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TECHNOLOGY
SINCE 1979

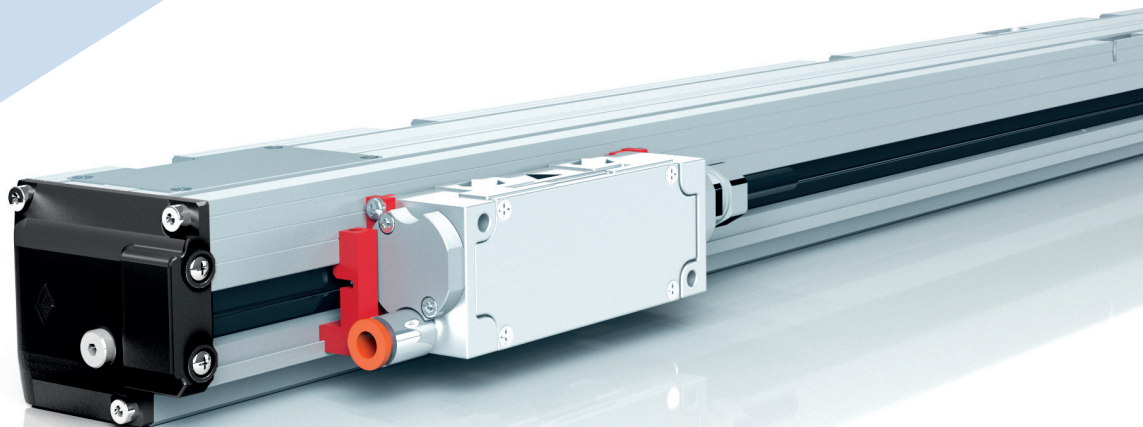


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innovative design guarantee superior
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门介绍 GVS 900 系列的视频。
Watch the video dedicated to GVS 900
series on YouTube or Youku.



适用于大型机床的光栅 / 磁栅尺

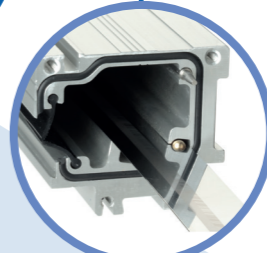
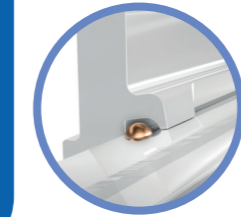
Optomagnetic scales for large machines.

应用于各种工业领域，如数控机床，立式车床，龙门机床，激光/等离子切割机、机器人、自动化等。

Application in various industrial fields such as machine tools, vertical lathes, gantry machines, laser/plasma cutting machines, robotics and automation.

创新设计的微球可轻松插入光栅/磁性钢带。只有一条光栅也支持读数头滑动。宽泛的模块对齐公差。

Innovative design with microspheres for an easy insertion of the grating/magnetic band. Only one grating that also supports the reader head sliding. Wide alignment tolerances of the modules.



高精度不锈钢光栅或磁带。可通过与机器安装面连接与否来选择最合适的热膨胀。

High-accuracy stainless steel grating or magnetic band. Possibility to select the most suitable thermal expansion, linked to the machine or independent.

T块用于模块弹性固定。尺身和光栅/磁带热膨胀相互独立。

T block for the elastic fixing of the modules. Scale and grating/magnetic band thermal expansions independent from each other.



自引导和自对准读数头(内部); 稳定高质量的增量和绝对信号。分辨率高达0.1 μm。

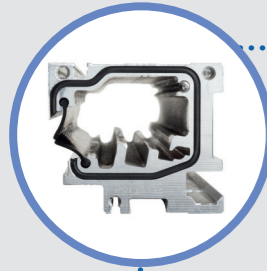
Self-guided and self-aligning reader head (internal); constant quality of the incremental and absolute signals. Resolution up to 0.1 μm.

测量长度可达30040 mm，或根据要求制作更长。

Up to 30040 mm of measuring length, or higher on request.

刚性固定模块，完美密封，经久不变形。

Rigidly bound modules for a perfect seal, unaltered over time.



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特制不锈钢托架用于读头滑动并将其固定在正确位置。

Brackets for sliding and fixing the transducer in the correct position.

