

精确可靠的检测-TOFI Reliably monitoring presence

托菲在有检测，位置检测传感器，运动控制传感器，伺服系统的研发和生产方面有十多年的应用经验。凭借客户第一的理念、稳定的高品质和强大的创新能力，托菲为许多行业和应用场合开发定制解决方案。无论是产品规格、尺寸、性能、产品成本考虑。我们都能为您提高产品市场竞争力提供传感器定制化的创新性传感器解决方案。

TOFI has more than ten years application experience in the production and development of presence detection, position detection sensors; motion control sensors and servo system. Rely on customers first; stable high quality and strong innovation, TOFI supplied develop customized solutions for various industries and applications. TOFI can supply the innovative customized sensor solution to help you improve product competitiveness from products dimensions, size, performance, costs and other aspects.

编码器/角度传感器

Encoder and angular sensor

坚固、耐用、精确

Ruggedized, Durable, Precise



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关注托菲公众号
了解最新产品资讯

运动控制传感器-编码器

Motion control sensor-Encoder

客户定制方案—“通过定制产品，TOFI已经为许多客户提高了竞争优势。”

Customized solutions—“Many customers have increased competitive advantages by TOFI customized products.”

最合适您的产品是我们无限的追求

Most suitable products for you are our unlimited pursuit.

运动控制传感器 MOTION CONTROL SENSOR

托菲提供各种编码器解决方案-定位、速度和角度测量, 如果您需要调节、控制和监测旋转或直线运动过程, 以确定电机和主轴的角度位置、旋转方向和转速, 那么托菲将是您的首选供应商之一。无论是微型旋转编码器、高分辨率编码器还是带重载外壳的编码器, 无论是计数器还是主轴定位系统, 托菲都能为您提供适合的产品。种类丰富、结构紧凑、带有集成控制和调节电子器件的驱动器系列使托菲在定位应用领域的技术能力更加全面。

TOFI provides various encoder solutions - positioning, speed and angle measurements. If you need to adjust, control and monitoring rotary or linear motion process to confirm the angular position, rotation direction and speed of the motor and spindle, then TOFI will be your preferred supplier. Not only miniature rotary encoder, high-resolution encoder or encoder with heavy-duty housing, but also counter and spindle positioning systems, TOFI can help to provide you right products. Variety, compact drive series with integrated control and regulation electronics enable TOFI more comprehensive technical capabilities in positioning applications.

客户定制解决方案 CUSTOMER-SPECIFIC SOLUTIONS

任何一种多功能产品系列也不可能为每一种应用都提供最佳的解决方案。市场上现有的解决方案往往并不能满足所有应用要求, 因此常常需要采用新的方法。这正是我们的研发部门一直与客户保持密切合作的原因。我们的创新专家致力于寻找满足特殊应用需求的优化解决方案, 从而为客户提供个性化的新组态方式——从特殊的机械设计到全新的系统。创新性的解决方案还可以帮助您在激烈的市场竞争中保持领先地位。

我们很高兴能为您提供建议!

No multifunctional product is versatile enough to offer the perfect solution for any application. Existing solutions on the market often can not meet all application requirements, so new approaches are often required. This is why our R&D department has been working closely with our customers. Our innovation experts are dedicated to finding optimized solutions to meet specific application requirements, thus providing customers with personalized new configurations -- from special mechanical designs to brand new systems. Innovative solutions can also help customer stay ahead of the competition.

We are happy to service for you!



增量式编码器 Incremental encoders
重载型编码器 Heavyduty encoders
绝对值编码器 Absolute encoders
防爆型编码器 EX encoders
分体式无轴承编码器 No Axle Splitting Encoder
转速传感器 Rotation sensors
旋转变压器 Rotary transformer

速度监视器 Speed monitors
拉线编码器 Linear encoders
特殊编码器 Special encoders
磁致伸缩位移传感器 Magnetostrictive displacement sensors
振动传感器 Vibration diagnosis and monitor
编码器附件 Encoder accessories
特殊编码器客户定制 Customized encoders

目录 CONTENTS



增量式编码器

P5—22

增量式编码器
精确的光感应技术，集成光电系统，不易破碎的码盘

尺寸 size 30...38 mm
尺寸 size 50 mm
尺寸 size 58 mm
尺寸 size 62, 66, 76, 90mm
大尺寸 孔径 Aperture 25...45mm
大尺寸 孔径 Aperture 15...65mm

Incremental encoders
Precise optical sensing technology
Integrated photoelectrical system
Unbreakable code disk



重载型编码器

P22—26

重载型编码器
在苛刻恶劣环境下应用的，坚固的重载型编码器技术。

增量式
尺寸 size 68mm.....90mm
尺寸 size 90...115mm
尺寸 size 100...127*102mm

Heavy-duty encoders
Stable, using in the harsh and bad surrounding, heavy-duty encoder technology



超速开关、编码器 超速开关组合

P27—28

超速开关、编码器+超速开关组合
坚固、耐用的产品组合。融合了多种感应原理或者双编码器，满足特殊应用和实现特殊安全功能。

超速开关 speed switches MS115
尺寸 法兰 size Flange 115mm
编码器+超速开关组合
Encoder + Speed switches combinations

**Speed switches
Encoder + Speed switches combinations**
Speed switches, Encoder + Speed switch combinations, Product combinations are extremely robust, failsafe and durable . These products merging several sensing methods or twin encoders can take over specific tasks and safety functions.



绝对值编码器

P31—37

绝对值编码器
精确的位置及角度反馈。多种感应原理：光学、磁性、电感式。

尺寸 size 38mm
尺寸 size 42mm, 50mm
尺寸 size 50mm.....58mm
尺寸 size 87mm.....120mm

Absolute encoders
Precise position and angle feedback
much sensing principle: optical, manetic, inductive



防爆编码器

P38—40

防爆型编码器
主要用于危险区域设备的旋转速度反馈。防爆等级有本安型+粉尘型复合防爆编码器。

尺寸 size 68...100 mm
实心轴+空心轴安装
尺寸 size 115mm

Explosion-proof encoders
Mainly used for rotary speed feedback of the equipment in the harsh areas. Explosion levels: Intrinsically Safe and dust type composite proof encoder



无轴承分体式编码器 转速传感器 旋转变压器

P42—48

无轴承分体式编码器
高转速无磨损。

转速传感器
旋转变压器
精密电位计

No bearing split encoders
High speed no wear

**Rotation sensors
Speed monitors
Rotary transformer
Precision rotary potentiometer**



拉线编码器

P49—51

拉线编码器
线性测量技术，带编码器或模拟量传感器的拉线盒装置。

不锈钢编码器
信号处理器
倾角传感器
振动传感器 HART
安装附件

Stainless steel encoder
Signal Processor
Tilt sensor
Vibration Sensor
Mounting Accessories

linear encoders
linear measurement technology
linear box with encoder or analog sensor



增量式编码器

INCREMENTAL ENCODERS

EDK100H系列空心轴增量式编码器



增量式编码器 Incremental encoders
尺寸30...38mm Housing size 30...38mm

运动控制传感器
增量式编码器

Motion Control Transducer
Incremental encoders

精确的光感应技术与稳固的磁感应技术

- 轴型, 盲孔型
- 特别适合空间狭窄的环境



产品系列 Product family	ESG38S	ESG3801S	ESG3802S	ESG3804S
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ38mm	Φ38mm	Φ38mm	Φ38mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft
轴径 Shaft	Φ6mm L=12.5	Φ4mm	Φ6mm L=15	Φ6mm
脉冲/圈 Pulse / ring	≤2500PPR	≤2500PPR	≤2500PPR	≤2500PPR
工作温度 Operating temperature	-20°C~+70°C	-20°C~+70°C	-20°C~+70°C	-20°C...+70°C
防护等级 Protection	IP54/IP65	IP54	IP54/IP65	IP65
最大转速 Maximum speed	6000RPM	6000RPM	6000RPM	6000RPM
轴负载 shaft load	25N Axial;50N Radial	25N Axial;50N Radial	25N Axial;50N Radial	25N Axial;50N Radial
特性 Features	尺寸38轴型 housing size 38mm,shaft	尺寸38轴型 housing size 38mm,shaft	尺寸38轴型 housing size 38 shaft	尺寸38轴型 适用高防护等级环境 Housing size 38 shaft Suitable for high protection level environment

ESK系列光电技术

ESK系列增量式编码器采用创新的光学感应方法, 确保在整个温度范围内均超高的精度和优质稳定的信号。
该技术的核心是一个专为编码器设计的高度集成的整体式OptoASIC。由于分立元件数量较少, 产品的抗冲击和抗振性能方面的应用可靠性大大提高。

Precise optical sensing technology and robust magnetic sensing technology

- Shaft, blind hollow shaft
- Especially for tight space



产品系列 Product family	ESG3803S	ESG38B	ESG3801B	ESG3802B
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ38mm	Φ38mm	Φ38mm	Φ38mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	实心轴 Solid shaft	半空心轴 half hollow shaft	半空心轴 half hollow shaft	半空心轴 half hollow shaft
轴径 Shaft	Φ6mm	Φ5、Φ6、Φ8mm	Φ5mm 深Φ17mm	Φ8mm
脉冲/圈 Pulse / ring	≤2500PPR	≤2500PPR	≤2500PPR	≤2500PPR
工作温度 Operating temperature	-20°C~+70°C	-20°C~+70°C	-20°C~+70°C	-20°C~+70°C
防护等级 Protection	IP54	IP54/IP65	IP54/IP65	IP54
最大转速 Maximum speed	6000RPM	6000RPM	6000RPM	6000RPM
轴负载 shaft load	25N Axial;50N Radial	25N Axial;50N Radial	25N Axial;50N Radial	25N Axial;50N Radial
特性 Features	尺寸38轴型 housing size 38 shaft	尺寸38盲孔, 双翼弹性 支架安装 housing size 38mm blind hollow shaft, elastic wings Bracket mounting	尺寸38盲孔, 双翼弹性 支架安装 housing size 38mm blind hollow shaft, elastic wings Bracket mounting	尺寸38厚度35.5盲孔, 双 翼弹性支架安装 housing size 38 thickness of 35.5 blind hollow shaft, the elastic bracket wings

ESK series photoelectric technology

ESK series incremental encoders using innovative optical sensing method, to ensure the highest precision and high quality and stable signal. The core of the technology is the highly integrated monolithic optoASIC, especially designed for encoders. Due to the reducing discrete components, attack and shock resistance of the product is greatly improved.

精确的光感应技术与稳固的磁感应技术

- 轴型, 全金属外壳, 抗震动大

Precise optical sensing technology and robust magnetic sensing technology

- Solid shaft, all-metal housing, shock resistance



产品系列 Product family	ESG3803B..../X	ESG3805B	ECK38S	ECK3801S	ESG50S
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ38mm	Φ38mm	Φ38mm	Φ38mm	Φ50mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	9-26VDC	9-26VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	Push-Pull/HTL NPN Open Collector	Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	半空心轴 Half Hollow shaft	半空心轴 Half Hollow shaft	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft
轴径 Shaft	Φ8mm	Φ6、Φ8mm	Φ6mm L=12.5	Φ6mm L=15	Φ8mm
脉冲/圈 Pulse / ring	≤2500PPR	≤2500PPR	≤600PPR	≤600PPR	≤2500PPR
工作温度 Operating temperature	-20°C~+70°C	-20°C~+70°C	-20°C~+70°C	-20°C~+70°C	-20°C~+70°C
防护等级 Protection	IP54	IP54	IP54	IP54	IP54/IP65
最大转速 Maximum speed	6000RPM	6000RPM	6000RPM	6000RPM	6000RPM
轴负载 shaft load	25N Axial;50N Radial	20N Axial;40N Radial	24N Axial;40N Radial	24N Axial;40N Radial	30N Axial;60N Radial
特性 Features	尺寸38盲孔型, 柔性支架安装, 适用于纺织机械行业 Housing size 38 blind hollow Shaft, elastic wings bracket Mounting. Applicable to textile machinery industry	尺寸38盲孔轴, 柔性支架安装, 适用于狭小空间 Housing size 38 blind hollow Shaft, elastic wings bracket Mounting.	尺寸38轴型, 不易破碎的码 盘 housing size 38mm, shaft, the code disc is not easily broken	尺寸38轴型, 不易破碎的码 盘 housing size 38mm, shaft, the code disc is not easily broken	尺寸50轴型 housing size 50mm, shaft

ESK系列光电技术

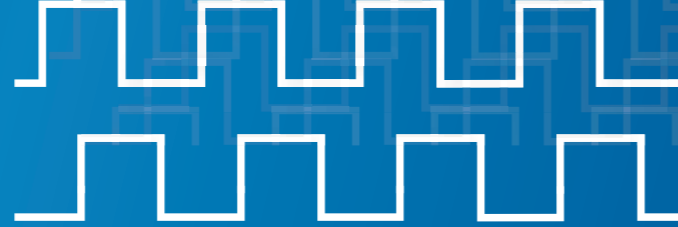
ESK系列增量式编码器采用创新的光学感应方法, 确保在整个温度范围内均超高的精度和优质稳定的信号。该技术的核心是一个专为编码器设计的高度集成的整体式OptoASIC。由于分立元件数量较少, 产品的抗冲击和抗振性能方面的应用可靠性大大提高。

精确的光感应技术与稳固的磁感应技术

- 轴型, 盲孔型或通孔
- 全金属外壳

Precise optical sensing technology and robust magnetic sensing technology

- Solid, blind hollow or through hollow shaft
- All-metal housing



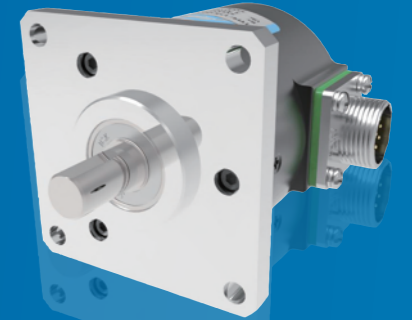
产品系列 Product family	ESG5001S	ESK50S	ESK5001S	ESK5002S
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ50mm	Φ50mm	Φ50mm	Φ50mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft
轴径 Shaft	Φ8mm L=25	Φ8mm	Φ8mm L=25	Φ6mm
脉冲/圈 Pulse / ring	≤2500PPR	≤1200PPR	≤1200PPR	≤1200PPR
工作温度 Operating temperature	-20°C~+70°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
防护等级 Protection	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65
最大转速 Maximum speed	6000RPM	6000RPM	6000RPM	6000RPM
轴负载 shaft load	30N Axial;60N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial
特性 Features	尺寸50长轴型 housing size 50mm, long-shaft	尺寸50轴型,允许较大的轴向跳动 housing size 50mm, allowing larger axial beat	尺寸50长轴型,允许较大的轴向跳动 housing size 50mm, long-shaft , allowing larger axial beat	尺寸50, 安装台阶Φ20mm轴型,允许较大的轴向跳动 housing size50, installation steps with 20mmShaft, allowing larger axial beat

ESK series photoelectric technology

ESK series incremental encoders using innovative optical sensing method, to ensure the highest precision and high quality and stable signal. The core of the technology is the highly integrated monolithic optoASIC, especially designed for encoders. Due to the reducing discrete components, attack and shock resistance of the product is greatly improved.

