

HENGSTLER

Our innovation - Your success

ENCODERS ■

■ RELAYS

COUNTERS ■

Product Program

HENGSTLER

>Resolver

>MFB Rotary Encoders

			
<p>Resolver</p>	<p>ICURO® RI64</p>	<p>S21</p>	<p>ACURO® AD35/36</p>



Absolute Singleturn	Incremental	Sine Wave Encoder	Absolute Single
<ul style="list-style-type: none"> > Ambient temperature up to 220°C > Absolute position feedback > Rugged: high shock and vibration > Pollution resistant > No electronic components > Maintenance-free > Size 10 ... 55 > Frameless and housed resolvers available 	<ul style="list-style-type: none"> > Through Hollow shaft Ø 10 -16 mm > Unbreakable code disc > Protection class up to IP67 > Isolated shaft > High shock and vibration resistance > Wide operating temperature range of -40°C ... +100°C > Up to 20,000 steps with 5,000 pulses > Wide power supply range DC 5-26 V > Wide operating temperature range of -40°C ... +100°C > Flexible due to many flange and configuration variants > Suitable for high shock ratings > 360° full screen 	<ul style="list-style-type: none"> > Operating temperature up to +120°C > 12,000 rpm continuous operation > Sine-Cosine 1 Vpp > Excellent immunity to interference > Higher signal quality  > Low harmonics (THD)  > High functional safety > Tapered solid or hollow shaft > Bandwidth 500 kHz with excellent signal quality > Easy installation by means of clamping ring front or rear > Wide temperature range of -25°C ... +100°C > 360° full screen 	<ul style="list-style-type: none"> > Operating temperature up to +120°C > 10,000 rpm continuous operation > Compact design: 24 ... 33,5 mm mounting depth > Resolution up to 22 Bit Singleturn > Multiturn 12 Bit (geared) > Interfaces: SSI, BiSS-B or BiSS-C > Option Sine wave 1 Vpp > Conical shaft 1:3, hub shaft or through hollow shaft 8 mm > Bandwidth 500 kHz
<p>Options:</p> <ul style="list-style-type: none"> > SCS open link 			<p>Options:</p> <ul style="list-style-type: none"> > AD34 ST + MT notched shaft > AD36 ST + MT through hollow shaft
<p>Fields of application:</p> <ul style="list-style-type: none"> > Servo Motors > Medical technology (can be sterilized) > Robots > Gearless drives > Military devices 	<p>Fields of application:</p> <ul style="list-style-type: none"> > Speed and position feedback in asynchronous geared and non-geared motors as well as point of motion measuring in any type of machine 	<p>Fields of application:</p> <ul style="list-style-type: none"> > Servo Motors 	<p>Fields of application:</p> <ul style="list-style-type: none"> > Servo Motors > Medical technology

