

LK series gas flow control unit

LK series gas flow control unit is used for precisely control of gas entering engine. It realized the flexible control of engine AFR and widely used for natural gas, methane, low concentration gas, straw gas etc gas generator sets.

LK系列主要技术参数

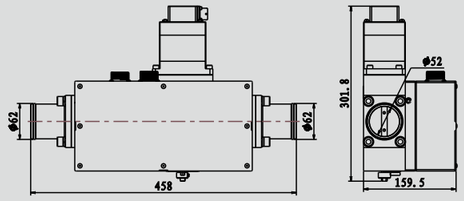
- 电源：20~32VDC
- 进气压力：2~25KPa(建议5KPa)
- 最大输出电流：10A

LK series Main Specifications

Power supply: 20~32VDC
Intake pressure: 2~25KPa(Advise 5KPa)
Max output current: 10A

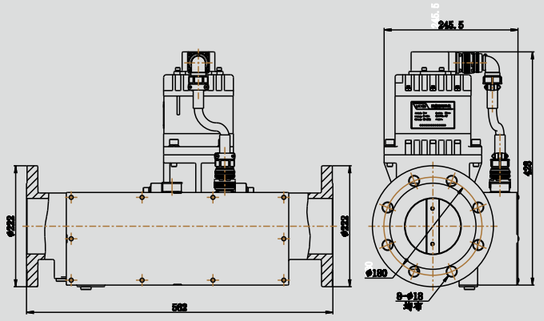
LK52燃气流量控制单元 LK52 gas flow control unit



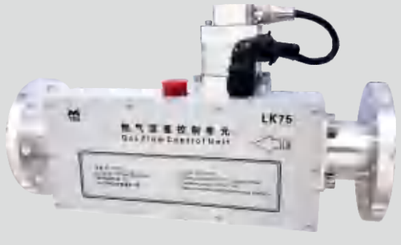


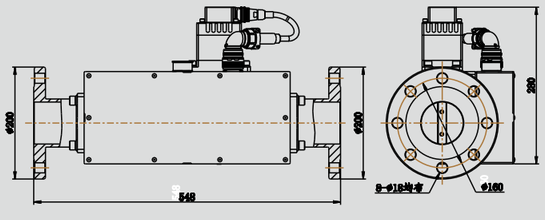
LK105燃气流量控制单元 LK105 gas flow control unit





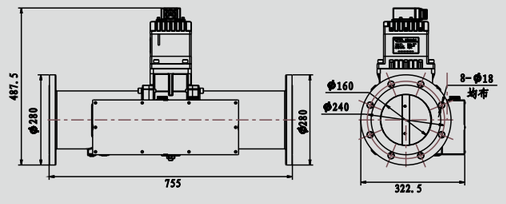
LK75燃气流量控制单元 LK75 gas flow control unit





LK160燃气流量控制单元 LK160 gas flow control unit





比例式混合器 Proportional mixer



W150H–F比例式混合器

- 适用燃料：天然气、沼气等
- 适用功率：160KW（215HP）
- 环境温度：–40℃～+120℃
- 燃料进口压力：2KPa～3KPa
- 安装方式：垂直安装

W150H-F Proportional Mixer

Application of fuel: natural gas and methane etc.
Application of power: 160KW (215HP)
The environment temperature:-40℃ to +120℃
Fuel inlet pressure: normal 2KPa ~ 3KPa
Installation: vertical



W200H–W比例式混合器

- 适用燃料：天然气、沼气等
- 适用功率：217KW（292HP）
- 环境温度：–40℃～+120℃
- 燃料进口压力：3KPa～6KPa
- 安装方式：垂直安装

W200H-W Proportional Mixer

Application of fuel: natural gas and methane etc.
Application of power: 217KW (292HP)
The environment temperature:-40℃ to +120℃
Fuel inlet pressure: normal 3KPa ~ 6KPa
Installation: vertical



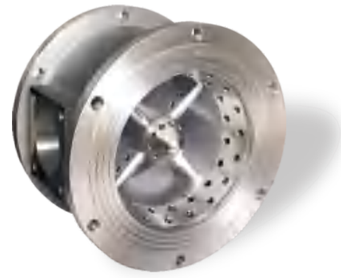
W300H–F比例式混合器

- 适用燃料：天然气、沼气等
- 适用功率：317KW（425HP）
- 环境温度：–40℃～+120℃
- 燃料进口压力：3KPa～8KPa
- 安装方式：垂直安装

W300H-F Proportional Mixer

Application of fuel: natural gas and methane etc.
Application of power: 317KW (425HP)
The environment temperature:-40℃ to +120℃
Fuel inlet pressure: normal 3KPa ~ 8KPa
Installation: vertical