精确的光感应技术与稳固的磁感应技术

- 轴型, 盲孔型或通孔
- 全金属外壳



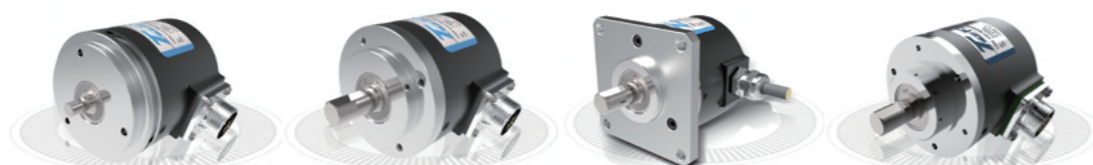
产品系列 Product family	ESK5004SK25	ESK5005S	ESG58S	ESG5801S	ESG5802S
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ50mm	Φ50mm	Φ58mm	Φ58mm	Φ58mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft
轴径 Shaft	Φ25mm	Φ6mm	Φ10mm	Φ10mm	Φ10mm
脉冲/圈 Pulse / ring	≤1200PPR	≤1200PPR	≤5000PPR	≤5000PPR	≤5000PPR
工作温度 Operating temperature	-40°C~+85°C	-40°C~+85°C	-20°C~+70°C	-20°C~+70°C	-20°C~+70°C
防护等级 Protection	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65
最大转速 Maximum speed	6000RPM	6000RPM	10000PRM	10000PRM	10000PRM
轴负载 shaft load	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial
特性 Features	尺寸50轴型,双翼弹性支架安装,允许较大的轴向跳动 housing size 50mm,shaft wings of the elastic bracket, allowing larger axial beat	尺寸50轴型,安装台阶Φ20mm,允许较大的轴向跳动 housing size 50mm, nstallation steps with 20mm, allowing larger axial beat	尺寸58轴型, 夹紧法兰 housing size 58mm, shaft clamping flange	尺寸58,安装台阶Φ36mm轴型,夹紧法兰 housing size 58mm, installation steps with 36mm shaft, clamping flange	尺寸58,安装台阶Φ36mm轴型,夹紧带同步法兰 housing size 58mm, installation steps with 36mm shaft, synchro or clamping flange

ESK系列光电技术

ESK系列增量式编码器采用创新的光学感应方法, 确保在整个温度范围内均超高的精度和优质稳定的信号。该技术的核心是一个专为编码器设计的高度集成的整体式OptoASIC。由于分立元件数量较少, 产品的抗冲击和抗振性能方面的应用可靠性大大提高。

Precise optical sensing technology and robust magnetic sensing technology

- solid, blind hollow or through hollow shaft
- All-metal housing



产品系列 Product family	ESG5803S	ESG5804S	ESG5805S	ESK58S
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ58mm	Φ58mm	Φ58mm 法兰Φ63.5*63.5mm	Φ58mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft
轴径 Shaft	Φ6mm	Φ10mm	Φ9.525、Φ10mm	Φ10mm
脉冲/圈 Pulse / ring	≤5000PPR	≤5000PPR	≤5000PPR	≤1500PPR
工作温度 Operating temperature	-20°C~+70°C	-20°C~+70°C	-20°C~+70°C	-40°C~+85°C
防护等级 Protection	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65
最大转速 Maximum speed	10000PRM	10000PRM	6000PRM	6000RPM
轴负载 shaft load	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial
特性 Features	尺寸58,安装台阶Φ50mm 轴型,同步法兰 Housing size 58, installation steps with 50mm solid shaft, synchro flange	尺寸58,安装台阶Φ40mm 轴型 Housing size 58, installation steps with 40mm solid shaft	尺寸58轴型,方形法兰安装, 允许较大的轴向跳动 Housing size 58, clamping flange, allowing larger axial beat	尺寸58轴型, 夹紧法兰, 允许较大的轴向跳动 Housing size 58, shaft, clamping flange, allowing larger axial beat

ESK series photoelectric technology

ESK series incremental encoders using innovative optical sensing method, to ensure the highest precision and high quality and stable signal. The core of the technology is the highly integrated monolithic optoASIC, especially designed for encoders. Due to the reducing discrete components, attack and shock resistance of the product is greatly improved.

精确的光感应技术与稳固的磁感应技术

- 轴型, 盲孔型或通孔
- 全金属外壳



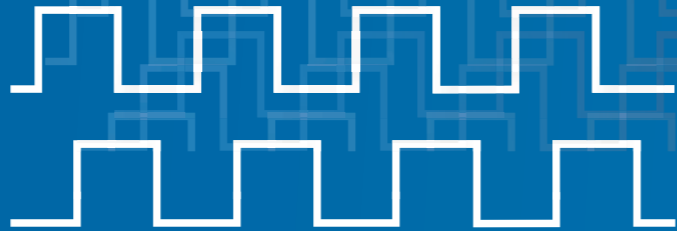
ESK5801S	ESK5802S	ESK5803S	ESK5804SK	ESK5805S
光电 Optical	光电 Optical	光电 Optical	光电 Optical	光电 Optical
Φ58mm	Φ58mm	Φ58mm	Φ58mm 法兰68*68mm	Φ58mm 法兰63.5*63.5mm
5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft	实心键槽轴 Solid shaft with keyway	实心轴 Solid shaft
Φ10mm	Φ10mm	Φ6mm	Φ15mm	Φ9.52、Φ10mm
≤1500PPR	≤1500PPR	≤1500PPR	≤1500PPR	≤1500PPR
-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65
6000RPM	6000RPM	6000RPM	6000RPM	6000RPM
40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial
尺寸58,安装台阶Φ36mm 轴型,夹紧法兰,允许较大的轴向跳动 Housing size 58, installation steps with 36mm solid shaft, clamping flange, allowing larger axial beat	尺寸58,安装台阶Φ36mm 轴型,夹紧带同步法兰,允许较大的轴向跳动 Housing size 58, installation steps with 36mm axis type, clamping or synchro flange, allowing larger axial beat	尺寸58,安装台阶Φ50mm 轴型,同步法兰,允许较大的轴向跳动 Housing size 58, installation steps with 50mm solid shaft, synchro flange, allowing larger axial beat	尺寸58,安装台阶Φ50mm 轴型,方法兰,允许较大的轴向跳动 Housing size 58, installation steps with 50mm solid shaft, square flange, allowing larger axial beat	尺寸58轴型,方法兰,允许较大的轴向跳动 Housing size 58mm, shaft, square flange, allowing larger axial beat

ESK系列光电技术

ESK系列增量式编码器采用创新的光学感应方法, 确保在整个温度范围内均超高的精度和优质稳定的信号。该技术的核心是一个专为编码器设计的高度集成的整体式OptoASIC。由于分立元件数量较少, 产品的抗冲击和抗振性能方面的应用可靠性大大提高。

Precise optical sensing technology and robust magnetic sensing technology

- solid, blind hollow or through hollow shaft
- All-metal housing



产品系列 Product family	ESK5806S	EDG58S	EDG5801S	EDG5802S
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ58mm	Φ58mm	Φ58mm	Φ63.5mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft
轴径 Shaft	Φ10mm	Φ10mm	Φ10mm	Φ8mm、Φ10mm
脉冲/圈 Pulse / ring	≤1500PPR	≤5000PPR	≤5000PPR	≤5000PPR
工作温度 Operating temperature	-40°C~+85°C	-20°C~+70°C	-20°C~+70°C	-20°C~+70°C
防护等级 Protection	IP54/IP65	IP65/IP67	IP65/IP67	IP65/IP67
最大转速 Maximum speed	6000RPM	6000RPM	6000RPM	6000RPM
轴负载 shaft load	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial
特性 Features	尺寸58, M5螺栓固定轴型, 双翼弹性支架安装, 允许较大的轴向跳动 Housing size 58mm, M5 bolt axis, shaft wings of the elastic bracket, allowing larger axial beat	尺寸58, 工业型编码器轴型, 夹紧法兰 Housing size 58, industrial encoder solid shaft, clamping flange	尺寸58, 工业型编码器轴型, 夹紧法兰, 接线盒出线 Housing size 58, industrial encoder solid shaft, clamping flange, junction box connected	尺寸58, 工业型编码器轴型, 夹紧法兰, 接线盒出线 Housing size 58, industrial encoder solid shaft, clamping flange, junction box connected

ESK series photoelectric technology

ESK series incremental encoders using innovative optical sensing method, to ensure the highest precision and high quality and stable signal. The core of the technology is the highly integrated monolithic optoASIC, especially designed for encoders. Due to the reducing discrete components, attack and shock resistance of the product is greatly improved.

精确的光感应技术与稳固的磁感应技术

- 轴型, 盲孔型或通孔
- 全金属外壳



产品系列 Product family	EDG5803S	EDK58S	EDK5801S	EDK5802S	ESG58H
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ58mm	Φ58mm	Φ58mm	Φ58mm	Φ58mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft	空心轴 Hollow shaft
轴径 Shaft	Φ6mm	Φ10mm	Φ10mm	Φ6mm	Φ10、Φ12、Φ14mm
脉冲/圈 Pulse / ring	≤5000PPR	≤1500PPR	≤1500PPR	≤1500PPR	≤5000PPR
工作温度 Operating temperature	-20°C~+70°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-20°C~+70°C
防护等级 Protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP54/IP65
最大转速 Maximum speed	6000RPM	6000RPM	6000RPM	6000RPM	6000RPM
轴负载 shaft load	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial
特性 Features	尺寸58, 工业型编码器, 安装台阶Φ50, 轴型, 同步法兰 Housing size 58, industrial encoder, installation steps with 50mm solid shaft, synchro flange	尺寸58, 工业型编码器轴型, 夹紧法兰, 允许较大的轴向跳动 Housing size 58, industrial encoder solid shaft, clamping flange, allowing larger axial beat	尺寸58, 工业型编码器, 安装台阶Φ36mm轴型, 夹紧带同步法兰, 允许较大的轴向跳动 Housing size 58, industrial encoder, installation steps with 36mm solid shaft, clamping or synchro flange, allowing larger axial beat	尺寸58, 工业型编码器, 安装台阶Φ50mm轴型, 同步法兰, 允许较大的轴向跳动 Housing size 58, industrial encoder, installation steps with 50mm solid shaft, synchro flange, allowing larger axial beat	尺寸58通孔型, 柔性支架安装 Housing size 58, through hollow shaft, flexible bracket mounted

ESK系列光电技术

ESK系列增量式编码器采用创新的光学感应方法, 确保在整个温度范围内均超高的精度和优质稳定的信号。该技术的核心是一个专为编码器设计的高度集成的整体式OptoASIC。由于分立元件数量较少, 产品的抗冲击和抗振性能方面的应用可靠性大大提高。

Precise optical sensing technology and robust magnetic sensing technology

- solid, blind hollow or through hollow shaft
- All-metal housing



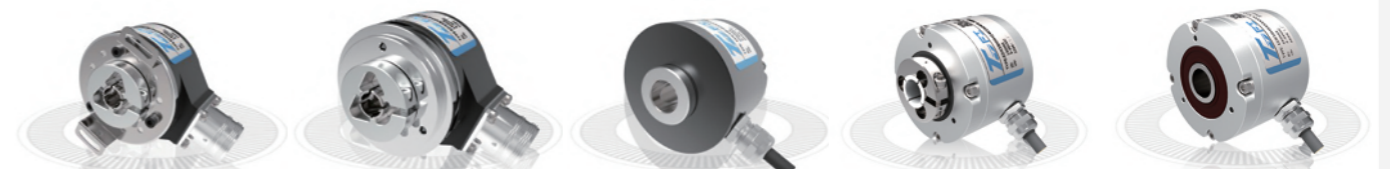
产品系列 Product family	ESG5801H	ESG5802H	ESK58H	ESK5801H
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ58mm	Φ58mm	Φ58mm	Φ58mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	空心轴 Hollow shaft	空心轴 Hollow shaft	空心轴 Hollow shaft	空心轴 Hollow shaft
轴径 Shaft	Φ10、Φ12、Φ14mm	Φ10、Φ12、Φ14mm	Φ10、Φ12、Φ14mm	Φ12mm
脉冲/圈 Pulse / ring	≤5000PPR	≤5000PPR	≤1500PPR	30PPR
工作温度 Operating temperature	-20°C~+70°C	-20°C~+70°C	-40°C~+85°C	-40°C~+85°C
防护等级 Protection	IP54/IP65	IP54	IP54/IP65	IP54/IP65
最大转速 Maximum speed	6000RPM	6000RPM	6000RPM	6000RPM
轴负载 shaft load	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial
特性 Features	尺寸58通孔型,柔性支架安装,带同步法兰 Housing size 58, through hollow shaft, flexible bracket mounted, synchro flange	尺寸58通孔型,柔性支架安装 Housing size 58, through hollow shaft, flexible bracket mounted	尺寸58通孔型,柔性支架安装,允许较大的轴向跳动 Housing size 58, through hollow shaft, flexible bracket mounted, allowing lager axial beat	尺寸58通孔型,柔性支架安装,允许较大的轴向跳动 Housing size 58, through hollow shaft, flexible bracket mounted, allowing lager axial beat

ESK series photoelectric technology

ESK series incremental encoders using innovative optical sensing method, to ensure the highest precision and high quality and stable signal. The core of the technology is the highly integrated monolithic optoASIC, especially designed for encoders. Due to the reducing discrete components, attack and shock resistance of the product is greatly improved.

精确的光感应技术与稳固的磁感应技术

- 轴型,盲孔型或通孔
- 全金属外壳



产品系列 Product family	EDG58H	EDG5801H	EDK5801H	EDK5802H	EDK5803H
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ58mm	Φ58mm	Φ58mm	Φ58mm	Φ58mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	空心轴 Hollow shaft	空心轴 Hollow shaft	空心轴 Hollow shaft	空心轴 Hollow shaft	空心轴 Hollow shaft
轴径 Shaft	Φ10、Φ12、Φ14mm	Φ10、Φ12、Φ14mm	Φ10、Φ12、Φ14mm	Φ10、Φ12、Φ14mm	Φ14mm
脉冲/圈 Pulse / ring	≤5000PPR	≤5000PPR	≤1200PPR	300...1200PPR	300...1200PPR
工作温度 Operating temperature	-20°C~+70°C	-20°C~+70°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
防护等级 Protection	IP65/IP67	IP65/IP67	IP65/IP67	IP66	IP66
最大转速 Maximum speed	6000RPM	6000RPM	6000RPM	6000RPM	6000RPM
轴负载 shaft load	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial
特性 Features	尺寸58,工业型编码器通孔型,柔性支架安装 Housing size 58, industrial encoder, through hollow shaft, flexible bracket mounted	尺寸58,工业型编码器通孔型,柔性支架安装 Housing size 58, industrial encoder, through hollow shaft, flexible bracket mounted	尺寸58,工业型编码器通孔型,柔性支架安装,允许较大的轴向跳动 Housing size 58, industrial encoder, through hollow shaft, flexible bracket mounted, allowing lager axial beat	尺寸58,工业型编码器通孔型,柔性支架安装,允许较大的轴向跳动 Housing size 58, industrial encoder, through hollow shaft, flexible bracket mounted, allowing lager axial beat.	尺寸58,工业型编码器通孔型,柔性支架安装,允许较大的轴向跳动 Housing size 58, industrial encoder, through hollow shaft, flexible bracket mounted, allowing lager axial beat.

ESK系列光电技术

ESK系列增量式编码器采用创新的光学感应方法,确保在整个温度范围内均超高的精度和优质稳定的信号。该技术的核心是一个专为编码器设计的高度集成的整体式OptoASIC。由于分立元件数量较少,产品的抗冲击和抗振性能方面的应用可靠性大大提高。

Precise optical sensing technology and robust magnetic sensing technology

- solid, blind hollow or through hollow shaft
- All-metal housing



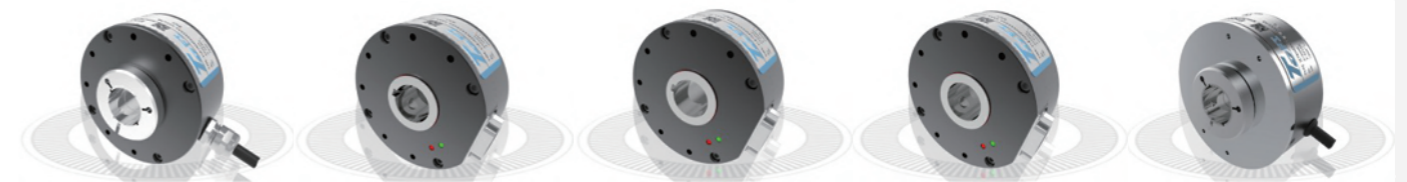
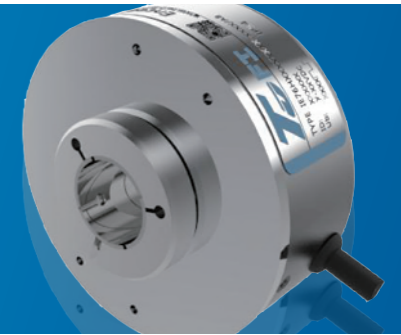
产品系列 Product family	ESG6601SM	ESG6602SM	EDK68S
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ66mm	Φ66mm	Φ68mm
电源 Voltage supply	5VDC, 5-30VDC, 9-26VDC	5VDC, 5-30VDC, 9-26VDC	5VDC, 5-30VDC, 9-26VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	实心螺纹轴 Threaded solid shaft	实心螺纹轴 Threaded solid shaft	实心轴 Solid shaft
轴径 Shaft	M10×1.5	M10×1.5	Φ6...10mm
脉冲/圈 Pulse / ring	≤5000PPR	≤5000PPR	200...1200PPR
工作温度 Operating temperature	-20°C...+70°C	-20°C...+70°C	-40~+85°C
防护等级 Protection	IP54/IP65	IP54/IP65	IP66
最大转速 Maximum speed	5000RPM	6000RPM	6000RPM
轴负载 shaft load	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial
特性 Features	尺寸66螺纹轴型,用于纺织 机械设备,允许较大的轴向跳动 Size 66, Screw shaft, Used in textile mechanical equipment. Allowing larger axial beat	尺寸66螺纹轴型,用于纺织 机械设备,允许较大的轴向跳动 Size 66, Screw shaft, Used in textile mechanical equipment. Allowing larger axial beat	尺寸68工业型编码器, 允许 较大的轴向跳动 Housing size 68, industrial encoder, Allowing larger axial beat.