>MFB Rotary Encoders for Series for Single Cable Solution

>MFB Rotary Encoders

MFB	MFB	MFB	MFB
ACURO® AD37	ACURO® AD38	ACURO® AD58	ACURO® AD58 DRIVE-CLiQ



ACURO® link



ACURO® link



ACURO® link



Absolute Single + Multiturn Encoder -Functional Safety	Absolute Single + Multiturn Encoder - Functional Safety	Absolute Single + Multiturn Encoder - Functional Safety	Absolute Single + Multiturn
<ul style="list-style-type: none"> > High performance motor feedback > ACURO®link interface > Allow users to create SIL2 and SIL3 Functional Safety Applications > Electronic Data Sheet > Motor and Drive data storage > High resolution 20 Bit Singleturn > 12 Bit Multiturn > Operating temperature of -40°C ... +115°C > 12,000 rpm max. speed > Shortest mounting depth > Motor winding temperature sensor input 	<ul style="list-style-type: none"> > High performance motor feedback > ACURO®link interface > SCS open link interface > Allow users to create SIL2 and SIL3 Functional Safety Applications > Safe absolut singleturn position > Electronic Data Sheet > Motor and Drive data storage > Condition monitoring data > High resolution 20 Bit Singleturn, Advanced version up to 24 Bit > High accuracy ±36 arcsec > 12 Bit Multiturn (geared) > Operating temperature of -40°C ... +115°C > 10,000 rpm max. speed > Shortest mounting depth > Tethermounting/ 8mm shaft cone 1:3, M4 > Motor winding temp. sensor input > Encoder temperature sensor > Solid or hollow shaft available > Compact design: 32 mm mounting depth > High corrosion resistance: high grade stainless steel housing > DNV GL certificate for maritime appl. > Interfaces: SSI, BiSS, CANopen, Analog > CANopen interface with E1 approval for vehicle applications 	<ul style="list-style-type: none"> > High performance motor feedback > ACURO®link interface > SCS open link interface > Allow users to create SIL2 and SIL3 Functional Safety Applications > Electronic Data Sheet > Motor and Drive data storage > High resolution 24 Bit Singleturn > High accuracy ±20 arcsec > 12 Bit Multiturn > Operating temperature of -20°C ... +115°C > 12,000 rpm max. speed > Shortest mounting depth > Motor winding temperature sensor input > Internal encoder temperature sensor > Condition monitoring data 	<ul style="list-style-type: none"> > High performance motor feedback > DRIVE-CLiQ Interface > SINAMICS compatible > Allow users to create SIL2 Functional Safety Applications > Operating Temperature of -25°C ... +110° C > 10,000 rpm Continuous Operation > Optical encoder with a true geared 12 Bit Multiturn > High resolution up to 24 Bit Singleturn > High accuracy up to ±20 arcsec > Motor winding temperature sensor input > Internal Temperature Control of Encoder > EDS
<p>Fields of application:</p> <ul style="list-style-type: none"> > Servo Motors 	<p>Fields of application:</p> <ul style="list-style-type: none"> > Servo Motors > Functional Safety Applications > Single Cable Solution 	<p>Fields of application:</p> <ul style="list-style-type: none"> > Servo Motors > Functional Safety Applications > Single Cable Solution 	<p>Fields of application:</p> <ul style="list-style-type: none"> > Servo Motors > SINAMICS motion control > Functional safety applications

> Rotary Encoders for Factory Automation Applications

FA ELV HD MED	FA ELV HD MED	FA ELV	FA MED
ICURO® RI30	ICURO® RI58	ICURO® RI76	ACURO® AC36



Incremental	Incremental	Inkremental	Absolute Single + Multiturn
<ul style="list-style-type: none"> > Small rotary encoder for industrial applications > Very compact design: 30 mm housing diameter / mounting depth 27 mm > Up to 6,000 steps with 1,500 pulses > Protection class up to IP64 > Solid shaft Ø 5 mm > Temperature range of -10°C ... +70°C > Low current consumption > High interference protection > Suitable for high pulse frequencies > 360° full screen 	<ul style="list-style-type: none"> > Up to 40,000 steps with 10,000 pulses > Solid shaft, hub shaft or through hollow shaft (up to Ø 15mm) versions available > Compact design > High signal accuracy > Protection class up to IP67 > Wide operating temperature range of -40°C ... +100°C > Flexible due to many flange and configuration variants > Suitable for high shock ratings > 360° full screen 	<ul style="list-style-type: none"> > Up to 40,000 steps with 10,000 pulses > Through hollow shaft Ø 15 to 42 mm > Outside diameter only 76 mm > Compact design: 43 mm mounting depth > Easy installation by means of clamping ring front or rear > Wide temperature range of -25°C ... +100°C > 360° full screen 	<ul style="list-style-type: none"> > Resolution up to 22 Bit Single-turn + 12 Bit Multiturn > High accuracy 35" > Solid or hollow shaft versions available > Overall length: 36 mm > Wide temperature range of -40°C ... +100°C > Protection class IP64 > 10,000 rpm continuous operation > Optical encoder with a true geared Multiturn > Interfaces: SSI, BiSS-B or BiSS-C > Optional Sine wave 1 Vpp > Bandwidth 500 kHz > 360° full screen
<p>Fields of application:</p> <ul style="list-style-type: none"> > Positionsbestimmung in jeglicher Art von Maschinen- und Automations-Anwendung. 	<p>Fields of application:</p> <ul style="list-style-type: none"> > Machine tools > CNC axes > Packing Machines > Motors/drives > Injection Moulding Machines > Sawing Machines > Textile Machines 	<p>Fields of application:</p> <ul style="list-style-type: none"> > Speed and position feedback in asynchronous geared and non-geared motors > Point of motion measuring in any type of machine 	<p>Fields of application:</p> <ul style="list-style-type: none"> > For equipment engineering and industry

>Explosion Proof Rotary Encoders

FA WE ELV MED	HD FA WE	O&G HD	O&G HD
ACURO® AC58	ACURO® AR Series	ACURO® AX65	ACURO® AX73



E1 10-036823



Absolute Single + Multiturn	Absolute Heavy Duty	Explosion Proof – Absolute Heavy Duty	Explosion Proof – Absolute Heavy Duty
<ul style="list-style-type: none"> > Solid or hollow shaft versions available > Wide temperature range of -40°C ... + 85°C > Resolution up to 22 Bit Single-turn + 12 Bit Multiturn > High EMC – Resistance > Optical encoder with a true geared Multiturn > Housing diameter 58 mm > Interfaces: EtherCAT, Profinet, Ethernet-IP, Profibus, CANopen, DeviceNet, CAN Layer 2, Interbus, SSI, BiSS-B and BiSS-C > Interfaces: EtherCAT, Profinet, Ethernet-IP NEW > Profibus Interface up to 16 Bit ST available NEW > MT Absolute SSI encoder + Incremental output TTL or HTL (AC58-I) > Wide range of programmable functions > 10,000 rpm continuous operation > High shock and vibration resistance > Large number of configuration options > Stainless steel as ACURO® AC61 available 	<ul style="list-style-type: none"> > Single and Multiturn: Resolution up to 28 Bit > Wearless electronic Multiturn: contact- and battery-less, self-energetic > 300 N axial and radial load > 200 g shock resistance / 20 g vibrations resistance > Submersible: Protection class up to IP69K > Wide temperature range of -40°C ... +100°C > Solid or hollow shaft versions available > Compact design: 32 mm mounting depth > High corrosion resistance: high grade stainless steel housing > DNV GL certificate for maritime application > Interfaces: SSI, BiSS, CANopen, Analog > CANopen interface with E1 approval for vehicle applications 	<ul style="list-style-type: none"> > ATEX and IECEx certification for Gas, Dust and Mining <ul style="list-style-type: none"> - Gas: Ex II 2G Ex db IIC T4 - Dust: Ex II 2D Ex tb IIIC T135 °C > Mining: Ex I M2 Ex db I > Most compact design of its class: 59 mm housing diameter / 70 mm mounting depth > Extreme robust design > 300 N axial and radial load > 200 g shock resistance / 30 g vibrations resistance > Protection class up to IP66 / IP67 > Easy field installation <ul style="list-style-type: none"> - Free choice of cable in the field (terminal box with cage clamp technology) - In case of emergency service, encoder and cable can be removed separately - Access to control elements (DIP) > Extreme corrosion resistance: high grade stainless steel housing (1.4404 / AISI 316L) > Wearless electronic Multiturn: contact- and battery-less, self-energetic > Interfaces: SSI and CANopen 	<ul style="list-style-type: none"> > ATEX and IECEx certification for Gas and Dust > Gas: Ex II 2 G Ex d IIC T4 Gb > Dust: Ex II 2 D Ex tb IIIC T130 Db > High precision standard as ACURO Industry > Resolution up to 22 Bit Single-turn + 12 Bit Multiturn > Optical encoder with a true geared Multiturn > Interfaces: SSI/BISS and Profibus > Easy field installation > Free choice of cable in the field (terminal box with cage clamp technology) > In case of emergency service, encoder and cable can be removed separately > Access to control elements (DIP) > Robust design > Extreme corrosion resistance: high grade stainless steel housing (1.4404 / AISI 316L) > Protection class IP66 / IP67
<p>Fields of application:</p> <ul style="list-style-type: none"> > Position Feedback in any kind of general machinery or factory automation application > Packaging Machines > Injection Molding Machines > Wood Processing Machines > Assembly and Handling Technology > Conveyor Technology > Printing and Paper Machines > Pitch Control systems (AC58-I) 	<p>Fields of application:</p> <ul style="list-style-type: none"> > Wind Power Plants > Cranes > Marine Equipment > Offshore Plants > Commercial Solar Plants > Bottling Machines > Presses > Food & Beverage Industrymaschinen 	<p>Fields of application:</p> <ul style="list-style-type: none"> > Drilling Equipment > Winches > Cranes > DrawWorks > Topdrive > Pipe Handling > Mills > Enameling Production Line > Petro Chemistry > Bottling Machines > Mixers > Silo Works 	<p>Fields of application:</p> <ul style="list-style-type: none"> > Drilling Equipment > Winches > Cranes > DrawWorks > Topdrive > Pipe Handling > Mills > Enameling Production Line > Petro Chemistry > Bottling Machines > Mixers > Silo Works

>Customized Rotary Encoders

>Explosion Proof Counters



ACURO® / ICURO®
Customized Versions



Pneumatic Preset Counter



Pneumatic Proximity Switch



Incremental

Mechanic interface modifications as:

- > Special flanges
- > Multifaceted shaft styles in terms of diameter or joint shapes