文丘里混合器 Venturi mixer

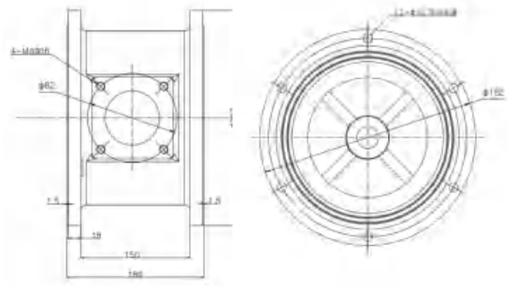


H150混合器

进气通径：Φ150

H150 Mixer

Inlet size: Φ150



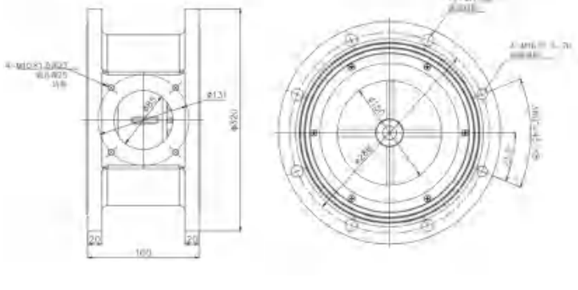


H110混合器

进气通径：Φ110

H110 Mixer

Inlet size: Φ110



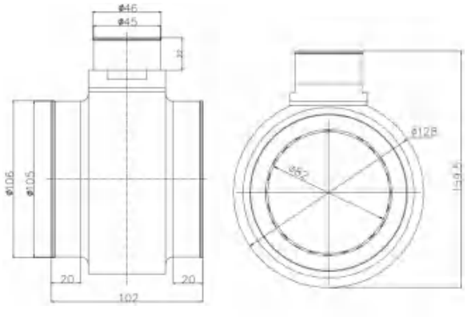


H82混合器

进气通径：Φ82

H82 Mixer

Inlet size: Φ82



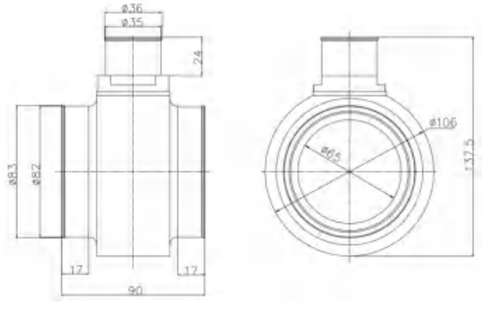


H65混合器

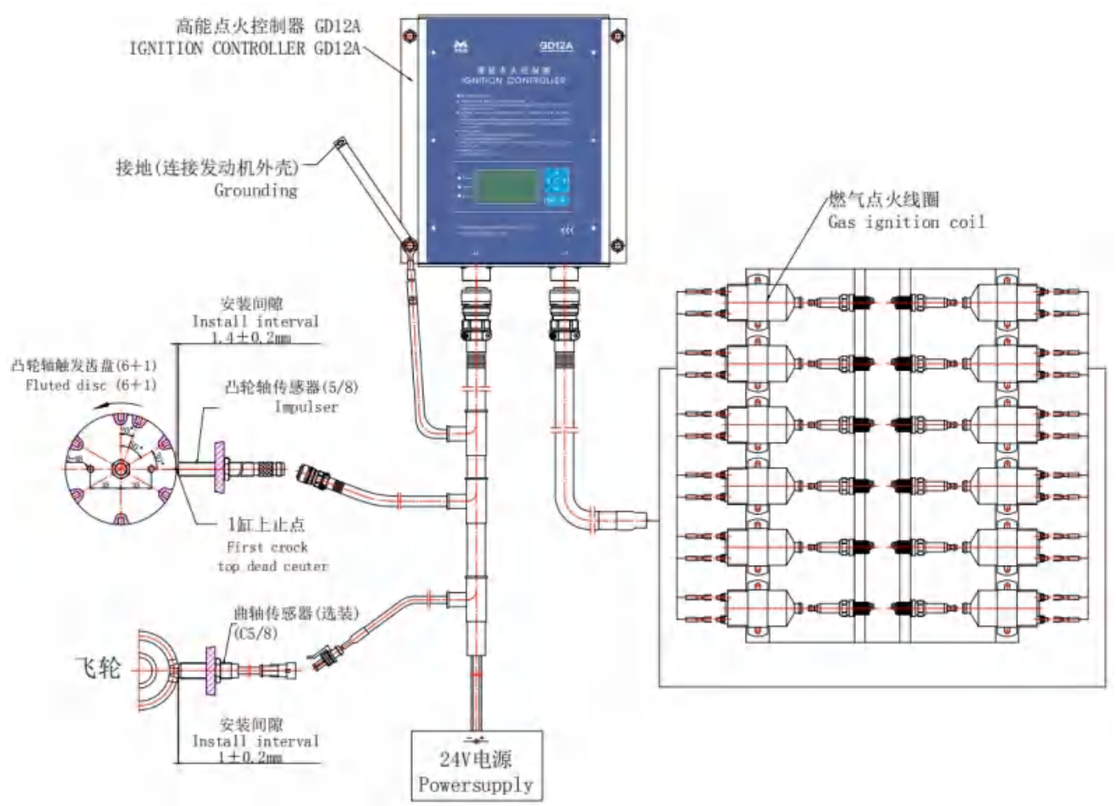
进气通径：Φ65

H65 mixer

Inlet size: Φ65



B
点火控制系统
Ignition control system





GD6高能点火控制器

GD6是欧特讯公司最新研发的燃气发动机专用高能量点火控制器。适用于各种气体燃料中大型多缸直列及V型6缸发动机。该产品具有点火能量高、可靠性高、适用范围广、寿命长等突出优势。其中LCD显示，可以实时显示点火能量、点火提前角、发动机转速等运行信息。同时提供了功能按键，可以根据发动机排量与燃气甲烷含量设定点火能量及点火提前角等工作参数。

High-Energy Ignition Controller GD6

GD6 High-Energy Ignition Controller is the latest development of our company for Gas Engine which applicable to a variety of gas &fuel in the large multi-cylinder inline and 6cylinder V-type engine. The product features high ignition energy, high reliability, wide range of applications, long life and other prominent advantages. With LCD display, it could display real-time ignition energy, ignition advance angle, engine speed and other operating information. It also provides function button which could set ignition energy and ignition advance angle and other operating parameters based on the engine displacement and gas methane content.