ESK series photoelectric technology

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精确的光感应技术与稳固的磁感应技术

- 轴型, 盲孔型或通孔
- 全金属外壳



ESK76H	ESK76KS	ESK76HK	ESK76HS	IE76H
光电 Optical	光电 Optical	光电 Optical	光电 Optical	光电 Optical
Φ76mm	Φ76mm	Φ76mm	Φ76mm	Φ76mm
5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
空心轴 Hollow shaft	螺丝固定轴+键槽轴 Screw shaft + keyway shaft	键槽轴 keyway shaft	螺丝固定轴 Screw shaft	空心轴 Hollow shaft
Φ12、Φ20、Φ25mm	Φ20mm	Φ20mm	Φ20mm	Φ12、Φ20、Φ25mm
≤2048PPR	≤2048PPR	≤2048PPR	≤2048PPR	≤2048PPR
-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54
6000RPM	6000RPM	6000RPM	6000RPM	6000RPM
80N Axial;100N Radial	80N Axial;100N Radial	80N Axial;100N Radial	80N Axial;100N Radial	80N Axial;100N Radial
尺寸76通孔型,柔性支架安 装,允许较大的轴向跳动 Housing size 76, through hollow shaft, flexible bracket mounted, allowing lager axial beat	尺寸76通孔型,螺丝固定轴+ 键槽轴,柔性支架安装,允许 较大的轴向跳动 Housing size 76, through hollow shaft, Screw shaft + keyway shaft, flexible bracket mounted, allowing lager axial beat	尺寸76通孔型,键槽轴,柔性 支架安装,允许较大的轴向 跳动 Housing size 76, through hollow shaft, keyway shaft, flexible bracket mounted, allowing lager axial beat	尺寸76通孔型,螺丝固定轴, 柔性支架安装,允许较大的 轴向跳动 Housing size 76, through hollow shaft, Screw shaft, flexible bracket mounted, allowing lager axial beat	尺寸76通孔型,柔性支架安 装,允许较大的轴向跳动 Housing size 76, through hollow shaft, flexible bracket mounted, allowing lager axial beat

ESK、EDK系列光电技术

ESK、EDK系列增量式编码器采用创新的光学感应方法, 确保在整个温度范围内均超高的精度和优质稳定的信号。该技术的核心是一个专为编码器设计的高度集成的整体式OptoASIC。由于分立元件数量较少, 产品的抗冲击和抗振性能方面的应用可靠性大大提高。

Precise optical sensing and Robust magnetic sensing

- Solid shaft ,blind hollow or through hollow shaft
- All -metal housing



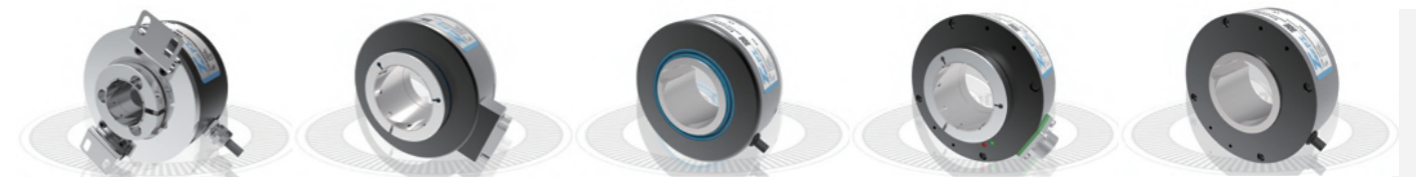
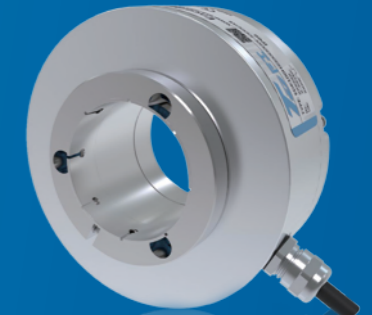
产品系列 Product family	IE76KS	IE76HK	IE76HS	ESG90H
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ76mm	Φ76mm	Φ76mm	Φ90mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	螺丝固定轴+键槽轴 Screw shaft + keyway shaft	键槽轴 keyway shaft	螺丝固定轴 Screw shaft	空心轴 Hollow shaft
轴径 Shaft	Φ20mm	Φ20mm	Φ20mm	Φ20、Φ25、Φ30mm
脉冲/圈 Pulse / ring	≤2048PPR	≤2048PPR	≤2048PPR	≤5000PPR
工作温度 Operating temperature	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-20°C~+70°C
防护等级 Protection	IP54	IP54	IP54/IP65	IP54/IP65
最大转速 Maximum speed	6000RPM	6000RPM	6000RPM	3500RPM
轴负载 shaft load	80N Axial;100N Radial	80N Axial;100N Radial	80N Axial;100N Radial	40N Axial;80N Radial
特性 Features	尺寸76通孔型,螺丝固定轴+键槽轴,柔性支架安装,允许较大的轴向跳动 Housing size 76, through hollow shaft, Screw shaft + keyway shaft, flexible bracket mounted, allowing larger axial beat	尺寸76通孔型,键槽轴,柔性支架安装,允许较大的轴向跳动 Housing size 76, through hollow shaft, keyway shaft, flexible bracket mounted, allowing larger axial beat	尺寸76通孔型,螺丝固定轴,柔性支架安装,允许较大的轴向跳动 Housing size 76, through hollow shaft, Screw shaft, flexible bracket mounted, allowing larger axial beat	尺寸90通孔型, 柔性支架安装 Housing size 90, through hollow shaft, flexible bracket mounted

ESK、EDK series photoelectric technology

ESK、EDK series incremental encoders using innovative optical sensing method, to ensure the highest precision and high quality and stable signal. The core of the technology is the highly integrated monolithic optoASIC, especially designed for encoders. Due to the reducing discrete components, attack and shock resistance of the product is greatly improved.

精确的光感应技术与稳固的磁感应技术

- 轴型, 盲孔型或通孔
- 全金属外壳



产品系列 Product family	ESG9001H	EE	EEK	ESK100H	ESK100HK
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ90mm	Φ100mm	Φ100mm	Φ100mm	Φ100mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	空心轴 Hollow shaft	空心轴 Hollow shaft	空心键槽轴 Hollow shaft keyway	空心轴 Hollow shaft	空心键槽轴 Hollow shaft keyway
轴径 Shaft	Φ20、Φ25、Φ30mm	Φ30、Φ35、Φ38、Φ40、Φ42、Φ45、Φ55mm	Φ30、Φ45mm	Φ25、Φ30、Φ35、Φ38、Φ40、Φ42、Φ45mm	Φ30、Φ45mm
脉冲/圈 Pulse / ring	≤5000PPR	≤3000PPR	≤3000PPR	≤3000PPR	≤3000PPR
工作温度 Operating temperature	-20°C~+70°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
防护等级 Protection	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65
最大转速 Maximum speed	3500RPM	6000RPM	6000RPM	6000RPM	6000RPM
轴负载 shaft load	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	100N Axial;200N Radial	100N Axial;200N Radial
特性 Features	尺寸90通孔型, 锁紧环与柔性支架安装, 允许较大的轴向跳动 Housing size 90, through hollow shaft, a locking ring and the flexible bracket mounted at the same side	尺寸100通孔型, 柔性支架安装, 允许较大的轴向跳动 Size 100 through hollow shaft flexible bracket mounted, allowing larger axial beat.	尺寸100键槽通孔型, 柔性支架安装, 允许较大的轴向跳动 Size 100 through hollow and keyway shaft, flexible bracket mounted, allowing larger axial beat.	尺寸100通孔型, 柔性支架安装, 允许较大的轴向跳动 Size 100 through hollow shaft flexible bracket mounted, allowing larger axial beat.	尺寸100键槽通孔型, 柔性支架安装, 允许较大的轴向跳动 Size 100 through hollow and keyway shaft, flexible bracket mounted, allowing larger axial beat.

ESK、EDK系列光电技术

ESK、EDK系列增量式编码器采用创新的光学感应方法, 确保在整个温度范围内均超高的精度和优质稳定的信号。该技术的核心是一个专为编码器设计的高度集成的整体式OptoASIC。由于分立元件数量较少, 产品的抗冲击和抗振性能方面的应用可靠性大大提高。

Precise optical sensing technology and robust magnetic sensing technology

- solid, blind hollow or through hollow shaft
- All-metal housing



产品系列 Product family	EDK100H	ESK90H	EDG100H	ESK120H
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ100mm	Φ90mm	Φ100mm	Φ120mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 5-30VDC 9-26VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	空心轴 Hollow shaft	空心轴 Hollow shaft	空心轴 Hollow shaft	空心轴 Hollow shaft
轴径 Shaft	Φ25, Φ30, Φ35, Φ38, Φ40, Φ42, Φ45mm	Φ25mm	Φ20, Φ25, Φ30mm	Φ50, Φ55, Φ60, Φ65mm
脉冲/圈 Pulse / ring	≤3000PPR	500...2500PPR	≤5000PPR	≤4096PPR
工作温度 Operating temperature	-40°C~+85°C	-40°C~+85°C	-20°C...+70°C	-40°C~+85°C
防护等级 Protection	IP66	IP65	IP66	IP54/IP65
最大转速 Maximum speed	4000RPM	3000RPM	3500RPM	6000RPM
轴负载 shaft load	100N Axial; 200N Radial	80N Axial; 100N Radial	40N Axial; 80N Radial	100N Axial; 200N Radial
特性 Features	尺寸100,工业型编码器通孔型,柔性 支架安装,允许较大的轴向跳动 Size 100 Industrial encoder through hollow shaft, flexible bracket mounted, allowing larger axial beat	尺寸90通孔型,柔性支架安装 Housing size 90, through hollow Shaft, flexible bracket mounted		尺寸120通孔型,柔性支架 安装,允许较大的轴向跳动 Size 120 through hollow shaft flexible bracket mounted, allowing larger axial beat.

重载型编码器 HEAVY-DUTY ENCODERS



EHK99重载型编码器

ESK、EDK series photoelectric technology

ESK、EDK series incremental encoders using innovative optical sensing method, to ensure the highest precision and high quality and stable signal. The core of the technology is the highly integrated monolithic optoASIC, especially designed for encoders. Due to the reducing discrete components, attack and shock resistance of the product is greatly improved.

精确的光感应技术, 集成光电系统, 不易破碎的码盘

- 轴型, 盲孔型或通孔
- 全金属外壳



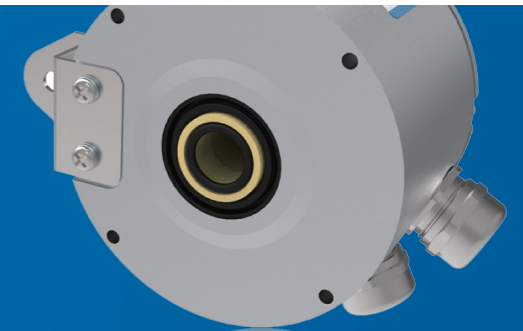
产品系列 Product family	EHK68S	EHK68H	EHK86	EHK86C
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ68mm	Φ68mm	Φ99mm	Φ99mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-30VDC	5VDC 9-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL	RS422/TTL Push-Pull/HTL
安装方式 Installation	实心轴 Solid shaft	空心轴 Hollow shaft	空心轴 Hollow shaft	空心轴 Hollow shaft
轴径 Shaft	Φ6、Φ8、Φ10mm	Φ10, Φ12, Φ14, Φ15mm	Φ12...16mm (Blind hollow shaft) Φ17mm (cone shaft 1:10)	Φ12...16mm (Blind hollow shaft) Φ17mm (cone shaft 1:10)
脉冲/圈 Pulse / ring	≤2500PPR	≤2048PPR	500...2500PPR	500...2500PPR
工作温度 Operating temperature	-40°C~+85°C	-40°C~+85°C	40°C...+100°C -40°C...+85°C 电缆输出	-25°C...+80°C
防护等级 Protection	IP65/IP67	IP66	IP66	IP66
最大转速 Maximum speed	3000RPM	3000RPM	≤6000RPM (mechanical)	≤6000RPM (mechanical)
轴负载 shaft load	70N Axial;140N Radial	70N Axial;140N Radial	≤200N axial; ≤300N radial	≤200N axial; ≤300N radial
特性 Features	尺寸68,重载型编码器轴型, 允许较大的轴向跳动 Size 68 Heavy Duty encode solid shaft, allowing larger axial beat.	尺寸68,重载型编码器通孔型, 柔性支架安装, 允许较大的轴向跳动 Size 68 Heavy Duty encode through hollow shaft flexible bracket mounted, allowing larger axial beat.	尺寸99, 重载型编码器盲孔型或锥孔型, 扭力杆安装, 允许较大的轴向跳动。功能检测系统 Size 99 Heavy Duty encode blind hollow or cone shaft with torque support flexible bracket mounted allowing larger axial beat. Function monitoring	尺寸99, 重载型编码器盲孔型或锥孔型, 扭力杆安装, 允许较大的轴向跳动。 Size 99 Heavy Duty encode blind hollow or cone shaft with torque support flexible bracket mounted allowing larger axial beat.

EHK系列光电技术

EHK系列增量式编码器采用创新的光学感应方法, 确保在整个温度范围内均超高的精度和优质稳定的信号。该技术的核心是一个专为编码器设计的高度集成的整体式OptoASIC。由于分立元件数量较少, 产品的抗冲击和抗振性能方面的应用可靠性大大提高。

Precise optical sensing , Integrated optical systems, Reliable coder disk

- Solid shaft ,blind hollow or through hollow shaft
- All -metal housing



产品系列 Product family	EHK86M	EHK90SK	EHK9001SK	EHK99H	EHK99HZ
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ99mm	Φ90mm	Φ90mm	Φ99mm	Φ99mm
电源 Voltage supply	5VDC 9-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-30VDC	5VDC 9-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL	RS422/TTL Push-Pull/HTL
安装方式 Installation	空心轴 Hollow shaft	实心轴 Solid shaft	实心轴 Solid shaft	空心轴 Hollow shaft	锥轴1:10 cone shaft 1:10
轴径 Shaft	Φ12...16mm (Blind hollow shaft) Φ17mm (cone shaft 1:10)	Φ11、Φ12、Φ15mm	Φ11、Φ12、Φ15mm	Φ12、Φ16mm	Φ17mm
脉冲/圈 Pulse / ring	500...2500PPR	≤2500PPR	≤2500PPR	≤2500PPR	≤2500PPR
工作温度 Operating temperature	-40°C...+100°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
防护等级 Protection	IP66	IP65/IP67	IP65/IP67	IP66	IP66
最大转速 Maximum speed	≤6000RPM (mechanical)	6000RPM	6000RPM	6000RPM	6000RPM
轴负载 shaft load	≤200N axial; ≤300N radial	70N Axial;140N Radial	70N Axial;140N Radial	100N Axial;300N Radial	100N Axial;300N Radial
特性 Features	尺寸99, 重载型编码器, 盲孔型或锥孔型, 扭力杆安装, 允许较大的轴向跳动。功能检测系统、冗余感应系统 Size 99 Heavy Duty encode blind hollow or cone shaft with torque support flexible bracket mounted allowing larger axial beat. Function monitoring Redundant sensing system with Two terminal boxes	尺寸90,重载型编码器轴型, 允许较大的轴向跳动 Size 90 Heavy Duty encode through hollow shaft flexible bracket mounted, allowing larger axial beat.	尺寸90,重载型编码器, 带同步法兰, 轴型, 允许较大的轴向跳动 Size 90 Heavy Duty encode solid hollow shaft with synchro flange, flexible bracket mounted, allowing larger axial beat.	尺寸99,重载型编码器盲孔型, 扭力杆安装, 允许较大的轴向跳动 Size 99 Heavy Duty encode blind hollow shaft with torque support flexible bracket mounted, allowing larger axial beat.	尺寸99,重载型编码器锥孔型, 扭力杆安装, 允许较大的轴向跳动 Size 99 Heavy Duty encode cone shaft with torque support flexible bracket mounted, allowing larger axial beat.

EHK series photoelectric technology

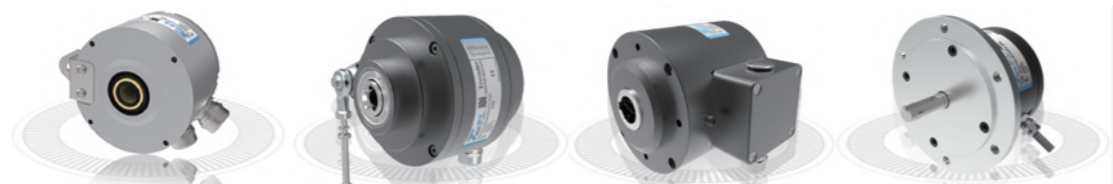
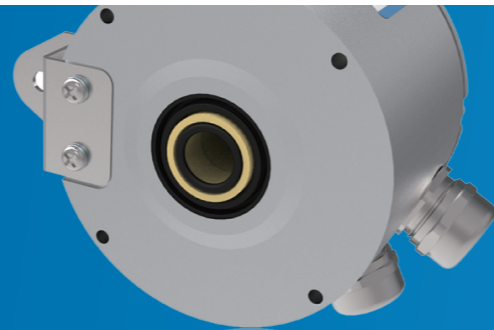
EHK series incremental encoders using innovative optical sensing method, to ensure the highest precision and high quality and stable signal. The core of the technology is the highly integrated monolithic optoASIC, especially designed for encoders. Due to the reducing discrete components, attack and shock resistance of the product is greatly improved.