密封垫片用于电路保护 (IP 67)。

Gaskets for circuit protection (IP 67).

参考索引有编码距离、恒定步距或通过零位磁力设定装置沿整个测量长度每 50 mm 设定一个参考索引。

Reference indexes at coded distance, at constant step, or selectable every 50 mm along the entire measuring length, with Zero Magneto Set device.

双向接头。可调节的电缆输出方向。

Double connector. Adjustable cable output.

特质钢连接块将光栅/磁带固定到机器上。线性热膨胀可确保加工应用在任何温度下保持优良的精度。

Block for fixing the grating/magnetic band to the machine. Linear thermal expansion suitable for the application, for an excellent accuracy at any temperature.

PUR电缆适用于连续运动。

PUR cable suitable for continuous movements.

特质密封唇具有非延展性，固定于尺体两个末端。

Non-extendible sealing lips, fixed at the lateral ends.

光栅/磁带均经严格校准。最高精度等级 ± 5 μm。

Grating/magnetic band calibration. Accuracy grade up to ± 5 μm.

从尺体和/或读数头的两侧加压。

Pressurization from both sides of the scale and/or of the transducer.



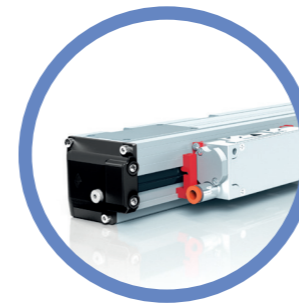
	增量式 INCREMENTAL		绝对式 ABSOLUTE	
	GVS 900 光栅尺 optical	GVS 915 磁栅尺 magnetic	GVS 908 光栅尺 optical	GVS 919 磁栅尺 magnetic
测量基体 Measuring support	不锈钢带 stainless steel grating	不锈钢带上的塑性铁氧体 plastroferrite on stainless steel tape	不锈钢带 stainless steel grating	不锈钢带上的塑性铁氧体 plastroferrite on stainless steel tape
栅距或极距 Grating pitch or pole pitch	40 μm	2+2 mm	240 μm	2+2 mm
线性热膨胀系数 Linear thermal expansion coefficient	$\lambda = 10.6 \times 10^{-6} \text{ } ^\circ\text{C}^{-1}$			
精度等级 Accuracy grade *	± 5 μm	± 10 μm	± 5 μm	± 10 μm
分辨率 Resolution	10 - 5 - 1 - 0.5 - 0.1 μm	10 - 5 - 1 - 0.5 μm	1 - 0.1 μm	1 - 0.5 μm
测量长度 Measuring length ML **	从 640 mm 到 30040 mm, 增加间隔 200 mm 模块长度: 1200, 1400, 1600, 1800, 2000 mm from 640 mm to 30040 mm, with steps of 200 mm. Modules length: 1200, 1400, 1600, 1800, 2000 mm			
参考索引 Reference indexes	C = 距离编码式 at coded distance P = 恒定步距 at constant step (每隔 every 50 mm) E = 可选式 selectable (每隔 every 50 mm)		特定绝对值码道 Specific absolute track	
最大横向运行速度 Max. traversing speed	最快可达 up to 120 m/min			
最大加速度 Max. acceleration	30 m/s ²			
最大移动所需力 Required moving force	≤ 15 N			
抗震性 Vibration resistance (EN 60068-2-6)	≤ 100 m/s ² [55 ÷ 2000 Hz]			
抗冲击性 Shock resistance (EN 60068-2-27)	≤ 300 m/s ² [11 ms]			
防护等级 Protection class (EN 60529)	IP 53 标准 standard IP 64 加压后 pressurized	IP 64 标准 standard IP 67 加压后 pressurized	IP 53 标准 standard IP 64 加压后 pressurized	IP 64 标准 standard IP 67 加压后 pressurized
操作温度 Operating temperature	0 °C ÷ 50 °C			
储藏温度 Storage temperature	-20 °C ÷ 70 °C			
相对湿度 Relative humidity	20% ÷ 80% (无冷凝 not condensed)			
读头滑动 Reading block sliding	通过滚珠轴承 by ball bearings ◎			
电源供给 Power supply	5 Vdc ± 5%			
电流 Max. current consumption	170 mA _{MAX} (带 with R = 120 Ω)		280 mA _{MAX} (带 with R = 120 Ω)	
输出信号 Output signals	TTL Line Driver 或者 or 1 Vpp		SSI-BiSS C (+ 1 Vpp 可选 optional) FANUC α-ai	SSI-BiSS C (+ 1 Vpp 可选 optional)
最大线长 Max. cable length ***	最高可达 up to 45 m		最高可达 up to 70 m	
连接器 Connector	在读头方向上, 输出方向可调 on the transducer, with adjustable output			
电气防护 Electrical protections	反极性和输出端口短路 inversion of polarity and short circuits			
重量 Weight	1.7 kg + 3.5 kg/m			

