Insight into a new world

The high-resolution AFS60 singleturn and AFM60 multiturn absolute encoders

SICK | STEGMANN

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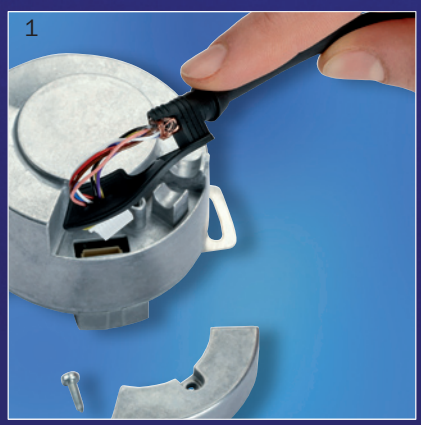
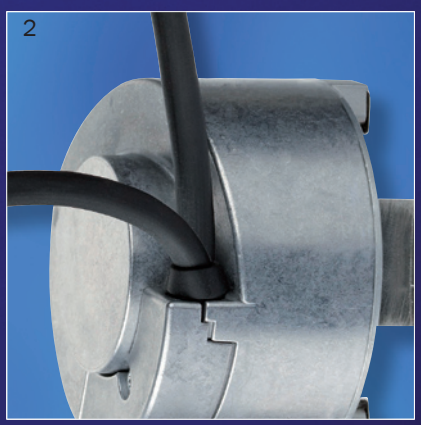
AFS/AFM60

Absolute top performance!





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Small size, Big performance.

With a resolution of 30 bits, the highly robust new AFM60 multiturn absolute encoder is a top performer. Even its small brother – the AFS60 singleturn absolute encoder – impresses with its 18-bit resolution. Thus, both new product ranges are particularly suited to harsh application environments requiring both maximum accuracy and reliability.

Both the AFM60 and the AFS60 can be programmed using the same Programming Tool used with the SICK STEGMANN DFS60 incremental series.

The generous spacing (30mm) between the bearings used in the AFS/AFM60 ensures excellent concentricity and robustness.

The increased bearing gap delivers exceptionally smooth operation even at the maximum operating speed.

AFS/AFM60 – your benefits:

- **NEW: 18-bit singleturn resolution**
  12-bit multiturn resolution
- **NEW: pluggable cable outlet** (Fig. 1)
  axial or radial (Fig. 2)
  M12 or M23 connector outlet
- **NEW: AFS/AFM60 programmable via standard output cable**
- A Common Programming Tool for DFS60, AFS60 and AFM60
- Programmable zero point or offset
- Programmable single turn resolution up to 18 bits
- Separate external voltage supply not required for programming
- **NEW: large 30 mm ball bearing gap** (Fig. 3)
- Excellent run-out
- Maximum precision
- Minimised vibration of the encoder housing at high speed
- Longer ball bearing life
- **NEW: temperature range –20 ...+100 °C**
- **NEW: robust nickel code disc for harsh ambient conditions** (Fig.4)
- **NEW: speed (mechanical) to 9,000 rpm**
- **NEW: Greatly reduced installation depth of the encoder** (Fig. 5)

Possible applications:
Packaging machines, such as palletising machines, tubular bag machines
Logistics e.g. in high-bay warehouses, high-bay stackers. Wood machining e.g. tying-off machines

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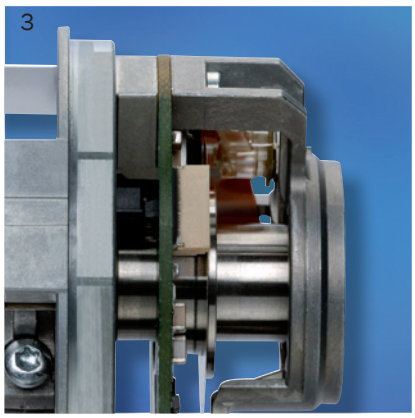

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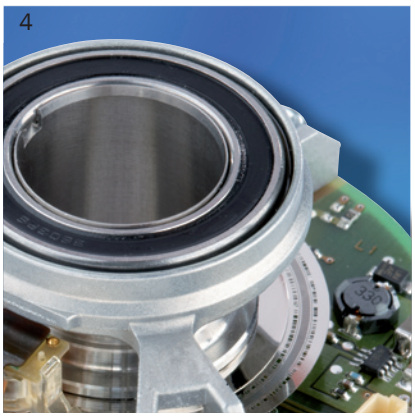

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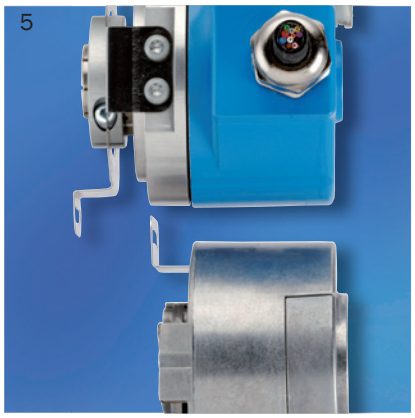

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Encoder programming has never been easier than it is today!

The new AFS/AFM60 absolute encoders, as well as the DFS60 incremental encoders, are programmed using a simple Programming Tool. Child's play, in seconds and can be re-programmed as many times as needed!

Programming is performed via the USB interface of a PC or notebook. An external voltage supply is not required!

The electronic type label, e.g. part number and current programming, is read out automatically. Users can now adapt resolutions, zero points or offsets to their application requirements and transfer them to the AFM/AFS60.

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Program me ...

Do you want to reduce stock-holding costs and machine downtime, avoid laborious control system programming in order to use common resolutions and increase the efficiency of your application?

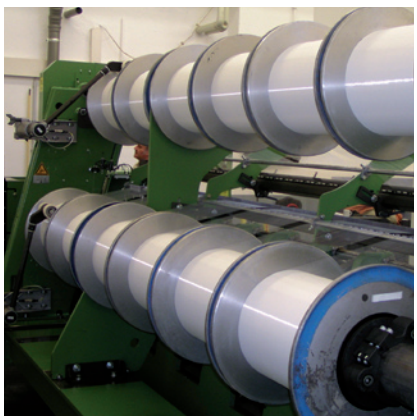
Thousands of settings, immediately available.
Individual programmability is the strength of this new encoder technology – universally usable for AFS60 singleturn and AFM60 multiturn absolute encoders, as well as incremental encoders from SICK STEGMANN!

With the Programming Tool, every user, system integrator or distributor can self-configure any programmable version of the AFM/AFS60 via a PC or laptop. Resolutions up to 262,144 singleturn and 4,096 revolutions multiturn, zero point or offset and the counting direction can be freely selected.

This means that stocks of pre-parameterised, application-specific device versions no longer need to be maintained, resulting in reduced stock-holding and immediate availability. Wherever the determination of position, angle, speed or acceleration is required, the encoders from the new AFM/AFS60 product range

Your benefits at a glance

- reduced stock-holding through programmable encoder solution
- customer-specific parameterisation
- immediate availability
- minimised machine downtime



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The new variety.

One technology, a thousand ideas – amazing how much high-technology fits into such a small space!

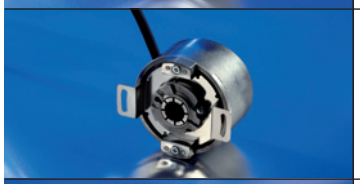
The variety of the AFS/AFM60 product ranges leaves no wish unfulfilled.

Choose your favourite!

AFS/AFM60. The complete ranges

AFS/AFM60 Face mount flange
Solid shaft
Diameter 10 x 19 mm

AFS/AFM60 Servo flange
Solid shaft
Diameter 6 x 10 mm



AFS/AFM60 blind hollow shaft
Shaft diameter 8 to 15 mm
(in development)

AFS/AFM60 through hollow shaft
Shaft diameter 8 to 15 mm
(in development)

Steps per revolution:	up to 262,144
Number of revolutions:	4,096 (AFM60)
Electrical interface:	SSI/Gray
Max operating speed.:	9,000 rpm
Working temperature range:	–20...+100 °C
Max. SSI clock frequency:	2 MHz
Protection:	Shaft IP65 Housing IP67

Approvals:

CE

UL class2

RoHS 2002/95/EC

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With its intelligent sensors, safety systems, and auto ident applications, SICK realises comprehensive solutions for factory automation.

- Non-contact detecting, counting, classifying, and positioning of any types of object
- Accident protection and personal safety using sensors, as well as safety software and services

LOGISTICS AUTOMATION

Sensors made by SICK form the basis for automating material flows and the optimisation of sorting and warehousing processes.

- Automated identification with bar code and RFID reading devices for the purpose of sorting and target control in industrial material flow
- Detecting volume, position, and contours of objects and surroundings with laser measurement systems

PROCESS AUTOMATION

Analyzers and Process Instrumentation by SICK MAIHAK provides for the best possible acquisition of environmental and process data.

- Complete systems solutions for gas analysis, dust measurement, flow rate measurement, water analysis or, respectively, liquid analysis, and level measurement as well as other tasks

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