精确的光感应技术,集成光电系统,不易破碎的码盘

- 轴型,盲孔型或通孔
- 全金属外壳

Precise optical sensing , Integrated optical systems,
Reliable coder disk

- Solid shaft ,blind hollow or through hollow shaft
- All -metal housing



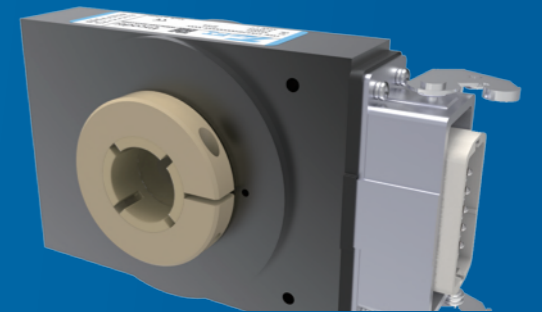
产品系列 Product family	EHK9901H	EHK105HS	EHK105HK	EHK115S
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ99mm	Φ105mm	Φ105mm	Φ115mm
电源 Voltage supply	5VDC 9-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL	RS422/TTL Push-Pull/HTL	RS422/TTL Push-Pull/HTL	RS422/TTL Push-Pull/HTL
安装方式 Installation	空心轴 Hollow shaft	空心轴 Hollow shaft	空心轴 Hollow shaft	实心轴 Solid shaft
轴径 Shaft	Φ12、Φ16mm	Φ12,Φ16,Φ19,Φ20mm 17 (1:10)	Φ16、Φ20、Φ25mm	Φ10、Φ11、Φ12mm
脉冲/圈 Pulse / ring	≤2500PPR	≤2500PPR	≤2500PPR	≤2048PPR
工作温度 Operating temperature	-40°C~+85°C	-40~+100°C	-40~+100°C	-40°C~+85°C
防护等级 Protection	IP66	IP66	IP66	IP65/IP67
最大转速 Maximum speed	6000RPM	6000RPM	6000RPM	6000RPM
轴负载 shaft load	100N Axial;300N Radial	100N Axial;300N Radial	100N Axial;300N Radial	70N Axial;140N Radial
特性 Features	尺寸99,重载型编码器盲孔型,扭力杆安装,允许较大的轴向跳动 Size 99 Heavy Duty encode hollow shaft with torque support flexible bracket mounted, allowing larger axial beat.	尺寸105,重载型编码器盲孔型或锥孔型,扭力杆安装,允许较大的轴向跳动 Size 105 Heavy Duty encode blind hollow or cone shaft with torque support flexible bracket mounted, allowing larger axial beat.	尺寸105,重载型编码器盲孔+键槽型,扭力杆安装,允许较大的轴向跳动 Size 105 Heavy Duty encode blind hollow and keyway shaft with torque support flexible bracket mounted, allowing larger axial beat.	尺寸115,重载型编码器B10欧式法兰,轴型,允许较大的轴向跳动 Size 115 Heavy Duty encode through hollow shaft with EURO flange B10 , flexible bracket mounted,allowing larger axial beat.

EHK系列光电技术

EHK系列增量式编码器采用创新的光学感应方法,确保在整个温度范围内均超高的精度和优质稳定的信号。该技术的核心是一个专为编码器设计的高度集成的整体式OptoASIC。由于分立元件数量较少,产品的抗冲击和抗振性能方面的应用可靠性大大提高。

Precise optical sensing , Integrated optical systems,
Reliable coder disk

- Solid shaft ,blind hollow or through hollow shaft
- All -metal housing



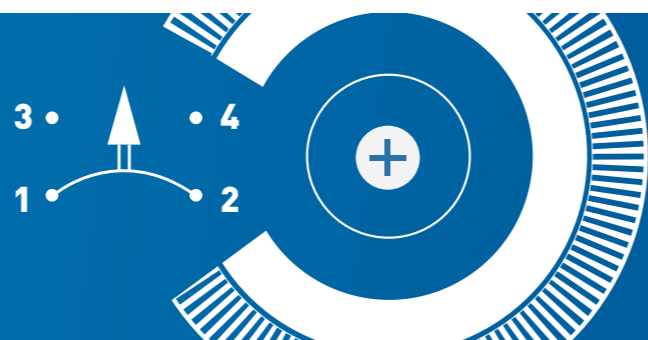
产品系列 Product family	EHK115SK	EHK100H	ESK124H	ESK127H
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical
外形尺寸 Housing size	Φ115mm	Φ100mm	Φ124mm	Φ127mm
电源 Voltage supply	5VDC 9-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	实心键轴 Solid shaft	空心轴 Hollow shaft	空心轴 Hollow shaft	空心轴 Hollow shaft
轴径 Shaft	Φ10、Φ11、Φ12mm	Φ25,Φ30,Φ35,Φ38,Φ40, Φ42,Φ45mm	Φ20,Φ25,Φ35,Φ30mm	Φ20,Φ30,Φ35,Φ38Φ, Φ40,Φ42,Φ45mm
脉冲/圈 Pulse / ring	≤2048PPR	≤3000PPR	≤3000PPR	≤3000PPR
工作温度 Operating temperature	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
防护等级 Protection	IP65/IP67	IP66	IP54/IP65	IP66
最大转速 Maximum speed	6000RPM	3000RPM	6000RPM	6000RPM
轴负载 shaft load	70N Axial;140N Radial	100N Axial;200N Radial	100N Axial;200N Radial	100N Axial;200N Radial
特性 Features	尺寸115,重载型编码器B10欧式法兰,轴型,允许较大的轴向跳动 Size 115 Heavy Duty encode solid hollow shaft with EURO flange B10 ,allowing larger axial beat.	尺寸100通孔型,柔性支架安装,允许较大的轴向跳动 Size 100 through hollow shaft flexible bracket mounted,allowing larger axial beat.	尺寸124*102通孔型,绝缘轴,柔性支架安装,允许较大的轴向跳动 Size 100 through hollow shaft flexible bracket mounted,allowing larger axial beat.	尺寸124*102通孔型,绝缘轴,柔性支架安装,允许较大的轴向跳动 Size 100 through hollow shaft flexible bracket mounted,allowing larger axial beat.

EHK series photoelectric technology

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编码器+超速开关组合

- 机械式离心原理,
- 无辅助电源;
- 坚固、耐用的重载型设计
- 组成 增量型编码器+超速开关



产品系列 Product family	MS115	EHK9001SK+MS	EHK100H+MS
组成 combinations	离心式机械超速开关 Mechanical centrifugal speed switch	增量型编码器+超速开关 Incremental Encoder + Speed switches combinations	增量型编码器+超速开关 Incremental Encoder + Speed switches combinations
感应原理 Sensing method	机械离心式 Mechanical centrifugal	光学+机械离心式 Optical+Mechanical centrifugal	光学+机械离心式 Optical+Mechanical centrifugal
外形尺寸 Housing size	Φ115mm	Φ90mm	Φ100mm
电源 Voltage supply	-	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	-	RS422/TTL, Push-Pull/HTL, NPN Open Collector	RS422/TTL, Push-Pull/HTL, NPN Open Collector
安装方式 Installation	实心轴, 欧式法兰B10 Solid shaft, Continental Flange B10	实心轴 Solid shaft	空心轴 Hollow shaft
轴径 Shaft	Φ11mm	Φ11mm, Φ12mm	Φ25mm, Φ30mm, Φ45mm
脉冲/圈 Pulse / ring	-	≤2500PPR	≤2500PPR
开关量输出 Switching outputs	1路输出, 转速可订 Outout one channel, Speed available on request	1路输出, 转速可订 Outout one channel, Speed available on request	1路输出, 转速可订 Outout one channel, Speed available on request
最大转速 Maximum Speed	-	6000RPM	3000RPM
最小开关电流 Minimum switching current	50mA	-	-
输出开关容量 Output switching capacity	≤6 A/230VAC ≤1A/125VDC	-	≤6 A/230VAC ≤1A/125VDC
超速范围 Speed range	750-3500RPM	750-3500RPM	750-3500RPM
工作温度 Operating temperature	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
防护等级 Protection	IP54/IP65	IP54/IP66	IP66
轴负载 shaft load	100N Axial; 200N Radial	100N Axial; 200N Radial	100N Axial; 200N Radial

编码器+超速开关组合

机械式离心原理, 无辅助电源;
 精确的光电原理+机械式离心原理超速开关, 坚固、耐用的重载型设计。融合了多种感应原理或者双编码器, 已满足特殊应用和实现特殊安全功能。

Encoder + Speed switches combinations

- Mechanical centrifugal theory,
- Electrical energy not necessary,
- Precise optical sensing theory + Mechanical centrifugal principle speed switches,
- Extremely robust, failsafe and durable of Heavy Duty design.



产品系列 Product family	EHK105HS+MS	EHK115SK+MS
组成 combinations	增量型编码器+超速开关 Incremental Encoder + Speed switches combinations	增量型编码器+超速开关 Incremental Encoder + Speed switches combinations
感应原理 Sensing method	光学+机械离心式 Optical+Mechanical centrifugal	光学+机械离心式 Optical+Mechanical centrifugal
外形尺寸 Housing size	Φ105mm	Φ115mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	9-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL	RS422/TTL Push-Pull/HTL
安装方式 Installation	锥孔1:10、盲孔 Taper hole 1:10、blind hole	实心轴, 欧式法兰B10 Solid shaft, Continental Flange B10
轴径 Shaft	Φ17mm, Φ16mm	Φ11mm, Φ12mm
脉冲/圈 Pulse / ring	≤2500PPR	≤2500PPR
开关量输出 Switching outputs	1路输出, 转速可订 Outout one channel, Speed available on request	1路输出, 转速可订 Outout one channel, Speed available on request
最大转速 Maximum Speed	6000RPM	6000RPM
最小开关电流 Minimum switching current	-	-
输出开关容量 Output switching capacity	≤6 A/230VAC ≤1A/125VDC	≤6 A/230VAC ≤1A/125VDC
超速范围 Speed range	750-3500RPM	750-3500RPM
工作温度 Operating temperature	-40°C~+85°C	-40°C~+85°C
防护等级 Protection	IP54/IP66	IP54/IP66
轴负载 shaft load	100N Axial; 300N Radial	100N Axial; 200N Radial

EHK series photoelectric technology

EHK series incremental encoders using innovative optical sensing method, to ensure the highest precision and high quality and stable signal. The core of the technology is the highly integrated monolithic optoASIC, especially designed for encoders. Due to the reducing discrete components, attack and shock resistance of the product is greatly improved.

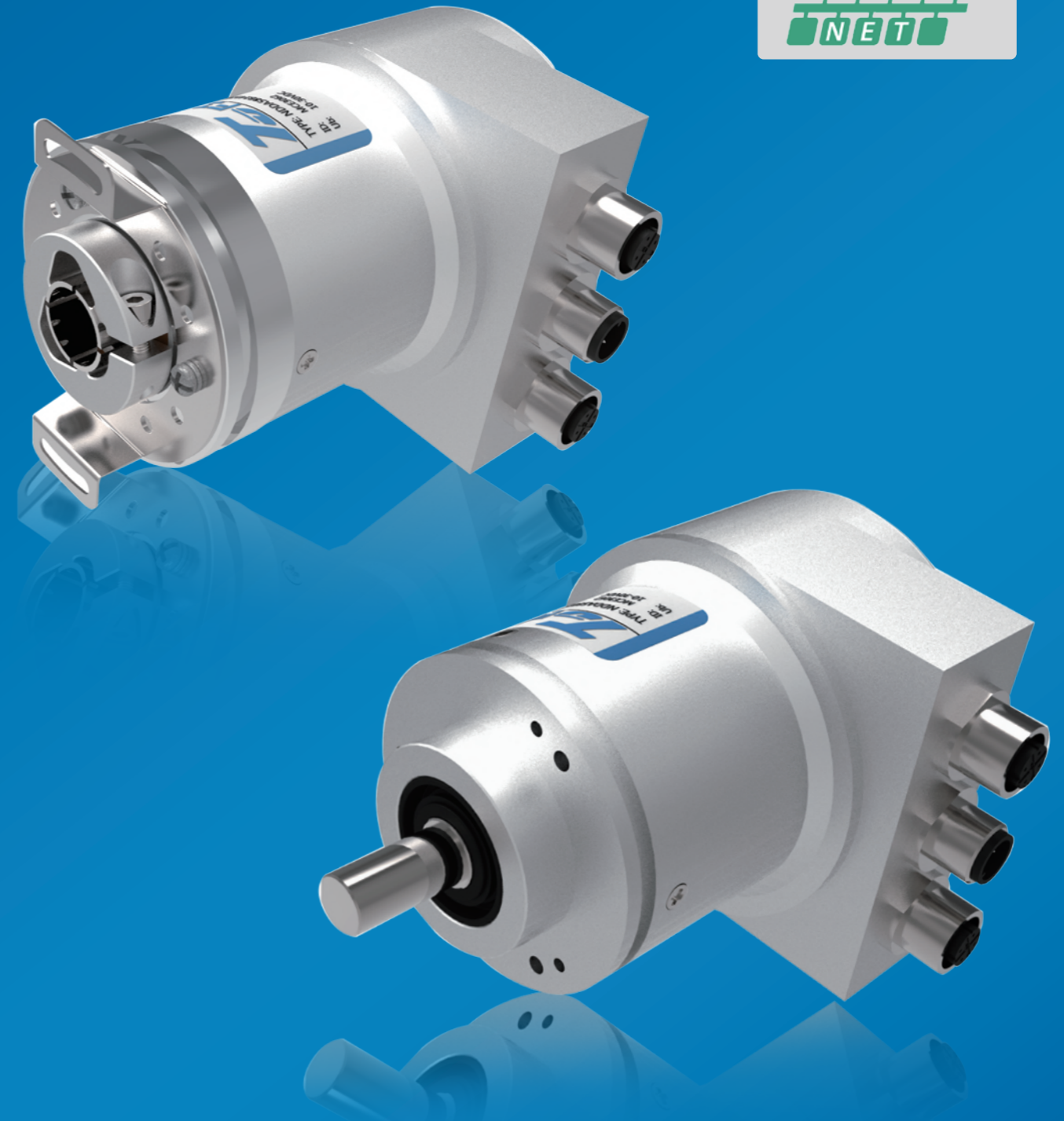
精确的光感应技术，集成光电系统，不易破碎的码盘

Precise optical sensing technology, integrated photoelectric system, unbreakable code disk



产品系列 Product family	ETF100-HS
感应原理 Sensing method	光电 Optical
外形尺寸 Housing size	Φ100mm
材质 Materials	316
电源 Voltage supply	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector
安装方式 Installation	空心轴 Hollow shaft
轴径 Shaft	Φ30mm hollow shaft
脉冲/圈 Pulse / ring	≤2500PPR
工作温度 Operating temperature	-40°C~+85°C
防护等级 Protection	IP54/IP65
最大转速 Maximum speed	3000RPM
轴负载 shaft load	100N Axial;300N Radial
特性 Features	尺寸100,全不锈钢材料通孔型, 允许较大的轴向跳动 Size 100, all stainless steel material through hollow shaft, allowing the larger axial runout

绝对值编码器 ABSOLUTE ENCODERS



NDDA58绝对值编码器

精确的光感应技术与稳固的磁感应技术

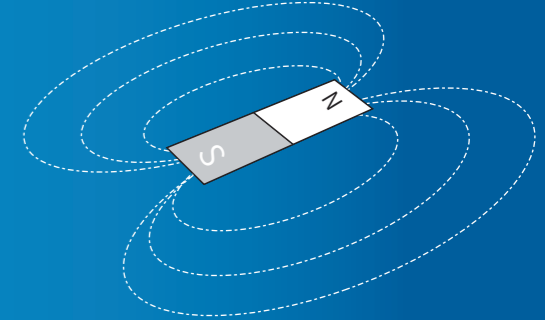
- 轴型, 盲孔型或通孔
- 全金属外壳



产品系列 Product family	JSCS38B	JSCS38S	JSCS3801S	JSCS3802S
感应原理 Sensing method	磁式 Magnetic	磁式 Magnetic	磁式 Magnetic	磁式 Magnetic
功能原理 Function principle	单圈 Singleturn	单圈 Singleturn	单圈 Singleturn	单圈 Singleturn
多圈技术 Multiturn technology	-	-	-	-
外形尺寸 Housing size	Φ38mm	Φ38mm	Φ38mm	Φ38mm
电源 Voltage supply	5VDC 10-30VDC	5VDC 10-30VDC	5VDC 10-30VDC	5VDC 10-30VDC
接口 Interface	RS485	RS485	Modbus	Modbus
分辨率 Resolution	≤14bit	≤14bit	≤14bit	≤14bit
步数/圈 Steps per turn	≤16384/14bit	≤16384/14bit	≤16384/14bit	≤16384/14bit
圈数 Number of turn	-	-	-	-
安装方式 Installation	半空心轴 Blind hollow shaft	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft
轴径 Shaft	Φ6mm、Φ8mm	Φ6mm	Φ6mm	Φ6mm
工作温度 Operating temperature	-40°C~+80°C	-40°C~+80°C	-40°C~+80°C	-40°C~+80°C
防护等级 Protection	IP54	IP54	IP54	IP54
最大转速 Maximum speed	2400RPM	2400RPM	2400RPM	2400RPM
轴负载 shaft load	30N Axial;60N Radial	30N Axial;60N Radial	30N Axial;60N Radial	30N Axial;60N Radial
特性 Features	尺寸38盲孔轴型 双翼弹性支架安装 Size 38 blind hollow Shaft wings of flexible bracket mounted	尺寸38轴型 Size 38 Solid Shaft	尺寸38轴型, 硬件设定地址 Size 38 Solid Shaft , hardware set address	尺寸38轴型, 硬件设定地址 Size 38 Solid Shaft , hardware set address