GD6主要技术参数

- 电源电压：20V ~ 32V
- 工作电流：最大3.5A
- 功率：最大功率65W
- 输出：6路输出
- 输出电压：250V
- 点火输出能量：100mJ ~ 450mJ
- 外形尺寸：258mmx289mmx66mm

GD6 Main Specifications

Supply voltage: 20V☒ 32V
Operating current: Maximum 3.5A
power: maximum power 65W
Output: 6connect output
Output voltage: 250V
Ignition output energy: 100mJ ~ 450mJ
Outline dimension: 258mm*289mm*66mm



GD12A高能点火控制器

GD12A是欧特讯公司最新研发的燃气发动机专用高能量点火控制器。适用于各种气体燃料中大型多缸直列及V型12缸发动机。该产品具有点火能量高、可靠性高、适用范围广、寿命长等突出优势。其中LCD显示，可以实时显示点火能量、点火提前角、发动机转速等运行信息。同时提供了功能按键，可以根据发动机排量与燃气甲烷含量设定点火能量及点火提前角等工作参数。

High-Energy Ignition Controller GD12A

GD12A High-Energy Ignition Controller is the latest development of our company for Gas Engine which applicable to a variety of gas &fuel in the large multi-cylinder inline and 12 cylinder V-type engine. The product features high ignition energy, high reliability, wide range of applications, long life and other prominent advantages. With LCD display, it could display real-time ignition energy, ignition advance angle, engine speed and other operating information. It also provides function button which could set ignition energy and ignition advance angle and other operating parameters based on the engine displacement and gas methane content.

GD12A主要技术参数

- 电源电压：20V ~ 32V
- 工作电流：最大7.0A
- 功率：24V最大功率100W
- 输出：12路输出
- 输出电压：250V
- 点火输出能量：100mJ ~ 500mJ
- 外形尺寸：258mmx292mmx66mm

GD12A Main Specifications

Supply voltage: 20V~32V
Operating current: Maximum 7.0A
power: 24V maximum power 100W
Output: 12 connect output
Output voltage: 250V
Ignition output energy: 100mJ ~ 500mJ
Outline dimension: 258mm*292mm*66mm



GD16A高能点火控制器

GD16A是欧特讯公司最新研发的燃气发动机专用高能量点火控制器。适用于各种气体燃料中大型多缸直列及V型16缸发动机。该产品具有点火能量高、可靠性高、适用范围广、寿命长等突出优势。其中LCD显示，可以实时显示点火能量、点火提前角、发动机转速等运行信息。同时提供了功能按键，可以根据发动机排量与燃气甲烷含量设定点火能量及点火提前角等工作参数。

High-Energy Ignition Controller GD16A

GD16A High-Energy Ignition Controller is the latest development of our company for Gas Engine which applicable to a variety of gas &fuel in the large multi-cylinder inline and 16cylinder V-type engine. The product features high ignition energy, high reliability, wide range of applications, long life and other prominent advantages. With LCD display, it could display real-time ignition energy, ignition advance angle, engine speed and other operating information. It also provides function button which could set ignition energy and ignition advance angle and other operating parameters based on the engine displacement and gas methane content.

GD16A主要技术参数

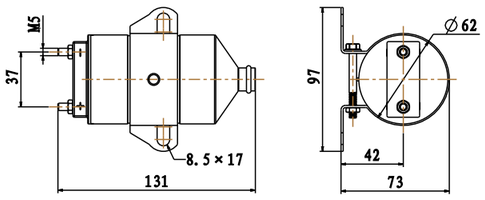
- 电源电压：20V ~ 32V
- 工作电流：最大9A
- 功率：24V最大功率130W
- 输出：16路输出
- 输出电压：250V
- 点火输出能量：100mJ ~ 500mJ
- 外形尺寸：258mmx342mmx66mm

GD16A Main Specifications

Supply voltage: 20V ~ 32V
Operating current: Maximum 9A
Power: 24V Max power 130W
Output:1 6connect output
Output voltage: 250V
Ignition output energy: 100mJ ~ 500mJ
Outline dimension: 258mm*342mm*66mm

配套部件 Supporting parts





OT-DX12 点火线圈

欧特讯生产的高性能点火线圈，采用专业的设计和制造工艺。点火线圈在点火控制系统中发挥了重要的作用，必须与点火控制器配套使用才能发挥出控制器高能量的特性。该点火线圈配套欧特讯生产的GD6和GD12A等高能点火控制器，非常适合于配套各种需要高能量的燃气发动机。

OT-DX12 Ignition coil

Ignition coil produced by Autosun takes professional design and manufacture process. It takes an important part in the ignition control system and must be used with ignition controller to develop high energy character of controller. This ignition coil matches with GD6 and GD12 high energy controller produced by Autosun and best matches with all kinds of gas engine which need high energy.