* 所声明的 ± X μm 精度等级是指 1 m 的测量长度。The declared accuracy grade of ± X μm is referred to a measuring length of 1 m.

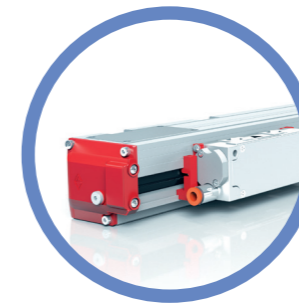
** 可根据要求提供更长的测量长度。Longer measuring lengths are available on request.

*** 可根据要求提供更长的电缆长度。Longer cable lengths are available on request.

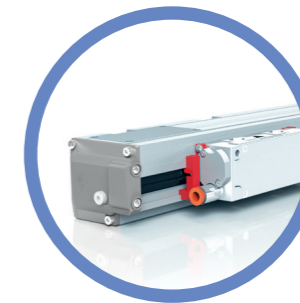
GVS 900 系列位移传感器可以与任何其他四种型号进行互换。
GVS 900 scale is available in four interchangeable models.



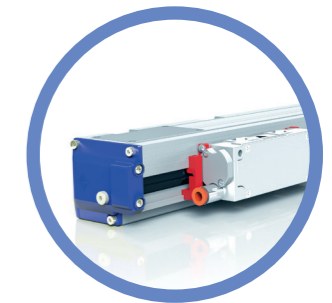
GVS 900
增量式光栅尺
Incremental optical



GVS 915
增量式磁栅尺
Incremental magnetic



GVS 908
绝对式光栅尺
Absolute optical



GVS 919
绝对式磁栅尺
Absolute magnetic

总体性能 GENERAL FEATURES

- 尺可提供单件或模块化版本。
The scales are available in a single piece or in modular version.
- 不锈钢支架上的不锈钢光栅或磁带, 由尺外壳保护并与机器导轨集成在一起, 在任何温度下都具有优良的精度。
Stainless steel grating or magnetic band on stainless steel support, protected by the scale housing and integral with the machine guide, for an excellent accuracy at any temperature.
- 刚性连接的模块, 可完美阻绝液体和环境污染, 经久耐用。
Rigidly bound modules, for a perfect seal against liquids and environmental dirty, unaltered over time.
- 独特的光栅/磁带支撑和引导系统使安装具有宽泛的对齐公差。
Exclusive grating/magnetic band support and guide system with wide alignment tolerances.

机械性能 MECHANICAL CHARACTERISTICS

- 坚固厚重的阳极氧化铝型材, 截面尺寸 50*58.5mm。
Rugged and heavy profile made of anodized aluminum. Dimensions 50x58.5 mm.
- 不可延伸的密封唇沿读数头的滑动侧, 固定在尺体末端。
Non-extendible sealing lips along the

sliding side of the reader head, fixed at the lateral ends.

- 弹簧系统用于对齐误差补偿和机械滞后自校正。
Spring system for misalignment compensation and self-correction of mechanical hysteresis.
- 由拉杆和阅读块组成的可加压的读数头, 其内部的电路板被充分保护。
Pressurizable reader head, consisting of tie rod and reading block, with fully-protected place for electronic boards.
- 模块之间的垫圈, 在机械连接处中提供充分的保护。
Gaskets between modules for a full protection in mechanical joints.

电气性能 ELECTRICAL CHARACTERISTICS

- 先进的双重比较读数系统, 对污垢的耐受性更高。
Advanced double-comparison reading system, for a higher tolerance against dirt.

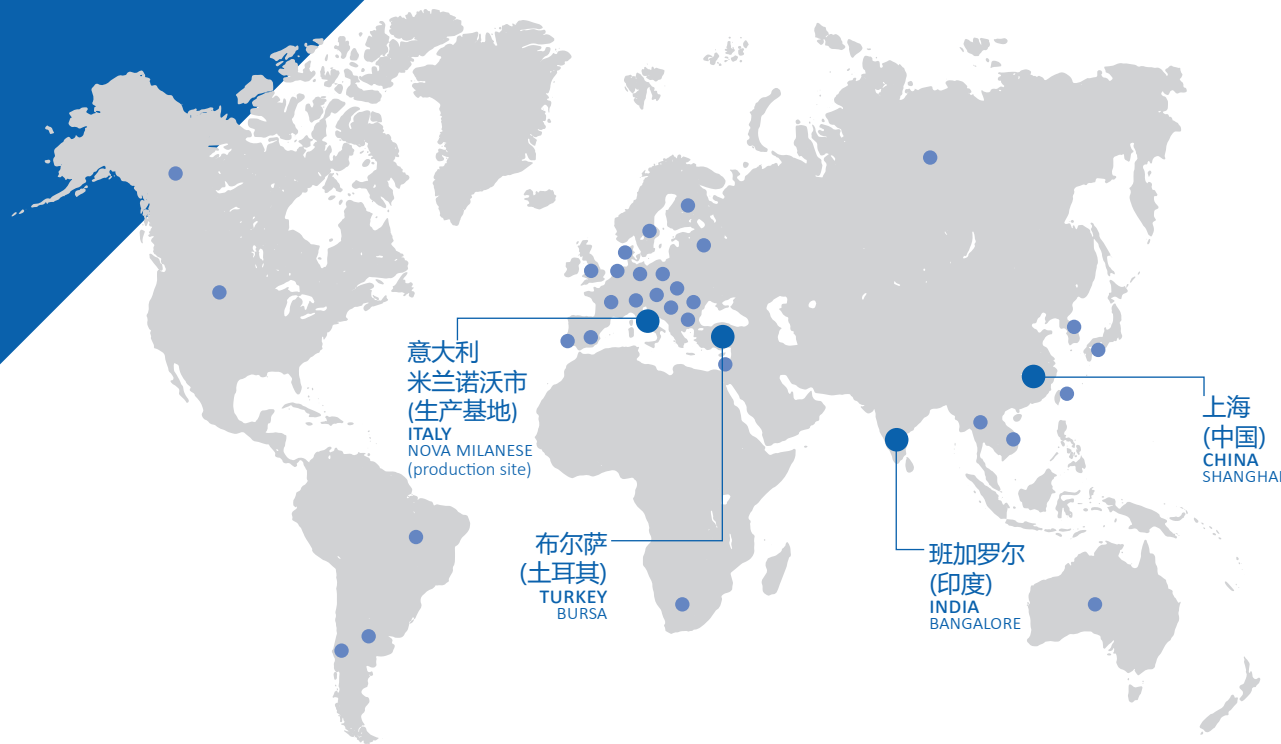
- 可调节电缆输出方向, 通过双连接器。传感器上的连接器, 在需要时可轻松断开。
Adjustable cable output, through double connector. Connector on the transducer, easily disconnectable in case of need.
- 增量版本: TTL 线路驱动系统, 具有更高的耐污性 或者 1 Vpp 模拟量信号。
绝对式版本: SSI-BiSS C (单向) 或 FANUC α-ai 串行接口。
Incremental version: TTL Line Driver or 1 Vpp signals.
Absolute version: SSI-BiSS C (uni-directional) or FANUC α-ai serial interface.
- PUR 电缆摩擦系数低, 耐油, 适合连续运动。
PUR cable with low friction coefficient, resistant to oil and suitable for continuous movements.



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光栅尺
Optical scales



磁性系统
Magnetic systems



旋转编码器
Rotary encoders



数显表
Digital readouts



位置控制器
Position controllers



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