Precise optical sensing technology and robust magnetic sensing technology

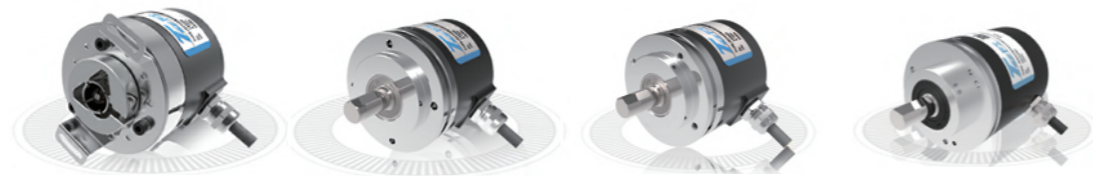
- Solid shaft ,blind hollow or through hollow shaft
- All -metal housing



JSCA50B	JSCA50S	JSCA50SK	JSDS50S	JSDS50B
磁式 Magnetic	磁式 Magnetic	磁式 Magnetic	光电 Optical	光电 Optical
多圈 Multiturn	多圈 Multiturn	多圈 Multiturn	单圈 Singleturn	单圈 Singleturn
机械齿轮组 (无需电池) Optical and mechanical gear set without battery	机械齿轮组 (无需电池) Optical and mechanical gear set without battery	机械齿轮组 (无需电池) Optical and mechanical gear set without battery	-	-
Φ50mm	Φ50mm	Φ50mm	Φ50mm	Φ50mm
5VDC 10-30VDC	5VDC 10-30VDC	5VDC 10-30VDC	5VDC 10-30VDC	5VDC 10-30VDC
RS485 Modbus-RTU	RS485 Modbus-RTU	RS485 Modbus-RTU	RS485/RS232/SSI	RS485/RS232/SSI
≤22bit	≤22bit	≤22bit	≤16bit	≤16bit
≤4096/12bit	≤4096/12bit	≤4096/12bit	≤65536/16bit	≤65536/16bit
≤1024/10bit	≤1024/10bit	≤1024/10bit	-	-
半空心轴 Blind hollow shaft	实心轴 Solid shaft	实心键槽轴 Solid shaft with keyway	实心轴 Solid shaft	半空心轴 Blind hollow shaft
Φ8、Φ10mm	Φ6、Φ8mm	Φ25mm	Φ6mm、Φ8mm	Φ6mm、Φ8mm、Φ10mm
-40°C~+80°C	-40°C~+80°C	-40°C~+80°C	-40°C~+80°C	-40°C~+80°C
IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65
3000RPM	3000RPM	3000RPM	6000RPM	6000RPM
30N Axial; 60N Radial	30N Axial; 60N Radial	30N Axial; 60N Radial	30N Axial;60N Radial	30N Axial;60N Radial
尺寸50盲孔型, 双翼柔性支架 安装 Size 50 blind hollow shaft, wings of flexible bracket mounted.	尺寸50轴型 Size 50 solid shaft	尺寸50键槽轴型, 双翼弹性 支架安装 Size 50 solid shaft with keyway, wings of flexible bracket mounted.	尺寸50轴型 Size 50 Solid shaft	尺寸50盲孔型, 双翼柔性支架安装 Size 50 blind hollow Shaft wings of flexible bracket mounted

精确的光感应技术与稳固的磁感应技术

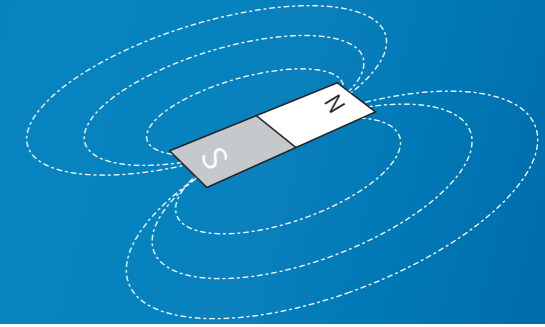
- 轴型, 盲孔型或通孔
- 全金属外壳



产品系列 Product family	JSCS58B	JSCS58S	JSCS5803S	JDDS58S
感应原理 Sensing method	磁式 Magnetic	磁式 Magnetic	磁式 Magnetic	光电 Optical
功能原理 Function principle	单圈 Singleturn	单圈 Singleturn	单圈 Singleturn	单圈 Singleturn
多圈技术 Multiturn technology	-	-	-	-
外形尺寸 Housing size	Φ58mm	Φ58mm	Φ58mm	Φ58mm
电源 Voltage supply	5VDC 10-30VDC	5VDC 10-30VDC	5VDC 10-30VDC	10-30VDC
接口 Interface	RS485/SSI/并行	RS485/Modbus-RTU/SSI	并行 Parallel	SSI / RS485 / Modbus-RTU
分辨率 Resolution	≤14bit	≤13Bit	≤10bit	≤16Bit
步数/圈 Steps per turn	≤16384/14bit	≤8192/13Bit	≤1024/10bit	≤65536/16Bit
圈数 Number of turn	-	-	-	-
安装方式 Installation	半空心轴 Blind hollow shaft	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft
轴径 Shaft	Φ10mm、Φ12mm、Φ14 mm	Φ10mm	Φ6mm	Φ6、8、10mm
工作温度 Operating temperature	-40°C~+80°C	-20°C~+70°C	-40°C~+80°C	-40°C~+80°C
防护等级 Protection	IP54	IP54/IP65	IP54	IP65/IP67
最大转速 Maximum speed	3000RPM	3600RPM	3000RPM	6000RPM
轴负载 shaft load	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial
特性 Features	尺寸58盲孔轴型 双翼弹性支架安装 Size 58 blind hole wings of flexible bracket mounted	尺寸58轴型, 带同步法兰 Size 58 Solid shaft with synchro flange.	尺寸58轴型, 带同步法兰 Size 58 Solid shaft with synchro flange.	尺寸58轴型, 工业型编码器, 夹紧带同步法兰 Size 58 Industrial encoder Solid shaft with clamping or synchro flange.

Precise optical sensing technology and robust magnetic sensing technology

- Solid shaft ,blind hollow or through hollow shaft
- All -metal housing



JDDS58H	ATF58CM-420	ATF58M-CN	ATF58M-DP
光电 Optical	磁式 Magnetic	光电 Optical	光电 Optical
单圈 Singleturn	多圈 Multiturn	多圈 Multiturn	多圈 Multiturn
-	机械齿轮组 (无需电池) Optical and mechanical gear set without battery	机械齿轮组 (无需电池) Optical and mechanical gear set without battery	机械齿轮组 (无需电池) Optical and mechanical gear set without battery
Φ58mm	Φ58mm	Φ58mm	Φ58mm
5VDC, 10-30VDC	10-30VDC	10-30VDC	10-30VDC
RS485/Modbus-RTU/SSI	RS485/4-20mA	CANopen	PROFIBUS DP
≤16Bit	≤24Bit	≤25bit	≤25bit
≤65536/16bit	4096/12Bit	8192/13Bit	8192/13Bit
-	4096/12Bit	4096/12Bit	4096/12Bit
空心轴 Hollow shaft	实心轴 Solid shaft	实心轴 Solid shaft	实心轴 Solid shaft
Φ10mm、Φ12mm、Φ14mm	Φ10mm	Φ10mm	Φ10mm
-40°C~+80°C	-25°C~+75°C	-25°C~+75°C	-25°C~+75°C
IP65	IP65	IP65	IP65
6000RPM	3000RPM	3600RPM	3600RPM
40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial
尺寸58轴型, 工业型编码器, 双翼弹性支架安装 Size 58 Industrial encoder Solid shaft wings of flexible bracket mounted	尺寸58轴型, 带同步法兰 Size 58 Solid shaft with synchro flange.	尺寸58轴型 Size 58 Solid shaft	尺寸58轴型 Size 58 Solid shaft

精确的光感应技术与稳固的磁感应技术

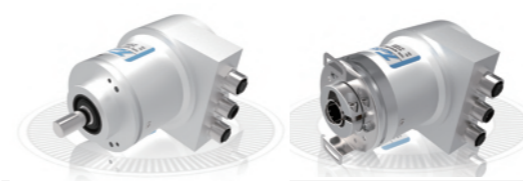
- 轴型, 盲孔型或通孔
- 全金属外壳



产品系列 Product family	JDCA58S	JDCA58B	JDDA58S	JDDA58B
感应原理 Sensing method	磁式 Magnetic	磁性 Magnetic	光电 Optical	光电 Optical
功能原理 Function principle	多圈 Multiturn	多圈 Multiturn	多圈 Multiturn	多圈 Multiturn
多圈技术 Multiturn technology	机械齿轮组 (无需电池) Optical and mechanical gear set without battery	机械齿轮组 (无需电池) Optical and mechanical gear set without battery	机械齿轮组 (无需电池) Optical and mechanical gear set without battery	机械齿轮组 (无需电池) Optical and mechanical gear set without battery
外形尺寸 Housing size	Φ58mm	Φ58mm	Φ58mm	Φ58mm
电源 Voltage supply	10-30VDC	10-30VDC	10-30VDC	10-30VDC
接口 Interface	RS485、SSI、CAN2.0B Modbus-RTU	RS485、SSI、CAN2.0B Modbus-RTU	Modbus-RTU / SSI / RS485	Modbus-RTU / SSI / RS485
分辨率 Resolution	≤24Bit	≤24bit	≤28bit	≤28bit
步数/圈 Steps per turn	4096/12Bit	≤4096/12bit	≤65536/16bit	≤65536/16bit
圈数 Number of turn	4096/12Bit	≤4096/12bit	≤4096/12bit	≤4096/12bit
安装方式 Installation	实心轴 Solid shaft	半空心轴 Blind hollow shaft	实心轴 Solid shaft	半空心轴 Blind hollow shaft
轴径 Shaft	φ6、φ10mm	φ10、φ12、φ14mm	φ6、φ10mm	φ10、φ12、φ14mm
工作温度 Operating temperature	-40°C~+85°C	-40°C~+85°C	-40°C~+80°C	-40°C~+80°C
防护等级 Protection	IP65/IP67	IP65	IP65/IP67	IP65
最大转速 Maximum speed	6000RPM	6000RPM	6000RPM	6000RPM
轴负载 shaft load	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial	40N Axial;80N Radial
特性 Features	尺寸58轴型, 带同步法兰 Size 58 Solid shaft with synchro flange. 	尺寸58盲孔型, 双翼柔性支架安装 Size 58 blind hollow shaft ,wings of flexible bracket mounted. 	尺寸58轴型, 带同步法兰 Size 58 solid shaft with synchro flange. 	尺寸58盲孔型, 双翼柔性支架安装 Size 58 blind hollow shaft ,wings of flexible bracket mounted.

Precise optical sensing technology and robust magnetic sensing technology

- Solid shaft ,blind hollow or through hollow shaft
- All -metal housing



产品系列 Product family	NDDA58S	NDDA58B
感应原理 Sensing method	光电 Optical	光电 Optical
功能原理 Function principle	多圈 Multiturn	多圈 Multiturn
多圈技术 Multiturn technology	机械齿轮组 (无需电池) Optical and mechanical gear set without battery	机械齿轮组 (无需电池) Optical and mechanical gear set without battery
外形尺寸 Housing size	Φ58mm	Φ58mm
电源 Voltage supply	10-30VDC	10-30VDC
接口 Interface	PROFINET-RT	PROFINET-RT
分辨率 Resolution	≤28bit	≤28bit
步数/圈 Steps per turn	≤65536/16bit	≤65536/16bit
圈数 Number of turn	≤4096/12bit	≤4096/12bit
安装方式 Installation	实心轴 Solid shaft	半空心轴 Blind hollow shaft
轴径 Shaft	φ6、φ10mm	φ10、φ12、φ14mm
工作温度 Operating temperature	-40°C~+80°C	-40°C~+80°C
防护等级 Protection	IP65/IP67	IP65
最大转速 Maximum speed	6000RPM	6000RPM
轴负载 shaft load	40N Axial;80N Radial	40N Axial;80N Radial
特性 Features	尺寸58轴型, 带同步法兰 Size 58 solid shaft with synchro flange. 	尺寸58盲孔型, 双翼柔性支架安装 Size 58 blind hollow shaft ,wings of flexible bracket mounted.

精确的光感应技术与稳固的磁感应技术

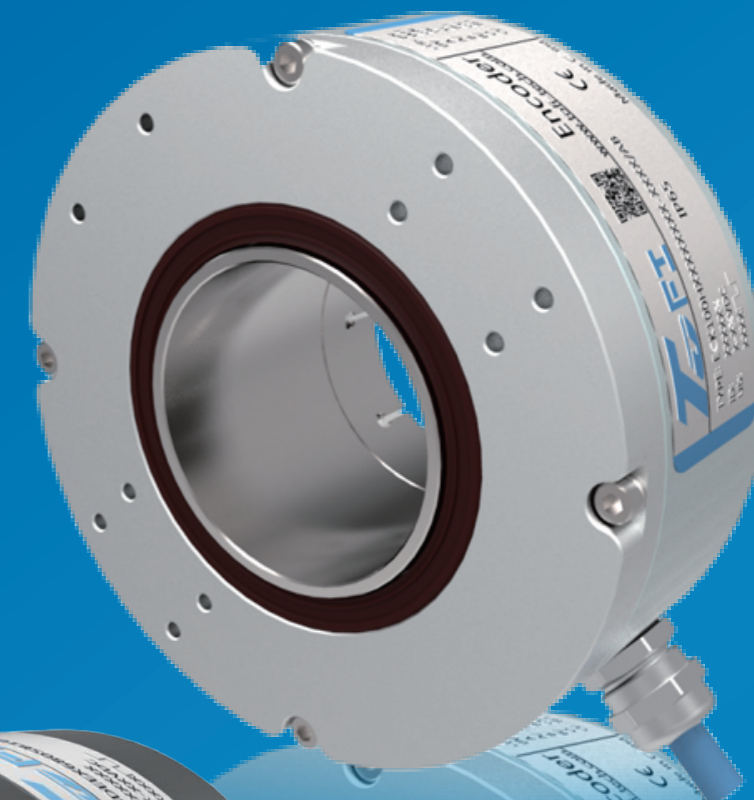
- 轴型，盲孔型或通孔
- 全金属外壳



产品系列 Product family	JSIS120H	JDDS100H
感应原理 Sensing method	电感式 Inductive	光电 Optical
功能原理 Function principle	单圈 Singleturn	单圈 Singleturn
多圈技术 Multiturn technology	-	-
外形尺寸 Housing size	Φ120mm	Φ100mm
电源 Voltage supply	10-30VDC	10-30V
接口 Interface	RS485 / 0-5V / 4-20mA	Modbus-RTU、SSI、RS485
分辨率 Resolution	8Bit	≤17bit
步数/圈 Steps per turn	256/8Bit	≤131072/17bit
圈数 Number of turn	-	-
安装方式 Installation	空心轴 Hollow shaft	空心轴 Hollow shaft
轴径 Shaft	Φ40mm	Φ30、Φ35、Φ38、Φ40、 Φ42、Φ45mm
工作温度 Operating temperature	-40°C~+80°C	-40°C~+80°C
防护等级 Protection	IP65	IP65
最大转速 Maximum speed	2000RPM	3000RPM
轴负载 shaft load	100N Axial;200N Radial	40N Axial;80N Radial
特性 Features	尺寸120通孔型，抗振动 housing size 120 through hollow shaft anti-vibration	尺寸100通孔型 Housing size 100 through hollow shaft

防爆编码器

EXPLOSION-PROOF ENCODERS



BDEEX100HA系列防爆型编码器
BDEEX68SB系列防爆型编码器

精确的光感应技术,集成光电系统,不易破碎的码盘

- 轴型,盲孔型或通孔
- 全金属外壳

Precise optical sensing technology,integrated photoelectric system,
unbreakable code disk shaft