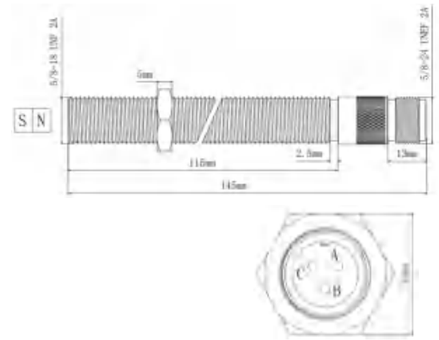
主要技术参数

- 次级最大电压：45KV
- 初级电阻：0.7±0.1Ω
- 次级电阻：11.8±0.2KΩ
- 点火线圈固定扭矩：16Nm
- 振动：20–2000Hz
- 温度：–30℃~+95℃
- 相对湿度：95%
- 高能点火控制器：GD12A/GD6
- 重量：0.82Kg

Main Specifications

Secondary Max Voltage: 45KV
Primary resistance:0.7±0.1Ω
Secondary resistance: 11.8±0.2KΩ
Ignition coil fix torque:16Nm
Vibration:20-2000Hz
Temperature:–30°C~+95°C
Relative humidity :95%
High energy ignition controller: GD12A/GD6
Weight:0.82Kg





CQ12凸轮轴传感器（霍尔）

欧特讯生产的CQ12 凸轮轴传感器（霍尔）通过感应配套齿盘上的磁钉来获取信号。产生的信号将被点火控制器用来计算凸轮轴位置。适用于各种燃气发动机精准的点火时序控制。具有抗干扰能力强，高品质，耐高温，长寿命的特性。能够根据用户的要求提供不同的规格以适应各种功率的燃气发动机。

CQ12 Camshaft sensor (HALL)

CQ12 camshaft sensor (HALL) produced by Autosun get signal by sensing magnetic nail on the sensor plate. Generating signal will be calculating camshaft position by ignition controller. It works for all kinds of gas engine precisely ignition sequence control. It is charactered with strong Anti-interference ability, high quality, high temperature resistance and long life. It could used for all power range gas engine according to the customer's requirement.

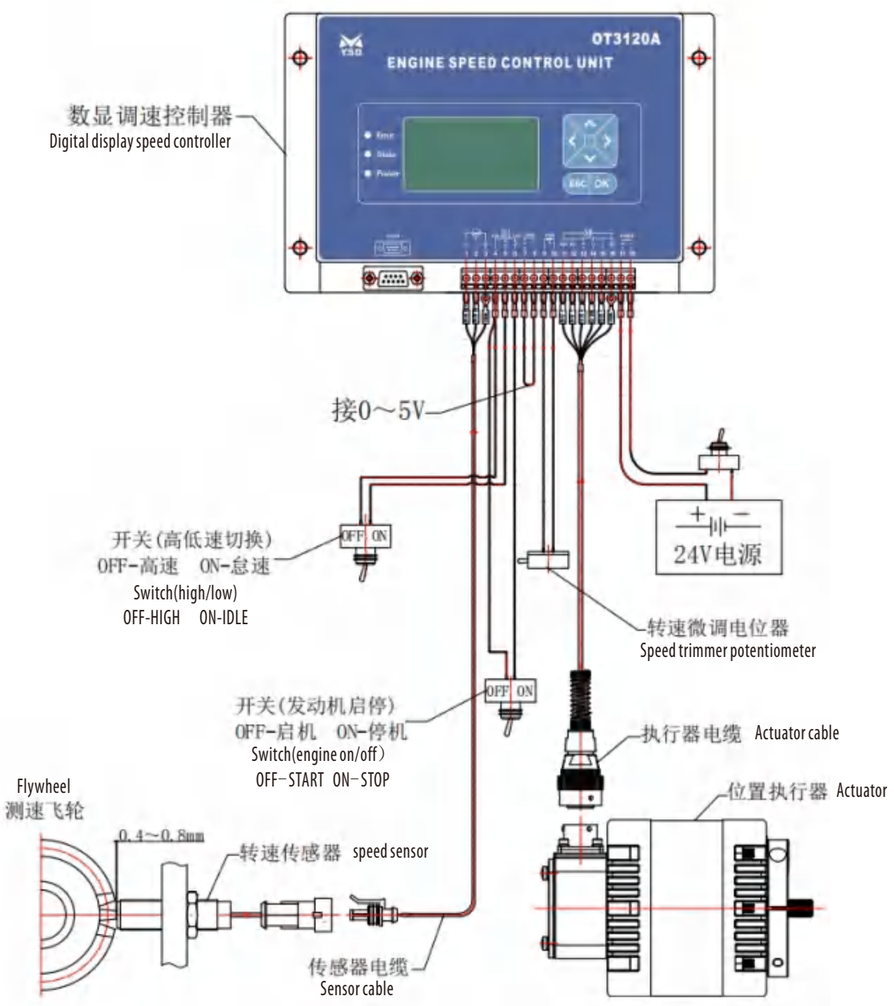
主要技术参数

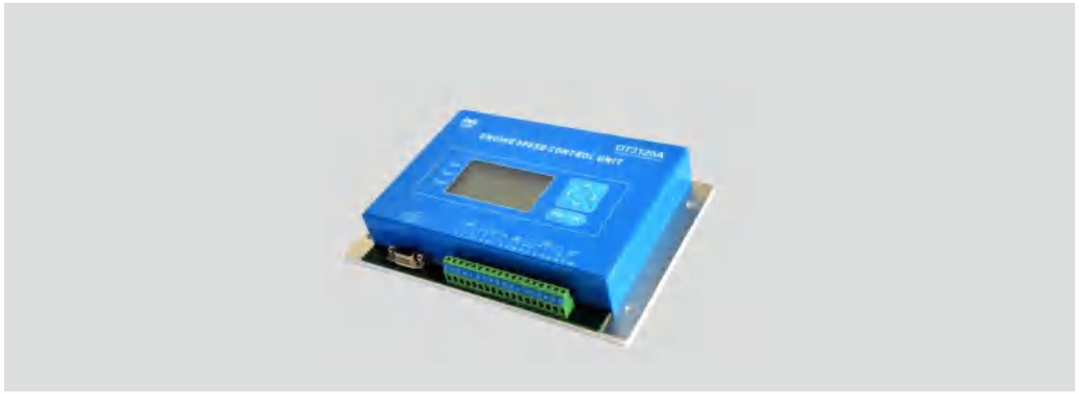
- 输入电压：直流5 V至30 V
- 输入电流：10毫安
- 输出电流：最高50毫安
- 频率：0 Hz至20 kHz
- 振动：10 Hz至2,000 Hz下20g
- 温度范围：–40℃~+150℃

