



中文 | ENGLISH

电子式位置开关 ERC 40
精确的安全的位置范围监测

Electronic position switches ERC 40
For precise and safe monitoring of position ranges



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精确、优势、关注客户

我们专注于技术— 我们了解我们的客户。我们坚定的站在客户一边为其提供特殊的设想、定制的解决方案。为了支持我们的客户， 我们提供了强大的编码器系统、强大的传动技术和全球化的服务。我们将与我们的客户一起克服在重工业领域或其它极其恶劣条件领域的巨大的挑战，继而不断的增进客户的业务。你有什么挑战？

Precision. Strength. Customer focused.

We are fascinated by technology – and we understand our customers. We stand firmly at your side with exceptional ideas and tailor-made solutions; to support our customers we offer robust encoder systems, powerful drive technology and a worldwide service. That is how we overcome together with our customers the huge challenges in heavy industry and other fields subject to harsh conditions to sustainably improve their business. What challenges do you have?

我们的应用领域：

- 金属及轧制技术
- 港口和起重机技术
- 矿山工业
- 石油和天然气工业
- 运输
- 海洋工程
- 发电行业
- 其它应用领域

Our fields of applications:

- Metal and rolling mill technology
- Harbour and crane technology
- Mining industry
- Oil and gas industry
- Transport
- Marine engineering
- Power generation
- ... and many other applications

任务和解决方案

Task and Solution

任务

重工业对所用部件的可靠性和寿命提出了很高的要求。经验表明，仍在许多工厂用于位置监测的机械凸轮限位开关不能满足安全性、准确性和易用性的这些要求。

例如，这些机械设备往往表现出低切断精度和用户不友好的处理期间调整切断点。这种低效率破坏了顺利的工业过程，由于需要额外的时间和精力来实现精确定位，导致停工和更长的停机时间。

Task

Heavy industry places tough demands on the reliability and lifetime of the installed components. Experience shows that mechanical cam limit switches, which are still used in many industrial plants for position monitoring do not meet all requirements in regards to safety, accuracy and ease of use.

For example, these mechanical devices often exhibit low switching accuracy and user-unfriendly handling during the adjustment of switching points. This inefficiency disrupts the smooth industrial process, causing stoppages and longer downtimes due to the extra time and effort required to achieve precise positioning.



ERC 40 具有法兰结构形式 (B5)、法兰和底脚结构形式 (B35).
ERC 40 with flange (type B5) and with flange and foot (type B35).

解决方案

来自 Johannes Hübner Giessen 的 ERC 40 系列电子位置开关是要求最高精度、用户友好和可靠性的重载应用的理想解决方案。这些装置使其能够以最高的精度监视整个位置范围内的位置和限位开关点。

ERC 40 系列是:

- 可靠的
- 舒适的
- 灵活的
- 安全的

Solution

The ERC 40 series of electronic position switches from Johannes Hübner Giessen are the ideal solution for heavy-duty applications demanding the highest levels of precision, user-friendliness and reliability. These devices make it possible to monitor both position and limit switching points across the complete position range with utmost precision.

The ERC 40 series is:

- reliable
- comfortable
- flexible
- safe

产品的优点 / Product benefits

安全的 / safe

- 符合现行的安全标准
- 可选 SIL 2 / PL d (USC 42)
- 通过错误输出和寿命监测进行状态监测
- 坚固的外壳和带滑键/键槽的键连接
- 封装的电子部件即使在端子箱打开时也能得到保护
- 高品质 EMC 电缆接头
- 安全终端：封装接线盒中的双层接线板

- Developed in line with current safety standards
- Optionally also to SIL 2 / PL d (USC 42)
- Status monitoring via error output and lifetime monitoring
- Robust housing and keyed joint with feather key / keyway
- Encapsulated electronics protected even when terminal box is open
- High-quality EMC cable glands
- Secure termination: double-tier terminal blocks in the potted terminal box

舒适的 / comfortable

- 用于客户友好的配置软件可实现快速编程
- 无需繁琐的装置交换，易于保存和导入参数数据集
- 可选实时位置数据（4 – 20 mA 输出）
- 集成开关测试功能降低检查时间和工作量
- 通过预设输入进行调整，以消除滑动或磨损的影响（无需机械调整）

- Fast programming thanks to user-friendly configuration software
- No fuss device swapping facilitated by easily saving and importing parameter data sets
- Optional real-time position data (4 – 20 mA output)
- Low inspection times and effort thanks to integrated switch test functions
- Adjustment via preset input to eliminate the effects of slip or wear (no need for mechanical adjustment)



产品的优点 / Product benefits



定制 / tailor-made

- 1:1 替换机械凸轮限位开关在新设备中集成
 - 多达 15 个继电器输出
- 实心轴可至 $\varnothing 14$ mm 的法兰 / 底脚安装形式
 - 防护等级最高可达 IP66
 - 转速可达最高 2800 rpm
 - 含盐的环境 / 轧钢厂的湿区
 - 安装服务 (可选)
- Replace mechanical cam limit switches 1:1 and integrate in new plants without any difficulty
 - Up to 15 relay outputs
- Flange / foot versions for solid shafts up to $\varnothing 14$ mm
 - High degree of protection up to IP66
 - Speeds up to max. 2800 rpm
- Saliferous environment / wet areas in rolling mills
 - Installation service (optional)