- shaft,blind hollow or through hollow shaft
- All-metal housing



产品系列 Product family	BDEEX58HB	BDEEX68SB	BDEEX100HA	BETF100-HT
感应原理 Sensing method	光电 Optical	光电 Optical	光电 Optical	光电 Optical
防爆标志 Explosion proof mark	Ex ib II C T4 Gb Ex tD A21 IP66 T80°C	Ex ib II C T4 Gb Ex tD A21 IP66 T80°C	Ex ib II C T4 Gb Ex tD A21 IP66 T80°C	Ex ib II C T4 Gb
外形尺寸 Housing size	Φ68mm	Φ68mm	Φ100mm	Φ100mm
电源 Voltage supply	10-28VDC	10-28VDC	10-28VDC	10-23VDC
输出方式 Output stage	Push-Pull/HTL	Push-Pull/HTL	Push-Pull/HTL	Push-Pull/HTL
安装方式 Installation	实心轴 Solid shaft	实心轴 Solid shaft	空心轴 Hollow shaft	空心轴 Hollow shaft
轴径 Shaft	Φ10、Φ12、Φ14mm	Φ6、Φ8、Φ10mm	Φ20,Φ25,Φ30,Φ35,Φ38 Φ40,Φ42,Φ45mm	Φ25,Φ30,Φ35,Φ38,Φ40 Φ42,Φ45mm
脉冲/圈 Pulse / ring	≤512PPR	≤600PPR	≤1500PPR	20~5000PPR
工作温度 Operating temperature	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C
防护等级 Protection	IP66	IP66	IP66	IP64
最大转速 Maximum speed	3000RPM	3000RPM	3000RPM	3000RPM
轴负载 shaft load	70N Axial;140N Radial	70N Axial;140N Radial	100N Axial;200N Radial	50N Axial;80N Radial
特性 Features	尺寸58轴型,允许较大的轴向跳动,本安型+粉尘复合防爆编码器 Size 58 shaft type, allowing larger axial runout, intrinsically safe + dust composite explosion-proof encoder	尺寸68轴型,允许较大的轴向跳动,本安型+粉尘复合防爆编码器 Size 68 shaft type, allowing larger axial runout, intrinsically safe + dust composite explosion-proof encoder	尺寸100通孔型,允许较大的轴向跳动,本安型+粉尘复合防爆编码器 Dimensions 100 through the pass, allowing the larger axial runout, intrinsically safe + dust composite explosion-proof encoder	尺寸100通孔型,允许较大的轴向跳动,本安型防爆编码器 Dimensions 100 through the pass, allowing the larger axial runout, intrinsically safe explosion-proof encoder

TOFI防爆编码器

适用于爆炸性环境周围或爆炸性环境下的编码器。我们提供多种具有防爆认证的编码器：本安型防爆编码器、本安型+粉尘复合型防爆编码器、隔爆型防爆编码器等。客户可根据现场要求特殊定做防爆编码器。

精确的光感应技术,集成光电系统,不易破碎的码盘

- 轴型,盲孔型或通孔
- 全金属外壳

Precise optical sensing technology,integrated photoelectric system,
unbreakable code disk shaft

- shaft,blind hollow or through hollow shaft
- All-metal housing



产品系列 Product family	BDEEX115SA
感应原理 Sensing method	光电 Optical
防爆标志 Explosion proof mark	Exib II C T4 Gb/DIP A 21TAT6IP66
外形尺寸 Housing size	Φ115mm
电源 Voltage supply	10-28VDC
输出方式 Output stage	Push-Pull/HTL
安装方式 Installation	实心轴 Solid shaft
轴径 Shaft	Φ10、Φ11、Φ12mm
脉冲/圈 Pulse / ring	≤1024PPR
工作温度 Operating temperature	-20°C≤Ta≤+40°C
防护等级 Protection	IP66
最大转速 Maximum speed	3000RPM
轴负载 shaft load	70N Axial;140N Radial
特性 Features	尺寸115轴型,允许较大的轴向跳动,本安型+粉尘复合防爆编码器 housing Size 115 shaft, allowing larger axial runout, intrinsically safe + dust composite explosion-proof encoder

TOFI防爆编码器

适用于爆炸性环境周围或爆炸性环境下的编码器。我们提供多种具有防爆认证的编码器：本安型防爆编码器、本安型+粉尘复合型防爆编码器、隔爆型防爆编码器等。客户可根据现场要求特殊定做防爆编码器。

The encoder is suitable for explosive surroundings or explosive environments. We offer a variety of explosion-proof certified encoder: intrinsically safe explosion-proof encoders, intrinsically safe + dust-proof composite encoders, flammable-ex encoders. Customers can request special custom-made ex-encoders according to the site.

转速传感器

Rotational Speed Sensor



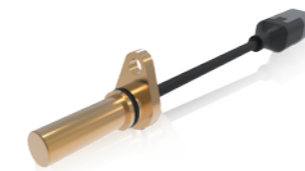
霍尔转速传感器 Rotational Speed Sensor
精密电位计 Precision potentiometer

运动控制传感器
转速传感器

Motion Control Transducer
Rotational Speed Sensor

转速传感器

- 霍尔原理 Hall principle
- 可靠检测旋转的齿轮 Detecting rotating gears
- 检测旋转方向 Rotation direction detection
- 非接触式无磨损检测 Hall principle non-contact measurement
- 特别适合恶劣的环境条件 suitable for all kinds of extremely harsh environment.



产品系列 Product family	RHS15	产品系列 Product family	SDM45	RAS50S
感应原理 Sensing method	磁式 Magnetic	感应原理 Sensing method	速度监视器 The speed monitor	电阻式 Resistance
感应距离 Sensing distance	0.2-1.7mm	外形尺寸 Housing size	78*45*75mm 导轨安装 Guide rail mounting	Φ50mm
Pulse / ring 相位偏移90°时齿槽宽度 Tooth width of target for phase shift 90°	4mm	阻值范围 Resistance range	-	2KΩ
齿轮直径 Diameter of target	≥50mm	电气角度 Electrical angle	-	0~90°
齿厚 Width of target	≥10mm	电源 Voltage supply	24VDC、220VAC	
齿轮覆盖传感器的最小宽度 Min overlap sensor-target	≥10mm	输出方式 Output stage	输入信号：PNP,NPN方波 PNP,NPN Square wave signal	电阻 Resistance
供电电压 Voltage supply	7-24VDC	安装方式 Installation	-	实心轴 Solid shaft
输出信号 Output signal	NPN Open Collector	轴径 Solid shaft	-	Φ6mm
信号类型 Output voltage	方波 Square wave signal	脉冲/圈 Pulse / ring	输出：继电器Output: relay	-
输出信道 Number of Frequency outputs	2路 2 channel	工作温度 Operating temperature	-20°C~+70°C	-30...+80°C
频率 Frequency	1Hz-15KHz	防护等级 Protection	IP20	IP65
工作温度范围 Working temperature	-32...+140°C	最大转速 Maximum speed	≤100KHz	±500PPM/°C
防护等级 (仅当连接器为AMP时) Protection	IP69K	轴负载 shaft load	-	25N Axial; 50N Radial
特性 Features	非接触式测量, 永不磨损 可探测钢铁等铁磁材质 高防护等级; 坚固耐用 使用温度范围宽, 安装方便	特性 Features	失速、超速报警, 测速范围可设定 Speed lose, overspeed alarm, speed range can be set	尺寸50轴型适用高防护等级环境 Housing size 50 shaft Suitable for high protection level environment

转速传感器 Speed sensor
速度监控器 Speed monitor
精密电位计 Precision potentiometer

分体式无轴承编码器

No Axle Splitting Encoders



EWH38H无轴承编码器



分体式无轴承编码器 No Axle Splitting Encoders
通孔孔径: $\Phi 25$ 、 $\Phi 38$ 、 $\Phi 35$ 、 $\Phi 40$ 、 $\Phi 50$ mm

运动控制传感器
分体式无轴承编码器

Motion Control Transducer
No Axle Splitting Encoders

精确的光感应技术与稳固的磁感应技术

- 通孔
- 全金属外壳

Precise optical sensing technology and robust magnetic sensing technology

- through hollow shaft
- All-metal housing



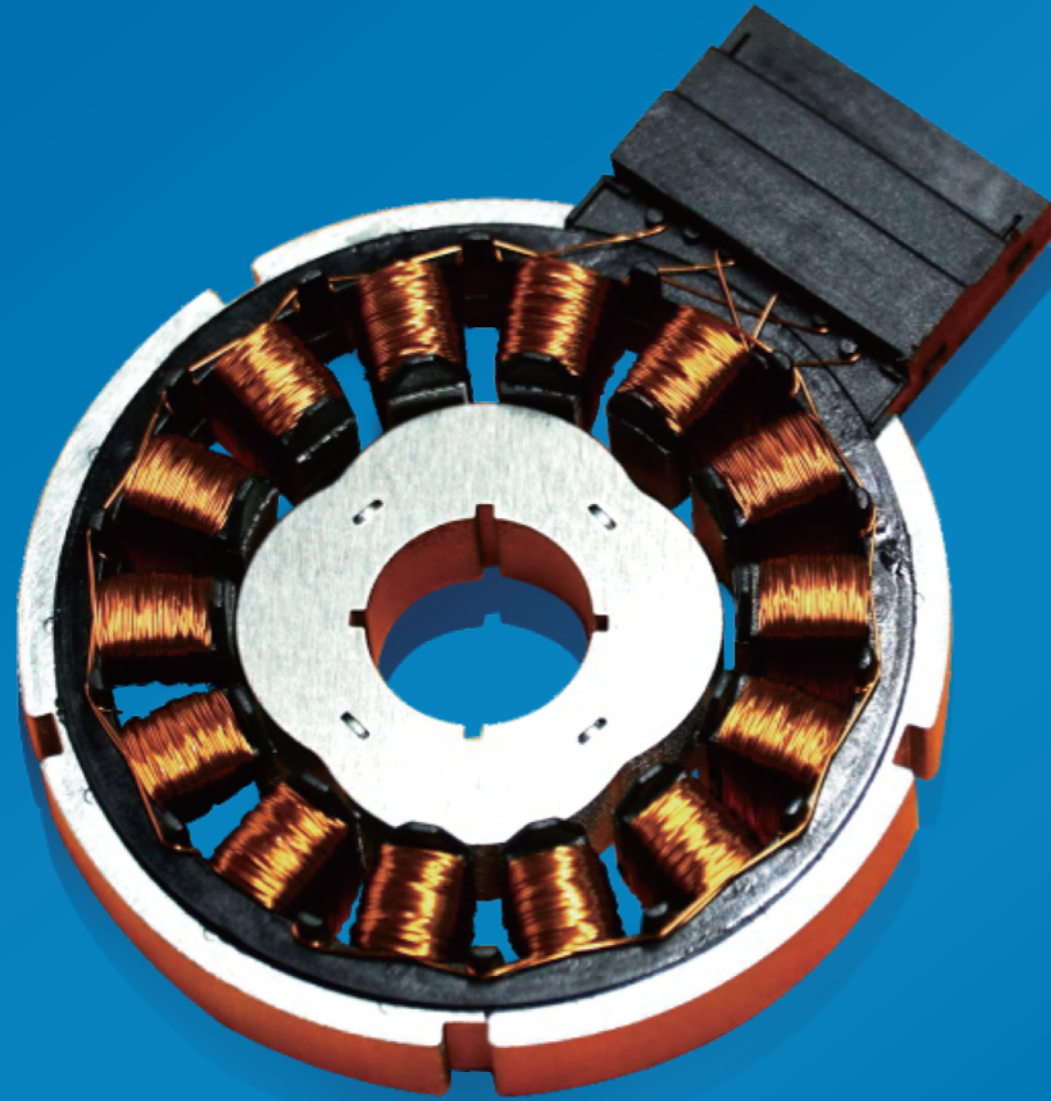
产品系列 Product family	EWH38H
感应原理 Sensing method	磁式 Magnetic
外形尺寸 Housing size	38mm*16.2mm*22mm
阻值范围	-
电气角度	-
电源 Voltage supply	DC5V
输出方式 Output stage	RS422/TTL
安装方式 Installation	空心轴 Hollow shaft
轴径 Solid shaft	$\Phi 15$ mm- $\Phi 290$ mm可选
脉冲/圈 Pulse / ring	4096PPR
工作温度 Operating temperature	-20°C...+80°C
防护等级 Protection	IP68
最大转速 Maximum speed	30000RPM
轴负载 shaft load	-
特性 Features	齿轮模数范围: 0.4、0.5mm Gear module range 0.4、0.5mm

磁性编码器 Magnetic encoders

无磨损系统 no wear systems
适用于旋转和线性应用 For rotary and linear applications
耐灰尘和污物 Dust and dirt tolerant
高防护等级 High protection class :IP68
2通道和3通道设计 2- and 3-channel

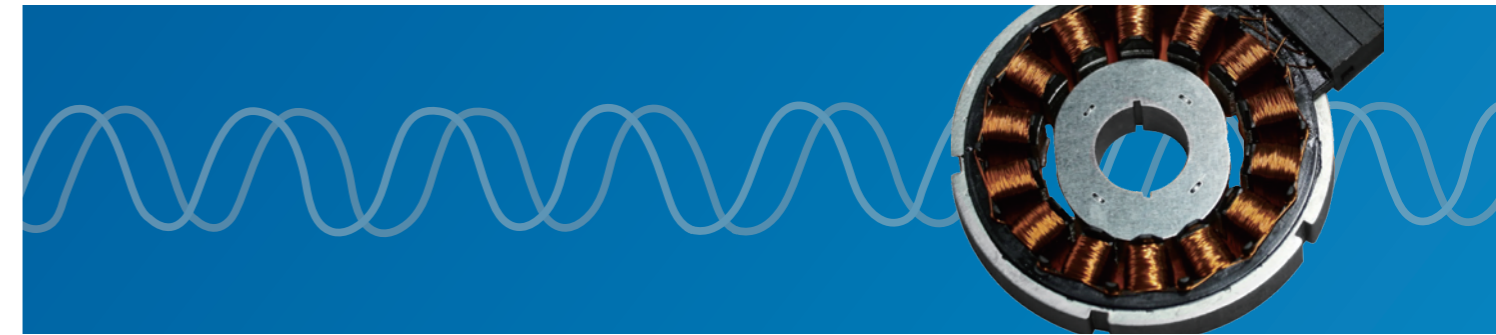
旋转变压器

ROTARY TRANSFORMER



磁阻式旋转变压器 Magneto-Resistive rotary transformer
绕线式旋转变压器 Wound rotor rotary transformer

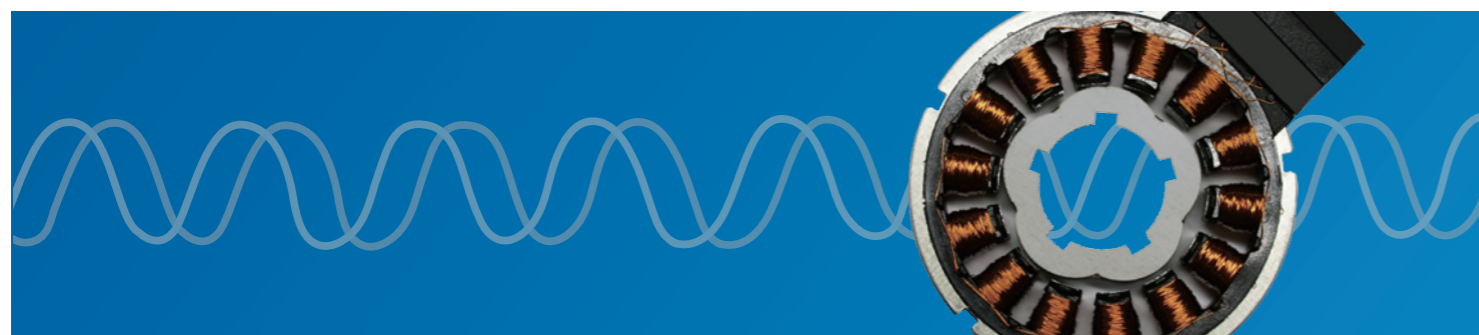
Motion Control Transducer
Rotary transformer



产品系列 Product family	MR37XUDF02	MR37XUDF03	MR37XUDF04	MR52XUDF02
感应原理 Sensing method	磁阻式 Magneto-Resistive	磁阻式 Magneto-Resistive	磁阻式 Magneto-Resistive	磁阻式 Magneto-Resistive
励磁电压 Excitation voltage	7V	7V	7V	7V
励磁频率 Frequency limits	10kHz	10kHz	10kHz	10kHz
变压比 Transformer ratio	$0.286 \times (1 \pm 10\%) \Omega$	$0.286 \times (1 \pm 10\%) \Omega$	$0.286 \times (1 \pm 10\%) \Omega$	$0.286 \times (1 \pm 10\%) \Omega$
极对数 Pole-pairs	2	3	4	2
开路输入阻抗 Open-circuit input impedance	$120 \times (1 \pm 20\%) \Omega$	$120 \times (1 \pm 20\%) \Omega$	$120 \times (1 \pm 20\%) \Omega$	$120 \times (1 \pm 20\%) \Omega$
电气误差 Electrical deviation	$\leq \pm 60'$	$\leq \pm 45'$	$\leq \pm 30'$	$\leq \pm 60'$
分解能力 Capacity of decomposition	10~12bit	10~12bit	10~12bit	10~12bit
跟踪转速 Tracking speed	20000r/min	20000r/min	20000r/min	20000r/min
工作温度 Working temperature	-55°C~+180°C	-55°C~+180°C	-55°C~+180°C	-55°C~+180°C
绝缘介电强度对地 Dielectric strength of insulation to ground	500V,相间250V, 1min	500V,相间250V, 1min	500V,相间250V, 1min	500V,相间250V, 1min
漏电流 leak current	$\leq 5\text{mA}$	$\leq 5\text{mA}$	$\leq 5\text{mA}$	$\leq 5\text{mA}$
绝缘电阻 Insulation resistance	$\geq 50\text{M}\Omega$	$\geq 50\text{M}\Omega$	$\geq 50\text{M}\Omega$	$\geq 50\text{M}\Omega$
重量 Weight	$\leq 60\text{g}$	$\leq 60\text{g}$	$\leq 60\text{g}$	$\leq 100\text{g}$

