



Absolute Encoders

Absolute shaft encoders, also known as shaft-angle encoders, are by no means used only to detect angular positions. They are also suitable for linear movements that can be converted into rotary movements by a toothed belt, drive pinion, or wire winch.

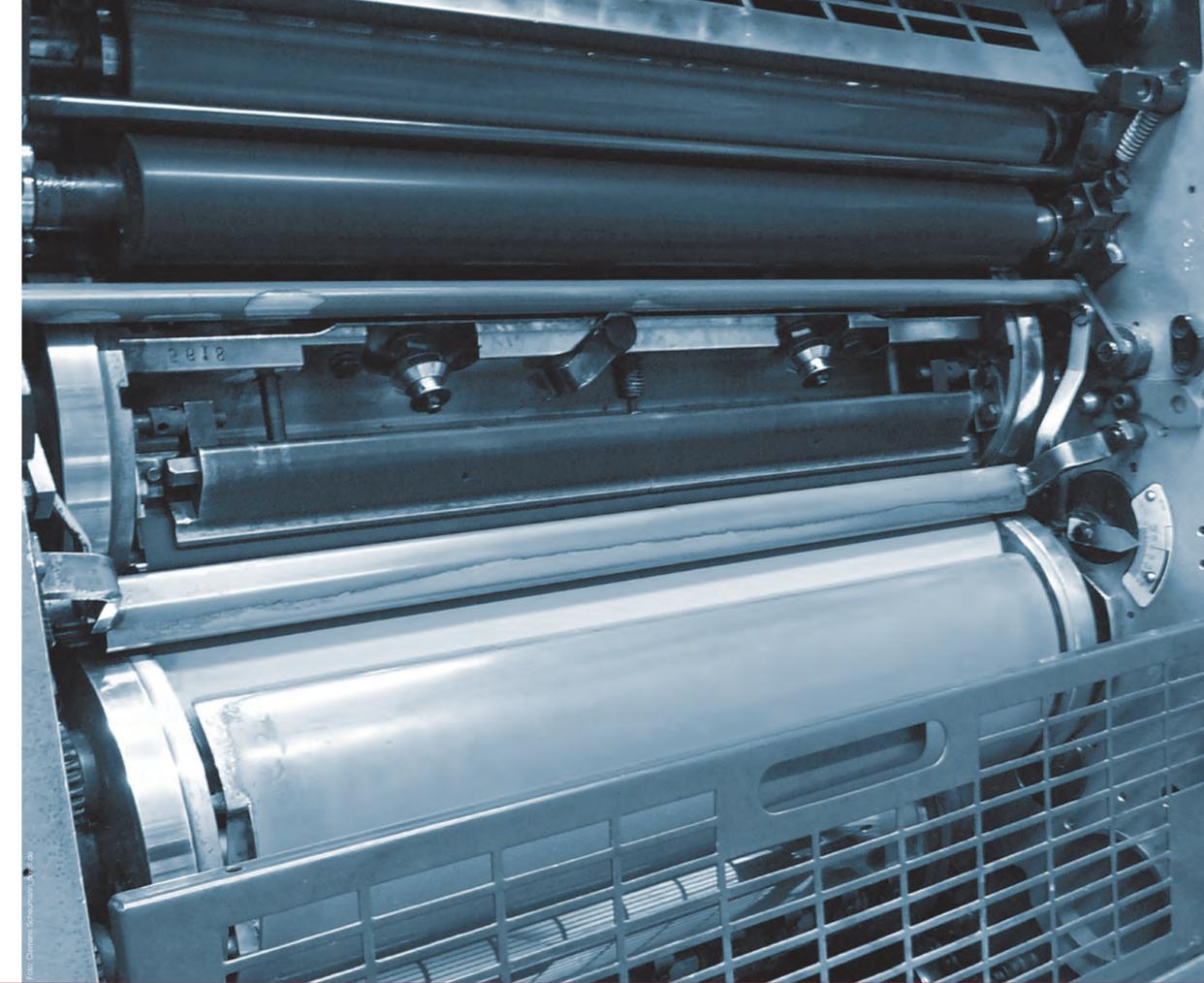
The special feature of absolute shaft encoders is that they assign a unique, digitally encoded signal to each individual measured increment. The method of transducing prevents erroneous readings, whether by a power failure, or by a transient malfunction. After the encoder is switched on again, or power is restored, the position can be read out. It is not necessary to move to a reference position, as it is for shaft encoders of the incremental type.

Examples of typical application for absolute encoders:

- overhead support robots
- ventilation flaps
- spinning machines
- conveyor belts
- cam controllers
- injection moulding machines
- packaging machinery
- extruders
- folding machines
- printing machines
- high lift storage systems
- stamping machines

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AUTOMATION

Encoders for Industrial Automation.



Incremental Encoders

Incremental encoders are sensors capable of generating signals in response to rotary movement. In conjunction with mechanical conversion devices, such as rack-and-pinions, measuring wheels or spindles, incremental shaft encoders can also be used to measure linear movement. The shaft encoder generates a signal for each incremental change in position. With the optical transformation, a line-coded disc made of metal, plastic or glass and positioned on a rotary bearing interrupts the infrared light ray emitted by gallium arsenid sender diode. The number of lines determines the resolution, i.e. the measuring points within a revolution. The interruptions of the light ray are sensed by the receptor element and electronically processed. The information is then made available as a rectangular signal at the encoder output.

Examples for typical application of incremental encoders:

- Door closing devices for trains
- Desktop robots
- Lens grinding machines
- Plotters
- Testing machines for optical waveguides
- Scattering machines
- Tampon printing machines
- Ultrasonic welding
- Screwing machines
- Labelling machines
- Etikettiermaschinen
- x/y indication
- Analysis devices
- Drilling machines
- Mixing machines

AC58 Fieldbus	AC58-I	RI64	RI36	RI76	Encoder Hub
					
Absolute Single + Multiturn Fieldbus	Absolute Multiturn with Incremental Signals	Incremental	Incremental	Incremental	Networking
<ul style="list-style-type: none"> ■ Optical encoder with a true geared multiturn ■ Broad temperature range: -40 to + 100°C ■ Resolution 14 Bit ST + 12 Bit MT ■ High EMC - Resistance ■ Body diameter 58 mm 	<ul style="list-style-type: none"> ■ Positioning and Speed feedback in one Encoder ■ MT Absolute encoder + Incremental output TTL or HTL ■ Broad temperature range: -40 to + 100°C ■ Control input: Preset and Direction ■ Resolution 25 Bit ■ Compact design: 50 mm length ■ High EMC - Resistance ■ Ideal for standard frequency converter and asynchronous motors ■ Body diameter 58 mm 	<ul style="list-style-type: none"> ■ Through Hollow shaft 10-16mm ■ Up to 5000 ppr ■ Unbreakable code disc ■ Protection class up to IP67 ■ Broad power supply range DC 5-26V ■ Isolated shaft ■ High shock and vibration resistance 	<ul style="list-style-type: none"> ■ Miniature industry standard encoder ■ Incremental output TTL or HTL ■ Resolution up to 3600 ppr ■ Frequency response up to 300 kHz ■ Body diameter 36 mm ■ 6 mm solid shaft 	<ul style="list-style-type: none"> ■ Through hollow shaft Ø 15 bis 42 mm ■ Outside diameter only 76 mm ■ Easy installation by means of clamping ring front or rear ■ Operating temperature up to 100 °C ■ Body diameter 76 mm 	<ul style="list-style-type: none"> ■ Connects up 4 SSI or BiSS encoders to USB or Profibus ■ Auto Configuration of BiSS Master ■ SSI compatible ■ Delivers Realtime speed and acceleration per axis ■ USB 2.0 Interface (USB 1.1 backwards compatible) ■ C-Functions library with DLL drivers ■ Windows XP (Win 7 in Preparation) ■ Supply DC 5 ... 30 V ■ Protection: IP67
Variants:					
<ul style="list-style-type: none"> ■ Profibus, DeviceNet, CANopen, CAN Layer 2, Interbus 					
Fields of application:	Fields of application:	Fields of application:	Fields of application:	Fields of application:	Fields of applications:
<ul style="list-style-type: none"> ■ Position Feedback in any kind of general machinery and factory automation applications. 	<ul style="list-style-type: none"> ■ Asynchronous motors geared and non geared with inverter for speed and position pitch control systems. 	<ul style="list-style-type: none"> ■ Speed an position feedback in asynchronous geared and non geared motors as well as point of motion measuring in any type of machine. 	<ul style="list-style-type: none"> ■ CNC axles ■ machine tools ■ robots ■ special purpose machines ■ high-speed winding machines 	<ul style="list-style-type: none"> ■ Speed an position feedback in asynchronous geared and non geared motors as well as point of motion measuring in any type of machine. 	<ul style="list-style-type: none"> ■ Position Feedback in any kind of general machinery and factory automation applications.