经济的 / economic

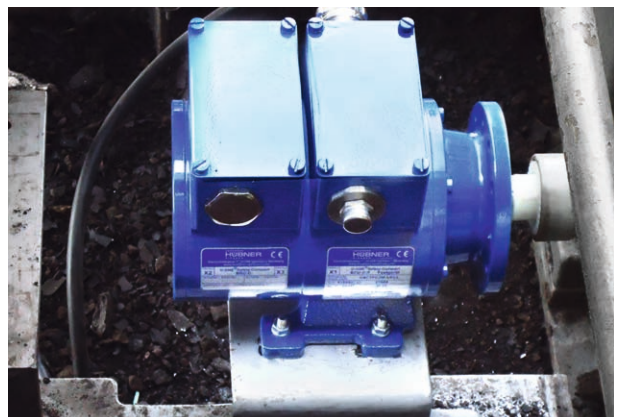
- 使用寿命长, 整体运行成本低
- 启动快, 设置时间快安装设置后即可用
 - 高可用性 – 低停机时间
- 高切断精度, 确保优化工艺时间时定位
- Long lifetime and low overall operating costs
- Fast start-up, fast setting times and immediate availability following installation / device swap
 - High availability – low downtimes
- High switching accuracy ensures optimized process times when positioning

系列 / Series	ERC 40
供电电源 Supply voltage	15 – 27 VDC 符合 / to IEC 60364-4-41, SELV / PELV
切断电压/电流 Switching voltage / current	AC: 最大 / max. 230 VAC / 500 mA DC: 最大 / max. 230 VDC / 180 mA; 最大 / max. 30 VDC / 500 mA
接线技术 Termination technology	螺钉压接端子 / Screw terminal 0,25 mm ² – 1,5 mm ²
编程界面 Programming interface	USB 2.0
单圈分辨率 Resolution singleturn	0,044° (360° / 8192 步 / steps); 13 Bit
多圈分辨率 Resolution multiturn	32.768 圈 / revolutions; 15 Bit
最大速度 Max. speed	2.800 rpm
工作温度范围 Operating temperature range	-25 °C 到 / to +70 °C
保护等级 Degree of protection	IP66
抗冲击 Shock resistance	25 g 符合 / to DIN EN 60068-2-27
抗振动 Vibration resistance	5 g 符合 / to DIN EN 60068-2-6

案例研究 1:1 替换 / Case Study 1:1 exchange



替换前: 机械凸轮限位开关.
Before: Mechanical cam limit switch.



替换后: 电子位置开关 ERC 40.
After: Electronic position switch ERC 40.

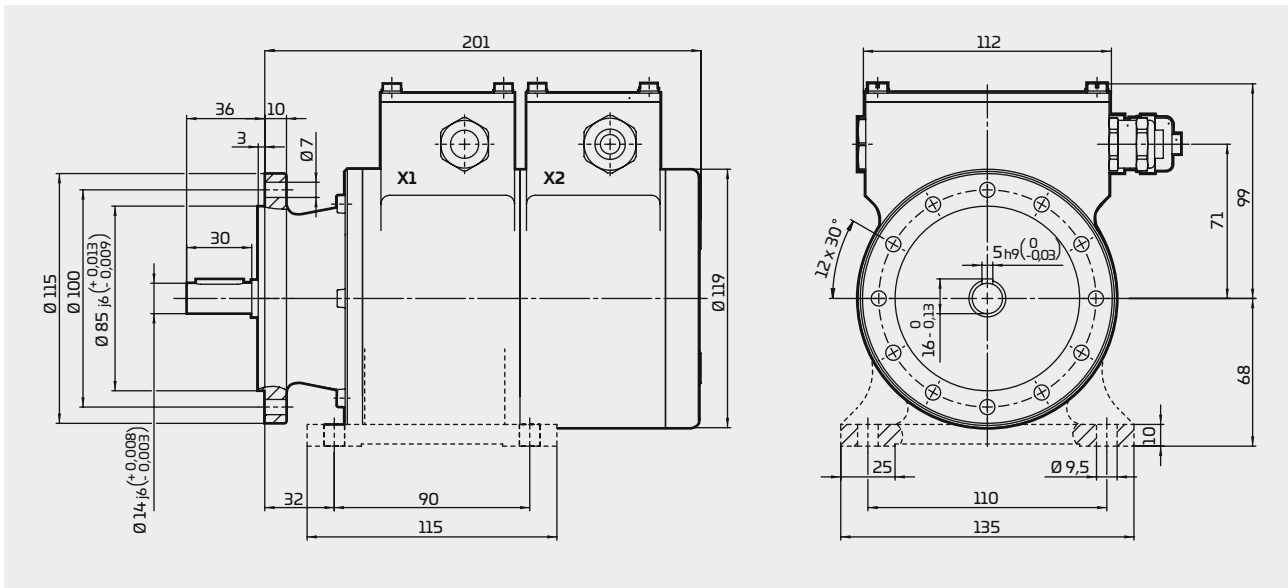
技术参数 / Technical data

尺寸图为最多 6 个继电器输出的案例

如果有 6 个以上的继电器输出，额外的模块外壳增加总长度。

Example dimension drawing with max. 6 relay outputs

If there are more than 6 relay outputs, additional module housings increase the overall length.



ERC 40-6

ERC 40-6 带法兰和底座 (类型 B35); 或者不带底座 (类型 B5).
ERC 40-6 with flange and foot (type B35); alternatively also available without foot (type B5).

选型表 / Type code

ERC 40	ERC	40	-	
电子式位置开关 / Electronic position switch				
系列 / Series				
可选项 电流输出 (4 – 20 mA) / Optional current output (4 – 20 mA) I = 带电流输出 / with current output - = 不带电流输出 / without current output				
位置开关数量 (继电器输出) / Number of position switches (relay outputs) 可选项 / Options: 3, 6, 9, 12 或 / or 15				

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