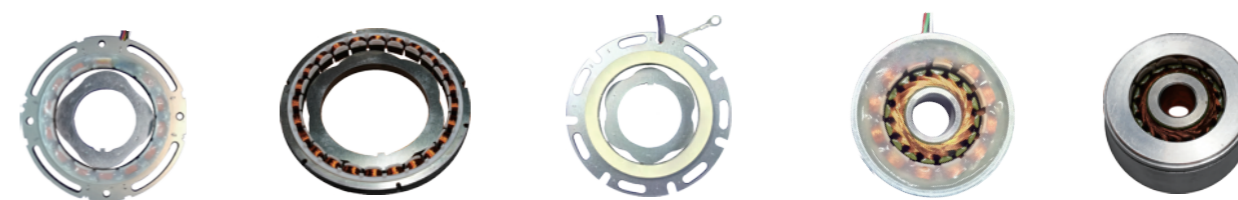
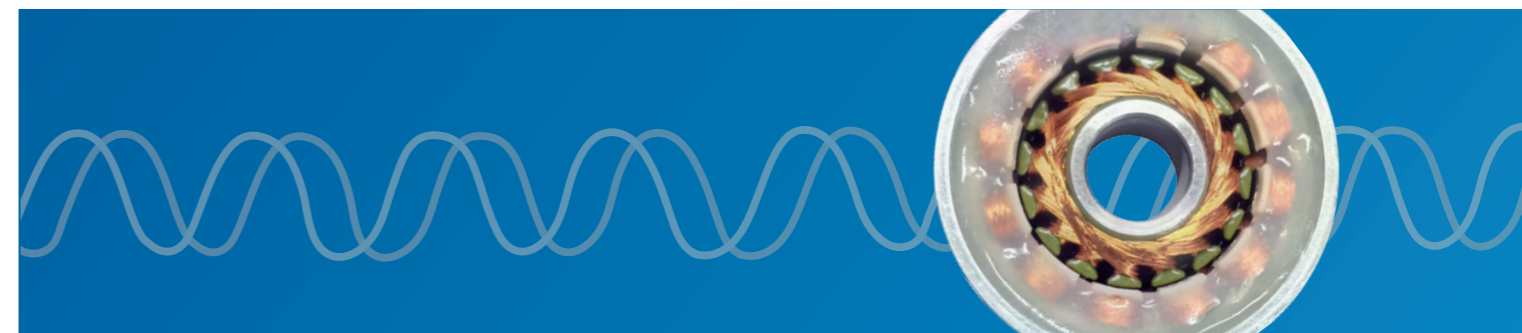
旋转变压器是一种精密角度、位置、速度反馈装置，特别适合高温、严寒、潮湿、高速、高震动等行业的应用

Rotary transformer is a precise device used for angle, position and speed feedback, especially suitable for industries with environment of high temperature, cold, damp, high speed, high vibration and others.



产品系列 Product family	MR52XUDF03	MR52XUDF04	MR52XUDF05	MR74XUDF03
感应原理 Sensing method	磁阻式 Magneto-Resistive	磁阻式 Magneto-Resistive	磁阻式 Magneto-Resistive	磁阻式 Magneto-Resistive
励磁电压 Excitation voltage	7V	7V	7V	7V
励磁频率 Frequency limits	10kHz	10kHz	10kHz	10kHz
变压比 Transformer ratio	$0.286 \times (1 \pm 10\%) \Omega$	$0.286 \times (1 \pm 10\%) \Omega$	$0.286 \times (1 \pm 10\%) \Omega$	$0.286 \times (1 \pm 10\%) \Omega$
极对数 Pole-pairs	3	4	5	3
开路输入阻抗 Open-circuit input impedance	$120 \times (1 \pm 20\%) \Omega$	$120 \times (1 \pm 20\%) \Omega$	$120 \times (1 \pm 20\%) \Omega$	$120 \times (1 \pm 20\%) \Omega$
电气误差 Electrical deviation	$\leq \pm 45'$	$\leq \pm 30'$	$\leq \pm 20'$	$\leq \pm 45'$
分解能力 Capacity of decomposition	10~12bit	10~12bit	10~12bit	10~12bit
跟踪转速 Tracking speed	20000r/min	20000r/min	20000r/min	20000r/min
工作温度 Working temperature	-55°C~+180°C	-55°C~+180°C	-55°C~+180°C	-55°C~+180°C
绝缘介电强度对地 Dielectric strength of insulation to ground	500V,相间250V, 1min	500V,相间250V, 1min	500V,相间250V, 1min	500V,相间250V, 1min
漏电流 leak current	$\leq 5\text{mA}$	$\leq 5\text{mA}$	$\leq 5\text{mA}$	$\leq 5\text{mA}$
绝缘电阻 Insulation resistance	$\geq 50\text{M}\Omega$	$\geq 50\text{M}\Omega$	$\geq 50\text{M}\Omega$	$\geq 50\text{M}\Omega$
重量 Weight	$\leq 100\text{g}$	$\leq 100\text{g}$	$\leq 100\text{g}$	$\leq 800\text{g}$

旋转变压器是一种精密角度、位置、速度反馈装置，特别适合高温、严寒、潮湿、高速、高震动等行业的应用
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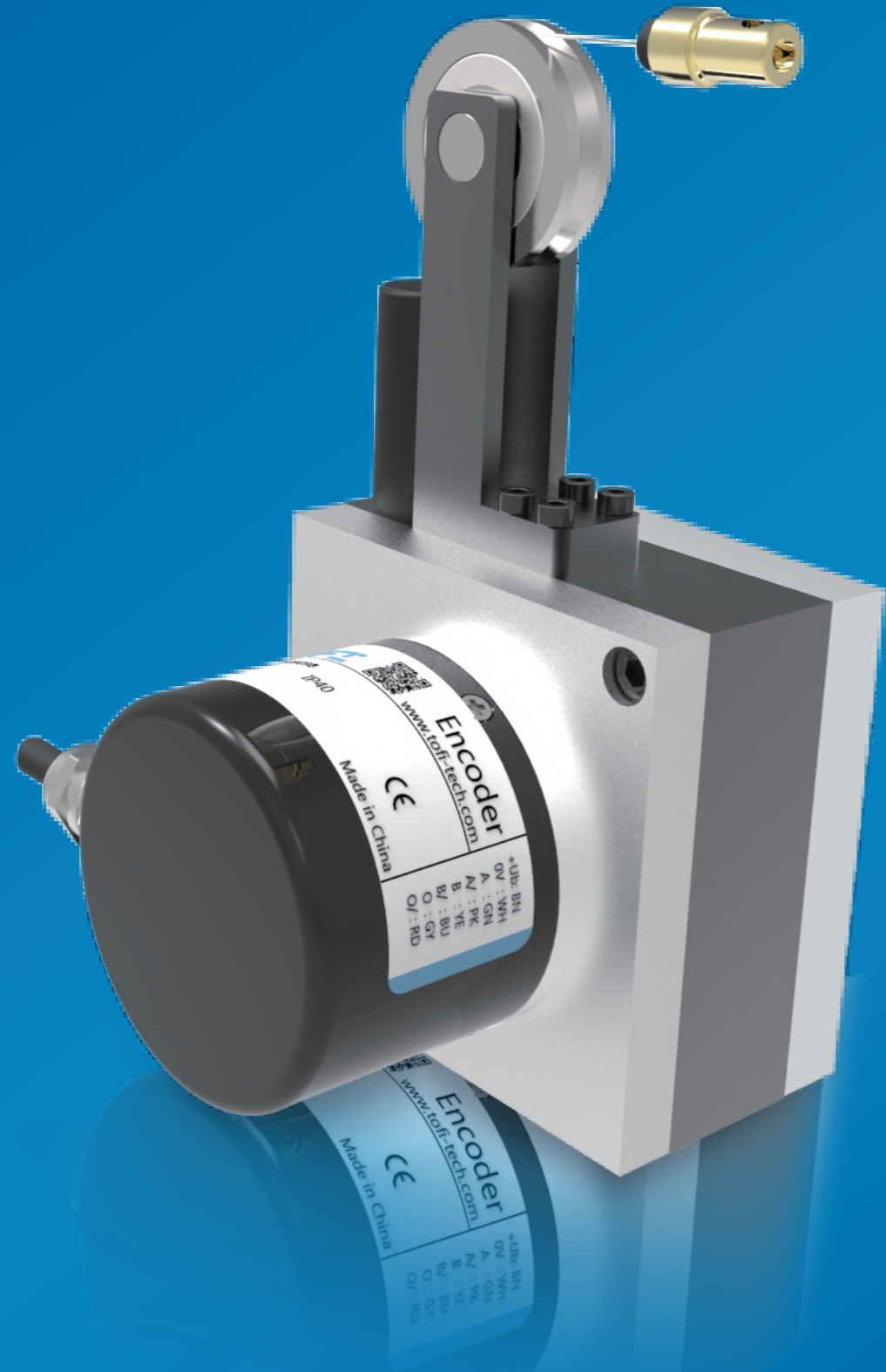


MR76XUDF04	MR132XUDF06	MR132XUDF06	MR36XFW01A	MR52XFW01A
磁阻式 Magneto-Resistive	磁阻式 Magneto-Resistive	磁阻式 Magneto-Resistive	绕线式 Wound rotor	绕线式 Wound rotor
7V	7V	7V	7V	7V
10kHz	10kHz	10kHz	10kHz	10kHz
$0.286 \times (1 \pm 10\%) \Omega$	$0.286 \times (1 \pm 10\%) \Omega$	$0.286 \times (1 \pm 10\%) \Omega$	$0.5 \times (1 \pm 10\%)$	$0.286 \times (1 \pm 10\%) \Omega$
4	6	6	-	2
$120 \times (1 \pm 20\%) \Omega$	$120 \times (1 \pm 20\%) \Omega$	$120 \times (1 \pm 20\%) \Omega$	$120 \times (1 \pm 15\%) \Omega$	$170 \times (1 \pm 15\%) \Omega$
$\leq \pm 30'$	$\leq \pm 30'$	$\leq \pm 20'$	$\leq \pm 10$	$\leq \pm 10'$
10~12bit	10bit	10~12bit	10bit	10bit
20000r/min	20000r/min	20000r/min	20000r/min)	20000r/min
-55°C~+180°C	-55°C~+180°C	-55°C~+180°C	-55°C~+180°C	-55°C~+180°C
500V,相间250V, 1min	500V,相间250V, 1min	500V,相间250V, 1min	500V,相间250V, 1min	500V,相间250V, 1min
$\leq 5\text{mA}$	$\leq 5\text{mA}$	$\leq 5\text{mA}$	$\leq 5\text{mA}$	$\leq 5\text{mA}$
$\geq 50\text{M}\Omega$	$\geq 50\text{M}\Omega$	$\geq 50\text{M}\Omega$	$\geq 50\text{M}\Omega$	$\geq 50\text{M}\Omega$
$\leq 1\text{kg}$	$\leq 1\text{kg}$	$\leq 1\text{kg}$	$\leq 65\text{g}$	$\leq 250\text{g}$

旋转变压器是一种精密角度、位置、速度反馈装置，特别适合高温、严寒、潮湿、高速、高震动等行业的应用
 Rotary transformer is a precise device used for angle, position and speed feedback, especially suitable for industries with environment of high temperature, cold, damp, high speed, high vibration and others.

拉线编码器

CABLE PULL ENCODERS



LTF80拉线编码器



拉线式编码器 cable pull encoders
测量长度 Length measurement 30m

运动控制传感器
拉线式编码器

Motion Control Transducer
cable pull encoders

拉线式, 带增量式编码器、绝对值编码器

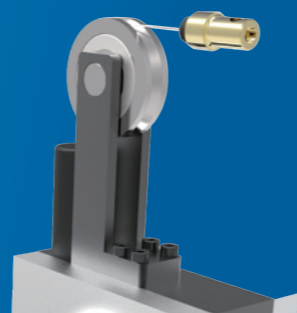
TOFI拉线编码器线性测量技术, 带编码器或模拟量传感器的拉线盒装置。可配不同类型的编码器或传感器(增量型编码器、模拟量输出传感器)。
结构:拉线装置的核心是一个安装有轴承的鼓轮, 拉线绳缠绕在装有弹簧的鼓轮的圆周上。注意:如果超出最大延展长度, 线缆和传感器将会损坏。



产品系列 Product family	LTF50	LTF55	LTF80	LTF82
功能原理 Function principle	增量式 Incremental	增量式 Incremental	增量式/绝对式 Incremental / absolute	增量式/绝对式 Incremental / absolute
感应原理 Sensing method	光电 Optical	光电/磁性 Optical	光电/磁性 Optical	光电/磁性 Optical
测量长度 Length measurement	1000mm	1500mm	4000mm	3000mm
外形尺寸 Housing size	50*50mm	55*55mm	80*80mm	80*80mm
电源 Voltage supply	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC	5VDC 9-26VDC 5-30VDC
输出方式 Output stage	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector	RS422/TTL Push-Pull/HTL NPN Open Collector SSI, RS485 Modbus-RTU PROFINET	RS422/TTL Push-Pull/HTL NPN Open Collector SSI, RS485 Modbus-RTU PROFINET
分辨率 (Pulse/mm) Resolution	≥0.016mm/p	≥0.02mm/p	≥0.02mm/p	≥0.02mm/p
线性度 Linearity	±0.05%FS	±0.05%FS	±0.05%FS	±0.05%FS
工作温度 Operating temperature	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
防护等级 (编码器) Protection(encoder)	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65
最大往返速度 Maximum round trip speed	≤1000mm/S	≤1000mm/S	≤1000mm/S	≤1000mm/S
特性 Features	测量长度1m, 配增量式编码器 Measure the length of 2m, with an incremental encoder	测量长度1.5m, 配增量式 Measure the length of 4m, with incremental	测量长度4m, 配增量式或 绝对值编码器 Measure the length of 4m, with incremental or absolute encoder	测量长度3m, 配增量式 或绝对值编码器 Measure the length of 3m, with incremental or absolute encoder

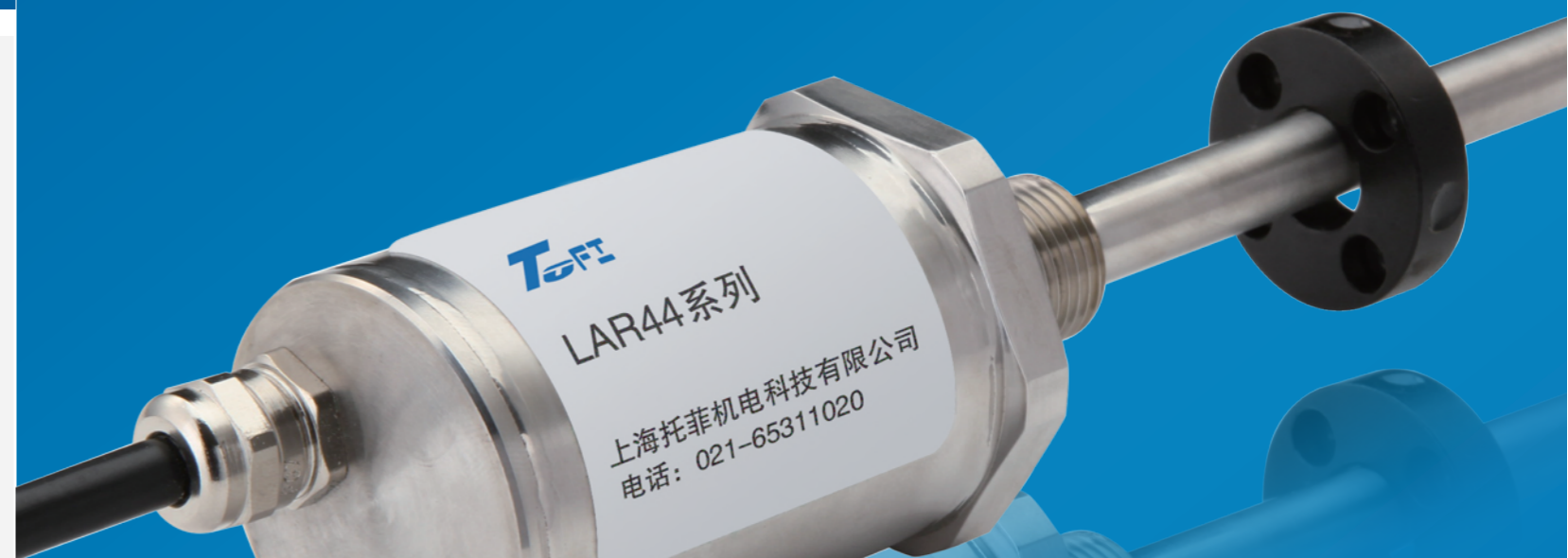
Cable pull,with incremental encoder,absolute encoder

Tofi cable-pull encoder linear measuring technology,with encoder or analog sensor on the linear box, can collected with any encoder or sensor(incremental or analog-output sensor)
structre:the core of the linear equitment is a wheel with bearing,cable twining in the tube of the wheel with bearing.Notice:the cable and the sensor will be damaged if the cable's length exceed maxism.