Connection Interface modifications as:

- > Special cable-styles,
- > Various connectors or pinnings

Signal modifications as:

- > Customized Zero-Signals (length, position or amount)

Specific interface configurations as:

- > Added Parity-Bit, Alarm-Bit, specific Data-formats, predefined Direction, Monofloptime or Preset-Value

Increased safety designs as:

- > Fully redundant designs
- > Dual outputs
- > Positive locking mounting style

Versatile adaptations for environmental conditions as:

- > Extended voltage range
- > Extended temperature range
- > Extended IP-rating
- > Extended vibration / shock-rigidity
- > Extended shaft speed
- > Vacuum suitable encoders
- > Usability in extreme magnetic fields

Improved chemical behavior as:

- > Specific corrosion resistances
- > Seawater proofing
- > Silicone- / PWIS-free (LABS frei)
- > Halogen free or fire proof cables

Customer specific documentation as:

- > CoC's, certificates
- > Customized labeling

Fields of application:

- > Positionsbestimmung in jeglicher Art von Maschinen- und Automations-Anwendung.

Pneumatic

- > Easy and simple installation – via hose coupler M5 or rapid-fit connector
- > ATEX marked products ready to install into final ATEX applications
- > 3 or 5 digits versions
- > Service pressure of 2 to 8 bar
- > Integrated pneumatic reset available
- > Permanently visible preset value
- > Easy pushbutton setting and simple operation
- > Maintenance free
- > Unique products on the market
- > Operating temperature 0 up to 140°C
- > Fully pneumatic operated device

Fields of application:

- > Industrial and factory transportation of materials (eg. fine powders which can be combustible)
- > Packaging unit controls
- > Oil and Gas areas
- > Various dosing and filling (resins, liquids, powders, paints, etc.)
- > Pumps

Pneumatic

- > Non-contact actuation
- > Responds to magnetic field and Fe
- > Compact dimensions
- > Continuous air supply not required
- > Service pressure of 2 to 6 bar
- > Solid or hollow shaft versions available
- > Compact design: 32 mm mounting depth
- > High corrosion resistance: high grade stainless steel housing
- > DNV GL certificate for maritime application
- > Interfaces: SSI, BiSS, CANopen, Analog
- > CANopen interface with E1 approval for vehicle applications

Fields of application:

- > Detection of pneumatic cylinders positions
- > Industrial and factory transportation systems
- > Any application areas with a need of health and safety requirements

>Safety Relays

O&G

Self-Powered Counter / SPC

H-480 – Safety Relay
6 contacts

H-480 – Safety Relay
4 contacts



Battery-Free Counter

- > Simple, Innovative and Cost Effective
- > ATEX Certification for Gas Applications
- > No Power Supply Required
- > Extreme Shock and Vibration Resistance:
- > 300 g Shock; 20 g Vibration
- > Most Compact Design of its Class: 36.5 mm
- > Mounting Depth; 28 mm Diameter
- > Suitable for all Fluid Media Types: Gas, Water, etc.
- > Easy, Fast Field Installation
- > Protects against Fraud
- > Various Communication Protocols Available: NAMUR, HART, M BUS, Wireless
- > 10,000 rpm continuous operation
- > Optical encoder with a true geared Multiturn
- > Interfaces: SSI, BiSS-B or BiSS-C
- > Optional Sine wave 1 Vpp
- > Bandwidth 500 kHz
- > 360° full screen

Fields of application:

- > Industrial Gas Metering
- > Industrial Water Metering

Compact. High Performance. Economical.

- > 6 contacts
- > Max. switching current 8 A
- > Forcibly guided contact set
- > Reinforced insulation between all contacts
- > Low coil power consumption
- > Low height (15,7 mm)
- > Ambient temperature -25°C ... +75°C

Fields of application:

- > Safety Modules
- > Elevators / Escalators
- > Railway
- > Sensors
- > Machine Building
- > Drive Systems
- > Medical Systems

Compact. High Performance. Economical.

- > 4 contacts **NEW**
- > Max. switching current 8 A
- > Forcibly guided contact set
- > Reinforced insulation between all contacts
- > Low coil power consumption
- > Low height (15,7 mm)
- > Ambient temperature -25°C ... +75°C

Fields of application:

- > Safety Modules
- > Elevators / Escalators
- > Railway
- > Sensors
- > Machine Building
- > Drive Systems
- > Medical Systems

HENGSTLER

Umlandstr. 49
D-78554 Aldingen

Telefon: +49 (0) 7424-89-0
info@hengstler.com
www.hengstler.com