Main Specifications

Input voltage: 5V~30VDC
Input current: 10mA
Output current: Max 50mA
Frequence:0Hz-20KHz
Vibration:10Hz-2000Hz under 20g
Temperature range:–40°C ~+150°C

C
调速控制系统
Speed control system





OT3120A 数显调速控制器

OT3120A燃气发动机（发电）控制系统主要实现调速功能。调速控制的稳态和动态指标出厂时做了常规通用参数设定，对大部分用户或机型一般能够满足要求，如出现不稳定可进行调整。

Digital speed controller OT3120A

OT3120A gas engine(generation) control system main realize speed function. Stabilize and mobilize figure of speed control already be set with normal parameter and could fulfill most customer or engine using, if unstable happens, adjustment.

主要技术参数

- 电源：20～32VDC，10A最大
- 工作温度：–20℃～+70℃
- 额定/怠速调速范围：0～9KHz
- 冲 击：2G
- 同步控制范围：0～5V
- 防护等级：IP65
- 输入设备：1路转速传感器输入
  1路并机端口
  1路微调端口
- 输出设备：1路执行器输出
  1路高低速切换开关
  1路发动机启停切换开关
- 振动条件：<80Hz
- 外形尺寸：226mmx147mmx36.8mm

Main Specifications

Power:20~32VDC,Max10A
Working Temperature: –20℃~+70℃
Rated/idle speed range: 0~9KHz
Shock:2G
Synchronize control range: 0~5V
Protection degree:IP65
Input device: 1 speed sensor input connect
1 parallel connect
1 speed trim connect
Output device: 1 actuator connect
1 high/low switch connect
1 engine start/stop switch connect
Vibration condition: <80Hz
Dimension:226mm*147mm*36.8mm



OT3120D 数显调速控制器

OT3120D燃气发动机（发电）控制系统主要实现V型发动机双路调速功能。调速控制的稳态和动态指标出厂时做了常规通用参数设定，对大部分用户或机型一般能够满足要求，如出现不稳定可进行调整。

Digital speed controller OT3120D

OT3120D gas engine(generation) control system main realize V type engine dual speed control function. Stabilize and mobilize figure of speed control already be set with normal parameter and could fulfill most customer or engine using, if unstable happens, adjustment.

主要技术参数

- 电源：20～32VDC，20A最大
- 工作温度：–20℃～+70℃
- 额定/怠速调速范围：0～9KHz
- 冲 击：2G
- 同步控制范围：0～5V
- 防护等级：IP65
- 输入设备：1路转速传感器输入
  1路并机端口
  1路微调端口
- 输出设备：2路执行器输出
  1路高低速切换开关
  1路发动机启停切换开关
- 振动条件：<80Hz
- 外形尺寸：309mm×147mm×37mm

Main Specifications

Power:20~32VDC,Max20A
Working Temperature: –20°C~+70°C
Rated/idle speed range: 0~9KHz
Shock:2G
Synchronize control range: 0~5V
Protection degree:IP65
Input device:1 speed sensor input connect
1 parallel connect
1 speed trim connect
Output device: 2actuator connect
1 high/low switch connect
1 engine start/stop switch connect
Vibration condition: <80Hz
Dimension:309mm×147mm×37mm

OT系列执行器

执行器的主要功能是将调速控制器输出的位置信号转换成指定的转角位置。执行器将输入的电信号，转化为机械转动。机械转动量（转角）与输入成比例关系。

OT series actuator

The main function of actuator is converted angular position to specify the location of the signal of the speed controller output. The actuator input signal is converted into mechanical rotation. Mechanical rotation (rotation) proportional to the input.

主要技术参数

- 电源电压：24VDC
- 工作角度：75°
- 输出电流：6A持续
  10A峰值（<30s）
- 环境温度：–40℃～+100℃
- 储存温度范围：–55℃～+125℃
- 冲击：<10G
- 振动：<500Hz
- 相对湿度：<95%
- 防护等级：IP65

Main Specifications

Supply voltage: 24VDC
Working angle : 75°
Current output: a sustained 6A
a peak 10A for up to 30S
The environment temperature: -40°C ~ +100°C
Storage temperature range: -55°C ~ +125°C
Shock: <10G
Vibration: <500Hz
Relative humidity: <95%
Protection grade: IP65





OT961数字位置执行器

OT961 digital position actuator

最大扭矩：6Nm
外形尺寸：157x95x106mm

Maximum torque： 6Nm
Dimensions： 157*95*106mm



OT981数字位置执行器

OT981 digital position actuator

最大扭矩：20Nm
外形尺寸：231x128x168mm

Maximum torque： 20Nm
Dimensions： 231*128*168mm



OT983数字位置执行器

Ot983 digital position actuator

最大扭矩：30Nm
外形尺寸：294x128x128mm

Maximum torque： 30Nm
Dimensions： 294*128*128mm

DJZ系列电机执行器 DJZ series motor actuator



DJZ50电机执行器

DJZ50电机执行器可与欧特讯公司生产的控制器OT3120A型号配套使用。可最大持续输出扭矩52Nm，转角45度。该执行器可用于600～3500KW燃气机控制系统中。

Motor actuator DJZ50

The DJZ50 motor actuators can be used with OT3120A controller produced by Autosun. The maximum continuous output torque 52Nm, angle of 45 degrees. The actuator can be used for 600 ~ 3500KW gas engine Control system.

主要技术参数

- 电源电压：24VDC
- 最大扭矩：52Nm
- 工作角度：45°
- 输出电流：10A持续
  20A峰值（<2s）
- 环境温度：-40℃～+100℃
- 储存温度范围：-55℃～+125℃
- 冲击：<10G
- 振动：<500Hz
- 相对湿度：<95%
- 防护等级：IP65
- 外形尺寸：215x253x256mm

Main Specifications

Supply voltage: 24VDC
Maximum torque: 52Nm
Working angle : 45°
Current output: a sustained 10A
a peak 20A for up to 2S
The environment temperature:-40°C ~ +100°C
Storage temperature range: -55°C ~ +125°C
Shock: <10G
Vibration: <500Hz
Relative humidity: <95%
Protection grade: IP65
Dimensions: 215*253*256mm

TZ系列一体式调速执行器 TZ series integrated speed governor



TZ981调速执行器

TZ981调速执行器是针对燃气发动机研发的一体式调速控制系统，具有安装方便、操作简单、可靠性高等特点。该调速执行器具有分段PID调节功能，可满足不同工况下的稳态和动态指标。

Speed governor TZ981

TZ981 speed governor is an integrated speed governor control system developed for gas engine, which has the characteristics of easy installation, simple operation and high reliability. The speed governor has the function of segmented PID regulation, which can meet the steady state and dynamic indexes under different working conditions.

主要技术参数

- 电源：20～32VDC，10A最大
- 工作温度：-40℃～+100℃
- 额定/怠速调速范围：0～9KHz
- 冲 击：10G
- 同步控制范围：0～5V
- 防护等级：IP67
- 输入设备：1路转速传感器输入
  1路并机端口
  1路微调端口
- 输出设备：1路高低速切换开关
  1路发动机启停切换开关
- 工作角度：75°
- 最大扭矩：20Nm
- 振动条件：<500Hz
- 外形尺寸：260mmx179mmx130mm

Main Specifications

Power:20~32VDC,Max10A
Working Temperature: -40°C~+100°C
Rated/idle speed range: 0~9KHz
Shock:10G
Synchronize control range: 0~5V
Protection degree:IP67
Input device: 1 speed sensor input connect
1 parallel connect
1 speed trim connect
Output device: 1 high/low switch connect
1 engine start/stop switch connect
Working angle: 75°
Maximum torque: 20Nm
Vibration condition : <500Hz
Dimension: 260mm*179mm*130mm



TZ983调速执行器

TZ983调速执行器是针对燃气发动机研发的一体式调速控制系统，具有安装方便、操作简单、可靠性高等特点。该调速执行器具有分段PID调节功能，可满足不同工况下的稳态和动态指标。

Speed governor TZ983

TZ983 speed governor is an integrated speed governor control system developed for gas engine, which has the characteristics of easy installation, simple operation and high reliability. The speed governor has the function of segmented PID regulation, which can meet the steady state and dynamic indexes under different working conditions.

主要技术参数

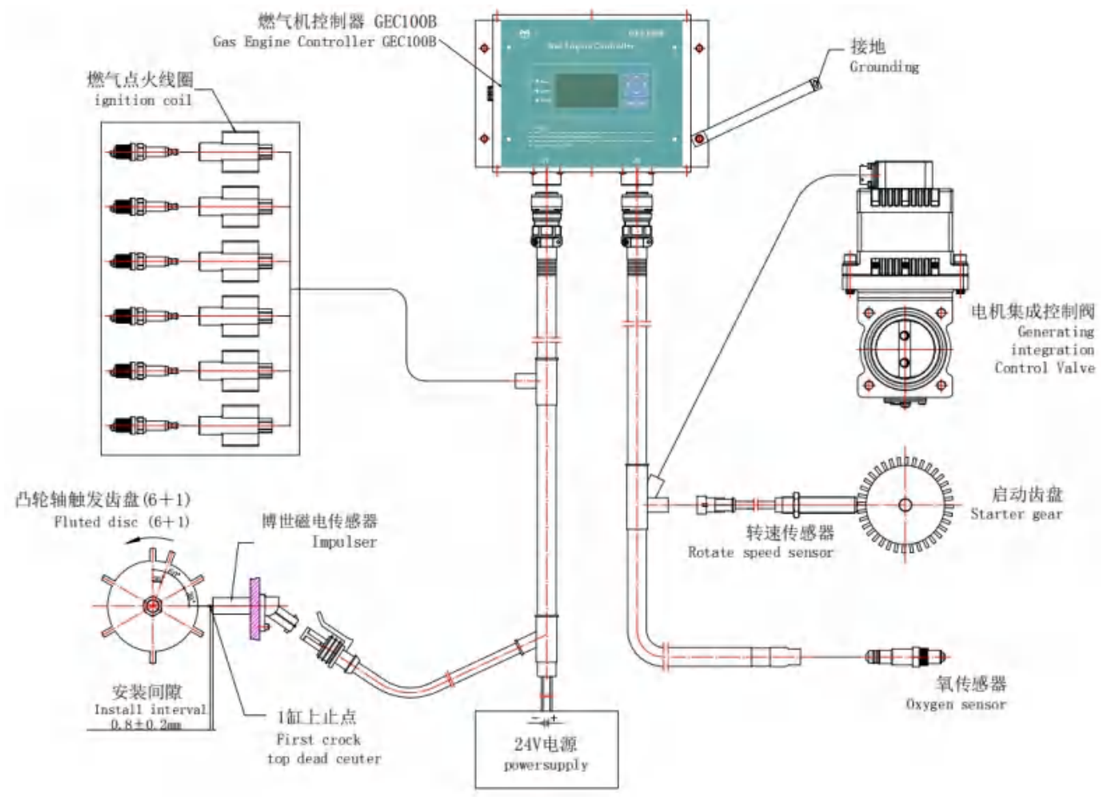
- 电源：20～32VDC，10A最大
- 工作温度：-40℃～+100℃
- 额定/怠速调速范围：0～9KHz
- 冲 击：10G
- 同步控制范围：0～5V
- 防护等级：IP67
- 输入设备：1路转速传感器输入
  1路并机端口
  1路微调端口
- 输出设备：1路高低速切换开关
  1路发动机启停切换开关
- 工作角度：75°
- 最大扭矩：30Nm
- 振动条件：<500Hz
- 外形尺寸：325mmx179mmx130mm

Main Specifications

Power:20~32VDC,Max10A
Working Temperature: -40°C~+100°C
Rated/idle speed range: 0~9KHz
Shock:10G
Synchronize control range: 0~5V
Protection degree:IP67
Input device: 1 speed sensor input connect
1 parallel connect
1 speed trim connect
Output device: 1 high/low switch connect
1 engine start/stop switch connect
Working angle: 75°
Maximum torque : 30Nm
Vibration condition: <500Hz
Dimension: 325mm*179mm*130mm

D

燃气发动机控制系统
Integrated control system of gas engine





GEC100B燃气发动机（发电）控制系统主要集成了点火控制、调速控制和空燃比检测等功能。适用于200KW以下燃气发动机，燃气发动机点火提前角对不同的机型已进行了出厂设定，一般不允许用户调整操作。调速控制的稳态和动态指标出厂时同样做了常规通用参数设定，对大部分用户或机型一般能够满足要求，如出现不稳定可进行调整。GEC100B空燃比检测功能可通过氧传感器测量空燃比并在显示屏上显示,方便用户调节燃气发动机上比例混合器的燃气进气量，使用户调整到所需要的空燃比。同时，通过发动机排温和振动检测仪器仪表来观察，保证燃气发动机排温和振动满足发动机的出厂要求。

Control system of gas engine

GEC100B gas engine(generation) control system mainly integrated ignition control, speed control and air fuel ratio test etc function. It works for 200KW gas engine.Gas engine ignition advance angle already been set according to different engine and do not allowed user adjustment. Stabilize and mobilize parameter also been set normally and could fulfill most user and engine requirement, if unstable could adjustment. GEC100B AFR test function could be test by oxygen sensor and display on the screen. It is easy for user to adjust proportional mixer of gas intake gas engine to let user adjust needed AFR. At same time, observe through the engine exhaust temperature and vibration test equipment to ensure engine exhaust temperature and vibration fulfill customer requirement.

主要技术参数

- 电源：20～32V DC，5A最大
- 额定/怠速调速范围：0～9KHz
- 同步控制范围：0～5V
- 输出过流保护：>4A 5s
- 输入设备：1路凸轮轴位置传感器输入
  1路转速传感器输入
  1路氧传感器输入
  1路并机端口
- 输出设备：6路点火输出
  1路节气门输出
  1路高低速切换开关
- 振动条件：<80Hz
- 工作温度：–20℃～+70℃
- 冲 击：2G
- 防护等级：IP65
- 外形尺寸：258X65.8X174mm

Main Specifications

Power supply:20~32VDC, Max5A
Rated/idle speed range:0~9KHz
Synchronize control range:0~5V
Output over protection: >4A 5s
Input device: 1 camshaft position sensor input connect
1 speed sensor input connect
1 oxygen sensor input connect
1 parallel connect
Output device: 6 ignition output connect
1 electronic throttle output connect
1 high/low switch conncet
Vibration condition :<80Hz
Working temperature:–20℃~+70℃
Shock: 2G
Protect degree:IP65
Dimension: 258*65.8*174mm

KZ系列电机集成控制阀

电机集成控制阀是一个转角电机驱动的节气门，简称为控制阀。该控制阀与本公司生产的数字控制器OT3120A、OT3130型号配套使用，可实现开环与闭环控制，常用于燃气发动机调速或空燃比控制。阀直径有Φ45mm、Φ55mm、Φ65mm、Φ75mm、Φ85mm、Φ110mm等规格,适用于200KW～1000KW燃气发动机。产品具有结构紧凑，节约空间，安装保养简便等特点。

位置控制阀的主要功能是将控制器输出的位置信号转换成指定的转角位置。转角电机的输入是电信号，输出是机械转动。机械转动量（转角）与输入信号成比例关系。

KZ series motor integrated control valve

The engine intake control valve is a combination of a corner motor and a disk valve with a corresponding diameter, referred to as a position control valve. This position control valve is used together withOT3120A、 OT3130 controller or other standard position signals produced by the company. It can realize open-loop and closed-loop control, and is often used for gas engine speed control or air-fuel ratio control. With diameter Φ45mm、 Φ55mm、 Φ65mm、 Φ75mm、 Φ85mm、 Φ110mm,it suitable for 200kw~1000KW gas engine. Our products functions compact structure, space saving and easy installation and maintenance.

The main function of the position control valve is to convert the position signal output by the controller into the specified corner position. The input of the angle motor is an electrical signal, and the output is a mechanical rotation. The amount of mechanical rotation (rotation angle) is proportional to the input signal.

主要技术参数

- 电源：20 VDC～32 VDC（24 VDC标称）
- 输出电流：4A持续；10A峰值，可持续30秒
- 工作温度范围：－40℃～＋100℃
- 储存温度范围：－55℃～＋125℃
- 冲击：GJB150.16–1986 军用设备环境试验方法（冲击试验）
- 振动：GJB150.16–1986 军用设备环境试验方法（振动试验）
- 湿度：38℃时，95%

Main Specifications

Power supply :20 VDC ～32 VDC (24 VDC nominal)
Output current: 4A continuous; 10A peak, last 30 seconds
Operating temperature range: –40°C~+100°C
Storage temperature range: -55°C~+125°C
Shock:GJB150.16-1986 Environmental test method for military equipment (shock test)
Vibration :GJB150.16-1986 Environmental test method for military equipment (vibration test)
Humidity: at 38 ° C, 95%



KZ55电机集成控制阀

Motor integrated control valve KZ55

主要技术参数

- 最大扭矩：5Nm
- 外形尺寸：197x80x72mm
- 孔径：55mm

Main Specifications

Maximum torque: 5Nm
Dimension: 197*80*72mm
Diameter:55mm



KZ75电机集成控制阀

Motor integrated control valve KZ75

主要技术参数

- 最大扭矩：8Nm
- 外形尺寸：278x115x70mm
- 孔径：75mm

Main Specifications

Maximum torque: 8Nm
Dimension:278*115*70mm
Diameter:75mm



KZ110电机集成控制阀

Motor integrated control valve KZ110

主要技术参数

- 最大扭矩：16Nm
- 外形尺寸：399x179x135mm
- 孔径：110mm

Main Specifications

Maximum torque: 16Nm
Dimension: 399*179*135mm
Diameter:110mm

E
燃气发动机
节气门
Gas engine throttle

QZ系列驱动控制阀

QZ系列发动机进气控制阀是由一个转角电机和相应直径的碟阀组合而成的，简称为驱动控制阀，常用于燃气发动机调速或空燃比控制。该位置控制阀的主要功能是将模拟量/数字量输入信号转换成指定的转角位置输出。机械转动量（转角）与输入信号成比例关系。

QZ Series drive control valve

The QZ series engine intake control valve is composed of a corner motor and a butterfly valve of the corresponding diameter, referred to as a position control valve, and is often used for gas engine speed control or air-fuel ratio control. The main function of the position control valve is to convert the analog/digital input signal into the specified angle position output. The amount of mechanical rotation (rotation angle) is proportional to the input signal.

主要技术参数

- 电源：20～32VDC，（24 VDC标称）
- 控制方式:4~20mA、PWM、0~5V
- 控制精度:≤0.2°
- 开度范围:0~75°
- 开度反馈:4~20mA
- 工作温度范围:－40℃～ ＋100℃
- 储存温度范围:－55℃～ ＋125℃
- 湿度：38℃时，95%
- 防护等级:IP67

Main Specifications

Power:20~32VDC
QZ series A control:4~20mA、PWM、0~5V
Control accuracy:≤0.2°
Open range:0~75°
Open feedback:4~20mA
Working Temperature: －40°C～ ＋100°C
Storage Temperature:－55°C～ ＋125°C
Humidity: 95% at 38°C
Protection degree:IP67



QZ160B驱动控制阀

- 最大扭矩：最大20Nm
- 输出电流：6A持续；10A峰值，可持续30秒
- 阀门口径：160mm
- 外形尺寸：500mmx230mmx150mm

QZ160B drive control valve

Max torque: Max 20Nm
Output current: 6A continuous; 10A peak, lasting 30 seconds
Valve diameter: 160mm
Dimension:500mmx230mmx150mm



QZ200B驱动控制阀

- 最大扭矩：最大25Nm
- 输出电流：6A持续；10A峰值，可持续30秒
- 阀门口径：200mm
- 外形尺寸：539mmx310mmx140mm

QZ200B drive control valve

Max torque: Max 25Nm
Output current: 6A continuous; 10A peak, lasting 30 seconds
Valve diameter: 200mm
Dimension:539mmx310mmx140mm



QZ120A驱动控制阀

- 最大扭矩：最大20Nm
- 输出电流：6A持续；10A峰值，可持续30秒
- 阀门口径：120mm
- 外形尺寸：466mmx179mmx135mm

QZ120A drive control valve

Max torque: Max 20Nm
Output current: 6A continuous; 10A peak, lasting 30 seconds
Valve diameter: 120mm
Dimension:466mmx179mmx135mm



QZ250A驱动控制阀

- 最大扭矩：最大30Nm
- 输出电流：6A持续；10A峰值，可持续30秒
- 阀门口径：250mm
- 外形尺寸：677mmx350mmx220mm

QZ250A drive control valve

Max torque: Max 30Nm
Output current: 6A continuous; 10A peak, lasting 30 seconds
Valve diameter: 250mm
Dimension:677mmx350mmx220mm