产品系列 Product family	LTF109	LTF115	LTF155	LDF130
功能原理 Function principle	电位器 Potentiometer	增量式/绝对式 Incremental / absolute	增量式/绝对式 Incremental / absolute	增量式/绝对式 Incremental / absolute
感应原理 Sensing method	电阻 Resistance	光电/磁性 Optical	光电/磁性 Optical	光电/磁性 Optical
测量长度 Length measurement	3000mm	6000mm	8000mm	10000mm
外形尺寸 Housing size	109*109mm	115*115mm	155*155mm	130*130mm
电源 Voltage supply	12-30VDC	5VDC、9-26VDC 5-30VDC	5VDC、9-26VDC 5-30VDC	5VDC、9-26VDC 5-30VDC
输出方式 Output stage	4-20mA	RS422/TTL Push-Pull/HTL NPN Open Collector SSI、RS485 Modbus-RTU	RS422/TTL Push-Pull/HTL NPN Open Collector SSI、RS485 Modbus-RTU PROFINET	RS422/TTL Push-Pull/HTL NPN Open Collector SSI、RS485 Modbus-RTU PROFINET
分辨率 (Pulse/mm) Resolution	-	≥0.03mm/p	≥0.04mm/p	≥0.066mm/p
线性度 Linearity	±0.1%FS	±0.05%FS	±0.05%FS	±0.05%FS
工作温度 Operating temperature	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C
防护等级 (编码器) Protection(encoder)	IP54/IP65	IP54/IP65	IP54/IP65	IP54/IP65
最大往返速度 Maximum round trip speed	≤1000mm/S	≤1000mm/S	≤1000mm/S	≤1000mm/S
特性 Features	测量长度3m, 模拟量输出 Measure the length of 3m, analog output	测量长度6m, 配增量式或绝对值编码器 Measure the length of 6m, with incremental or absolute encoder	测量长度8m, 配增量式或绝对值编码器 Measure the length of 8m, with incremental or absolute encoder	测量长度10m, 配增量式或绝对值编码器 Measure the length of 10m, with incremental or absolute encoder

磁致伸缩位移传感器 Magnetostrictive displacement sensors



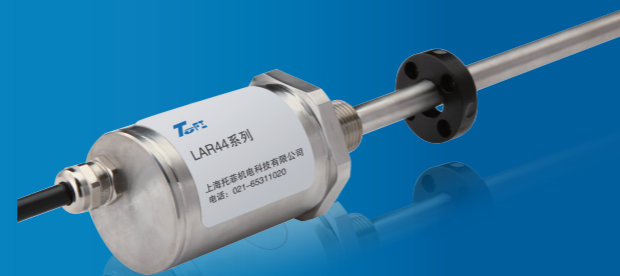
磁致伸缩位移传感器 Magnetostrictive displacement sensors
量程:50.....6000mm

绝对值输出

- 非接触式位移反馈
- 杆状R系列与外置导轨拉杆式P系列
- 广泛应用于液压轴的反馈系统

Absolute measurement

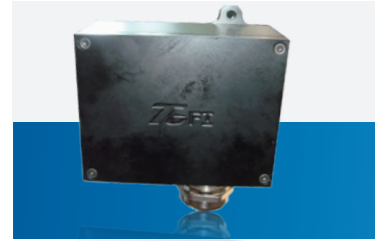
- Non-Contact displacement feedback
- Rod-shaped R-series and external guide rail pull rod type P-series
- Widely used in the feedback system of hydraulic shaft



产品系列 Product family	LAR44		LAR48	LAP48
感应原理 Sensing method	磁致伸缩 Magnetostrictive		磁致伸缩 Magnetostrictive	磁致伸缩 Magnetostrictive
外形尺寸 Housing size	杆状R系列 Rod-shaped R-series		杆状R系列 Rod-shaped R-series	外置导轨拉杆式P系列 External guide rail pull rod type P-series
电源 Voltage supply	24VDC		24VDC	24VDC
输出方式 Output stage	SSI (24、25、26位 Binary、Gray)	ModBus RS485	模拟量输出 Analog: 0~20mADC, 4~20mADC, ±10VDC, 0~10VDC, 0~5VDC	模拟量输出 Analog: 0~20mADC, 4~20mADC, ±10VDC, 0~10VDC, 0~5VDC
安装方式 Installation	螺纹安装 Screw thread			外置安装, 固定夹片 External installation, fixed clips
量程 Stroke length	50-6000mm	50~1500mm	50-6000mm	50-3000mm
分辨率 (Pulse/mm) Resolution	1/2/5/10/20 /40/50/100um	1um	16位DA	16位DA
重复精度 Repeat accuracy	< ± 0.002%F.S. (最小± 1位数字) (min. ± 1bit digital)		< ± 0.002%F.S. (最小± 2.5um) (min ± 2.5um)	< ± 0.002%F.S. (最小± 2.5um) (min ± 2.5um)
工作温度 Operating temperature	-40°C~+75°C		-40°C~+75°C	-40°C~+75°C
防护等级 Protection	IP67		IP67	IP67
耐压能力 Compressive ability	35MPa(连续) /70MPa(峰值) 35MPa (continuous) /70Mpa (peak)		35MPa(连续) /70MPa(峰值) 35MPa (continuous) /70Mpa (peak)	-
特性 Features	绝对值输出、非接触式位移反馈; 广泛应用于液压轴的反馈系统; Absolute measurement、Non-Contact displacement feedback; Rod-shaped R-series and external guide rail pull rod type P-series; Widely used in the feedback system of hydraulic shaft		不锈钢整体全封闭结构, 坚固耐用; 绝对位置输出; 体积小, 可内置油缸 内, 适合行走机械。 Stainless steel totally closed structure, rugged and durable; Output absolute position; Small volume, the sensor can be embedded in hydraulic cylinders and be fit for mobile machinery;	外置安装, 绝对位置输出, 非接触式测量, 永不磨损。 External installation, output absolute position; Non-Contact measurement, never wear.

振动诊断与监控
加速度传感器、速度传感器
Vibration diagnosis and monitor
Acceleration sensor、speed sensor





VB系列二线制HART协议单通道机壳振动变送器，主要应用于在线实时测量旋转机械（如电机、风机、汽轮机等）的机壳振动，输出与振动值相对应的4-20mA信号，并提供HART通讯协议。可以早期发现、报警、保护旋转机械，使机器的运转寿命加长，机组的维修周期缩短。
高集成度，无须前置器，高可靠性 High integration, without proximator, high reliability
VB系列集成了加速度传感器、变送器、以及HART通讯的功能，使用VB传感器只需要把它安装在机组现场的相应振动测量点的位置即可。
安装简单方便、无须任何调整 Easy installation, without any modification.
机器的被测点位置：一般要求在轴承振动测量点附近安装一套X, Y两个间隔90°的VB传感器。对于标准的双轴承的旋转机械，一般配置4套振动变送器。
VB传感器在出厂之前已经将各种参量调节、校验好。只需要将相应的电缆连接上即可，一般无须作任何的调整和校验。

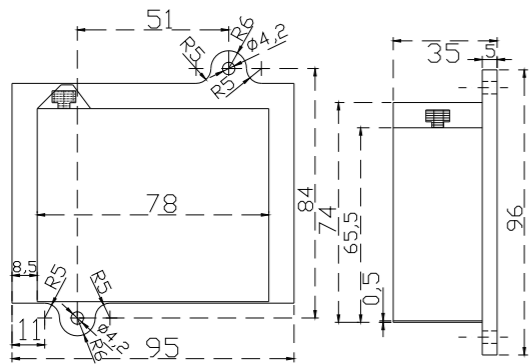
监测旋转机械转子的机壳振动 Monitoring the vibration of machinery rotor's shell.
故障监测 Malfunction monitoring
测量参量 Parameters measuring
机壳振动的加速度峰值、或速度有效值、或位置峰峰值。
机组类型 Machinery type
各种滑动轴承的旋转机械。如汽轮机、风机、压缩机、电机、泵等。
安装要求 Installation requirement.
VB传感器直接安装在轴承振动测量点附近位置。

订货信息 Ordering information

VB系列 System	测量类型 Measuring type	测量量程 Measuring range	输出 output															
VB	02	05																
VB	01=加速度 (m/S ² 单峰值) 02=速度 (mm/S 有效值) 03=位移 (um 峰峰值)	<table border="1"> <tr> <th>加速度测量量程</th> <th>速度测量量程</th> <th>位移量程</th> </tr> <tr> <td>01=10m/S²</td> <td>01=10mm/S</td> <td>10=100um</td> </tr> <tr> <td>05=50m/S²</td> <td>02=20mm/S</td> <td>15=150um</td> </tr> <tr> <td>10=100m/S²</td> <td>05=50mm/S</td> <td>20=200um</td> </tr> <tr> <td></td> <td>10=100mm/S</td> <td></td> </tr> </table>	加速度测量量程	速度测量量程	位移量程	01=10m/S ²	01=10mm/S	10=100um	05=50m/S ²	02=20mm/S	15=150um	10=100m/S ²	05=50mm/S	20=200um		10=100mm/S		无=4-20mA HART协议 V5=1-5V I20=4-20mA SR=单刀双掷zeng DR=双刀双掷zeng
加速度测量量程	速度测量量程	位移量程																
01=10m/S ²	01=10mm/S	10=100um																
05=50m/S ²	02=20mm/S	15=150um																
10=100m/S ²	05=50mm/S	20=200um																
	10=100mm/S																	

订购范例: VB-02-05

机械图 Mechanical drawing



振动传感器
V系列
M8外螺纹安装
防护等级 IP67
可选附件：绝缘安装
多种测量类型

Vibration sensor
V series
M8 outward thread installation
Grade IP67
Available accessories: insulated mounting
Variety of measuring type



加速度传感器
灵敏度 100mV/g, @250C, ±10%
频响 0.5-10,000Hz (±3dB)
测量范围 50g
共振频率 30kHz

Acceleration sensor
Sensitivity 100mV/g, @250C, ±10%
Operating frequency 0.5-10,000Hz (±3dB)
Measuring range 50g
Resonance frequency 30kHz



压电式加速度传感器
轴向灵敏度 100mV/g
测量范围 50g
频率响应 0.5-5000Hz
谐振频率 25000Hz

Piezoelectric acceleration sensor
Axial Sensitivity 100mV/g
Measuring range 50g
Operating frequency 0.5-5000Hz
Resonant frequency 25000Hz



VT0793V 速度传感器
灵敏度 4.0mV/mm/sec (100mV/in/sec)
@25oc, ±10%
测量范围 5.0v pk
非线性误差 1%
频率响应 2-7,000Hz (±3dB)
共振频率 15kHz

VT0793V speed sensor
Sensitivity 4.0mV/mm/sec (100mV/in/sec)
@25oc, ±10%
Measuring range 5.0v pk
Non linearity error 1%
Operating frequency 2-7,000Hz (±3dB)
Resonance frequency 15kHz



VB25速度传感器
测量范围: ±20mm/S
输出: 4-20mA、1-5V
频率响应 (±1dB) : 5-1000Hz
电源电压: 12-30VDC

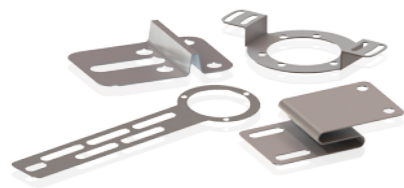
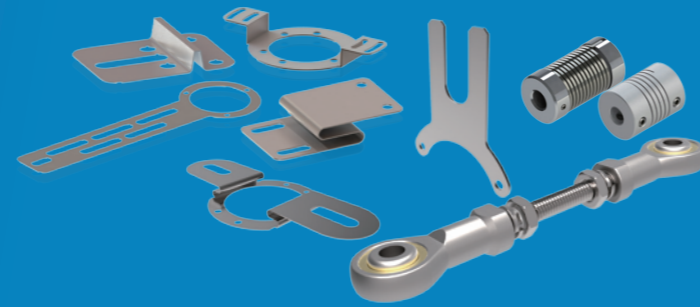
VB25 speed sensor
Measuring range ±20mm/S
Output 4-20mA、1-5V
Operating frequency (±1dB) 5-1000Hz
Voltage 12-30VDC

订货信息 Ordering information

V系列 System	测量类型 Measuring type	测量量程 Measuring range	输出 output										
V	02	05											
V	01=加速度 (m/S ² 单峰值) 02=速度 (mm/S 有效值)	<table border="1"> <tr> <th>加速度测量量程</th> <th>速度测量量程</th> </tr> <tr> <td>01=10m/S²</td> <td>01=10mm/S</td> </tr> <tr> <td>025=25m/S²</td> <td>02=20mm/S</td> </tr> <tr> <td>05=50m/S²</td> <td>025=25mm/S</td> </tr> <tr> <td></td> <td>05=50mm/S</td> </tr> </table>	加速度测量量程	速度测量量程	01=10m/S ²	01=10mm/S	025=25m/S ²	02=20mm/S	05=50m/S ²	025=25mm/S		05=50mm/S	V5=1-5V I20=4-20mA PC=PNP-NC
加速度测量量程	速度测量量程												
01=10m/S ²	01=10mm/S												
025=25m/S ²	02=20mm/S												
05=50m/S ²	025=25mm/S												
	05=50mm/S												

为了让您更加方便快捷安全的使用我们的编码器,我们为编码器提供了完整的附件,其中包括安装支架、联轴器、扭力杆、电缆连接器、绝缘轴套等。

We provide complete accessories matched for the encoder for you using our encoder fastly,conveniently and safely,include mounting brackets,couplings,torsion bar,cable connector and insulating bushings



安装支架

- 双翼弹性支架
- 长臂连接支架
- 偏心连接器(夹紧环)
- Mounting bracket
- Wings flexible bracket
- Long arm link bracket
- Eccentric connector(Clamping ring)



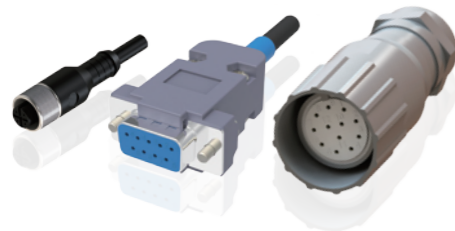
联轴器

- 螺旋形联轴器
- 弹簧联轴器
- 波纹管联轴器
- Coupling
- Spiral coupling
- Spring coupling
- Bellows coupling



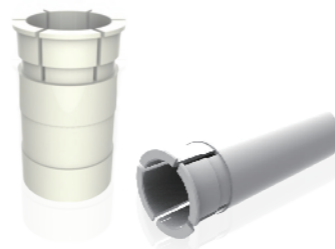
扭力杆

Torsion bar



电缆连接器 Cable connector

M12、M23、MIL, 以及其他标准的对接连接器



绝缘轴套

Insulating bushings

IP 6 7

接触和异物的侵入
Protection against ingress of solid foreign objects
(including dust) and access to hazardous parts

水的侵入
Protection against ingress of water

接触和异物的侵入 Protection against ingress of solid foreign objects (including dust) and access to hazardous parts	水的侵入 Protection against ingress of water
0 - 无防护 not protected	0 - 无防护 not protected
1 - 防护手背接触危险部件 Protection against ingress of back of hand - 防护直径50 mm或更大的异物侵入 -with $\phi \geq 50\text{mm}$	1 - 防护垂直方向滴水 vertical dripping
2 - 防护手指接触危险部件 Finger - 防护直径12.5 mm或更大的异物侵入 -with $\phi \geq 12.5\text{mm}$	2 - 防护当外壳在15°范围内倾斜时,垂直方向滴水 dripping(inclined 15°)
3 - 防护工具接触危险部件 Tool - 防护直径2.5 mm或更大的异物侵入 -with $\phi \geq 2.5\text{mm}$	3 - 防护喷雾的侵入 spraying
4 - 防护金属线接触危险部件 wire - 防护直径1.0 mm或更大的异物侵入 $\phi \geq 1.0\text{mm}$	4 - 防护溅水的侵入 splashing
5 - 防护金属线接触危险部件 wire - 防尘 dust-protected	5 - 防护喷水的侵入 jetting
6 - 防护金属线接触危险部件 wire - 尘密 dust-tight	6 - 防护强力喷水的侵入 powerful jetting
	7 - 防护短时间浸水的影响 temporary immersion
	8 - 防护持续潜水影响 continuous immersion
	9 - 能有效防护高压水和蒸汽的侵入 high-pressure/steam jet cleaning

注释:

不要求规定特征数字时,该处有字母“X”代替(如果两个字母都省略则用“XX”表示)
仅标志第二位特征数字为7或8的设备并不能满足标志5或6的要求,除非有双标志(例如IPX6/IPX7)
对于防护等级为IPX8的要求如下:
--- 1米水深
--- 24小时在水下,在额定负载条件下,进行动作,不动作循环试验.
--- 周期时间:2小时
--- 水温=室温 $\pm 5^\circ\text{C}$

Note:

If a characteristic numeral is not specified,it shall be replaced by the letter X(XX if neither characterising numeral is specified)
The device only marks the second characteristic numeral can't satisfy the requirement of signs 5 or 6,unless it marks two signs (EX.IPX6/IPX7)
The requirements of IPX8
--water immersion 1M
--Active in rated loading underwater for 24hours
--Cycle time:2hours
--Water Temperature:Room temperature $\pm 5^\circ\text{C}$

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For more information please visit: