



AFS/AFM60 EtherNet/IP

Intelligent, powerful, precise

ABSOLUTE ENCODERS

SICK
Sensor Intelligence.



Technical data overview

Encoder design	Multiturn / Singleturn (depending on type) (depending on type)						
Shaft type	Blind hollow shaft Solid shaft, Servo flange Solid shaft, face mount flange (depending on type)						
Shaft diameter	<table border="0"> <tr> <td style="padding-right: 20px;">Blind hollow shaft</td> <td>10 mm 12 mm 15 mm 1/2" 14 mm 8 mm 1/4" 3/8" 5/8" (depending on type)</td> </tr> <tr> <td style="padding-right: 20px;">Solid shaft, Servo flange</td> <td>6 mm</td> </tr> <tr> <td style="padding-right: 20px;">Solid shaft, face mount flange</td> <td>10 mm 3/8" 6 mm (depending on type)</td> </tr> </table>	Blind hollow shaft	10 mm 12 mm 15 mm 1/2" 14 mm 8 mm 1/4" 3/8" 5/8" (depending on type)	Solid shaft, Servo flange	6 mm	Solid shaft, face mount flange	10 mm 3/8" 6 mm (depending on type)
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Solid shaft, Servo flange	6 mm						
Solid shaft, face mount flange	10 mm 3/8" 6 mm (depending on type)						
Connection type	Male connector, M12, 4-pin, axial Female connector, M12, 4-pin, axial						
Communication interface	EtherNet/IP™						
Number of steps per revolution (max. resolution)	262,144 (18 bit)						
Max. resolution (number of steps per revolution x number of revolutions)	18 bit x 12 bit (262,144 x 4,096)						
Programmable/configurable	Over webserver Over PLC-Engineering-Tool						

Product description

The AFS60/AFM60 EtherNet/IP absolute encoders from SICK are the first encoders of their kind to feature an active web server as well as to make their function blocks available for fieldbus integration. Mechanical engineers, integrators, and end customers all benefit from features including simple commissioning, significantly reduced configuration time, and direct, continuous access to the encoder via the machine's HMI user interface. Furthermore, the encoders are equipped with an FTP server for direct firmware updates. The web server configuration option opens up entirely new opportunities for commissioning, service, and maintenance by operating personnel who have different capabilities and levels of interface knowledge.

At a glance

- High-resolution, 30-bit absolute encoder
- Integrated web server and FTP server
- DLR (Device Level Ring)
- Function module
- Comprehensive diagnostic functions
- IP addressing via software or hard-ware
- Round axis functionality (transmission calculation)

Your benefits

- Integrated web server for easy configuration without the need for specialized interface knowledge
- FTP server for firmware updates directly on site and in existing systems
- DLR (Device Level Ring) for enhanced system throughput thanks to redundant network communication
- Status display via five duo LEDs on the sensor for a quick initial indication of the operational status
- Comprehensive diagnosis via the 32-bit fault header
- Round axis functionality for full scalability for binary and non-binary resolutions as well as not complete multiturn revolutions (transmission calculation)
- Individual IP address via DHCP or pre-defined IP address via DEC switches

Fields of application

- Palletizing systems
- Storage systems
- Packaging
- Hydraulic presses
- Printing machines
- Robots
- Rotary tables

Ordering information

Other models and accessories → www.sick.com/AFS_AFM60_EtherNet_IP

- **Mechanical design:** blind hollow shaft
- **Connection type:** male connector, 1x, M12, 4-pin, axial, Female connector, 2x, M12, 4-pin, axial
- **Programmable/configurable:** ✓

Singleturn or multiturn version	Mechanical design	Type	Part no.
Singleturn	Blind hollow shaft	AFS60A-BFIB262144	1071317
Multiturn	Blind hollow shaft 1/2"	AFM60A-BFIB018x12	1059706
	Blind hollow shaft 1/4"	AFM60A-BKIB018x12	1081418
Singleturn	Blind hollow shaft 1/4"	AFS60A-BKIB262144	1068497
Multiturn	Blind hollow shaft 10 mm	AFM60A-BDIB018x12	1055325
Singleturn	Blind hollow shaft 10 mm	AFS60A-BDIB262144	1055356
Multiturn	Blind hollow shaft 12 mm	AFM60A-BEIB000S01	1064851
		AFM60A-BEIB018x12	1055326
Singleturn	Blind hollow shaft 12 mm	AFS60A-BEIB262144	1055358
Multiturn	Blind hollow shaft 14 mm	AFM60A-BGIB018x12	1062548
	Blind hollow shaft 15 mm	AFM60A-BHIB018x12	1055328
Singleturn	Blind hollow shaft 15 mm	AFS60A-BHIB262144	1055360
	Blind hollow shaft 3/8"	AFS60A-BCIB262144	1062844
	Blind hollow shaft 5/8"	AFS60A-BJIB262144	1094796
Multiturn	Blind hollow shaft 8 mm	AFM60A-BBIB018x12	1077495
Singleturn	Blind hollow shaft 8 mm	AFS60A-BBIB262144	1116899

- **Mechanical design:** Solid shaft, Servo flange
- **Mechanical design:** Solid shaft Servo flange 6 mm x 10 mm
- **Connection type:** male connector, 1x, M12, 4-pin, axial, Female connector, 2x, M12, 4-pin, axial
- **Programmable/configurable:** ✓

Singleturn or multiturn version	Type	Part no.
Multiturn	AFM60A-S1IB018x12	1055331
Singleturn	AFS60A-S1IB262144	1055362

- **Mechanical design:** Solid shaft, face mount flange
- **Connection type:** male connector, 1x, M12, 4-pin, axial, Female connector, 2x, M12, 4-pin, axial
- **Programmable/configurable:** ✓

Singleturn or multiturn version	Mechanical design	Type	Part no.
Multiturn	Solid shaft face mount flange 10 mm x 19 mm	AFM60A-S4IB000S02	1064852
		AFM60A-S4IB018x12	1055334
		AFM60A-S5IB018x12	1059130
Singleturn	Solid shaft face mount flange 10 mm x 19 mm	AFS60A-S4IB262144	1055364
Multiturn	Solid shaft face mount flange 3/8"	AFM60A-S6IB018x12	1070433
		AFM60A-S7IB018x12	1061098
Singleturn	Solid shaft face mount flange 3/8"	AFS60A-S6IB262144	1073147
		AFS60A-S7IB262144	1069404
	Solid shaft face mount flange 6 mm x 19 mm	AFS60A-S5IB262144	1085628

- **Specialty:** Sales Kit

Singleturn or multiturn version	Scope of delivery	Type	Part no.
-	1 x AFM60A-BDIB018x12 (1055325), 1 x STE-1204-WE (6048152), 1 x DOS-1204-W (6007303)	AMS60A-BDIB Sales Kit 01	1057724

Singleturn or multiturn version	Scope of delivery	Type	Part no.
Multiturn	-	AFM60A-BEIB Sales Kit 01	1057725
		AFM60A-S1IB Sales Kit 02	1057742
	1 x AFM60A-S1IB018x12 (1055331), 1 x STL-1204-W05ME90 (6047913), 1 x YG2A14-050UB3XLEAX (2095767)	AFM60A-S1IB Sales Kit 04	1057752
	1 x AFM60A-BDIB018x12 (1055325), 1 x STE-1204-WE (6048152), 1 x DOS-1204-W (6007303)	AFM60A-BDIB Sales Kit 03	1057734
	1 x AFM60A-BDIB018x12 (1055325), 1 x STL-1204-W05ME90 (6047913), 1 x YG2A14-050UB3XLEAX (2095767)	AFM60A-BDIB Sales Kit 02	1057744
		AFM60A-BDIB Sales Kit 04	1057754
	1 x AFM60A-BEIB018x12 (1055326), 1 x STE-1204-WE (6048152), DOS-1204-W (6007303)	AFM60A-BEIB Sales Kit 03	1057735
	1 x AFM60A-BEIB018x12 (1055326), 1 x STL-1204-W05ME90 (6047913), 1 x YG2A14-050UB3XLEAX (2095767)	AFM60A-BEIB Sales Kit 02	1057745
		AFM60A-BEIB Sales Kit 04	1057755
	1 x AFM60A-BHIB018x12 (1055328), 1 x STE-1204-WE (6048152), 1 x DOS-1204-W (6007303)	AFM60A-BHIB Sales Kit 01	1057726
		AFM60A-BHIB Sales Kit 03	1057736
	1 x AFM60A-BHIB018x12 (1055328), 1 x STL-1204-W05ME90 (6047913), 1 x YG2A14-050UB3XLEAX (2095767)	AFM60A-BHIB Sales Kit 02	1057746
		AFM60A-BHIB Sales Kit 04	1057756
	1 x AFM60A-S1IB018x12 (1055331), 1 x STE-1204-WE (6048152), 1 x DOS-1204-W (6007303)	AFM60A-S1IB Sales Kit 03	1057732
		AFM60A-S1IB Sales Kit 01	1057722
	1 x AFM60A-S4IB018x12 (1055334), 1 x STE-1204-WE (6048152), 1 x DOS-1204-W (6007303)	AFM60A-S4IB Sales Kit 01	1057723
		AFM60A-S4IB Sales Kit 03	1057733
	1 x AFM60A-S4IB018x12 (1055334), 1 x STL-1204-W05ME90 (6047913), 1 x YG2A14-050UB3XLEAX (2095767)	AFM60A-S4IB Sales Kit 02	1057743
		AFM60A-S4IB Sales Kit 04	1057753

Singleturn or multiturn version	Scope of delivery	Type	Part no.
Singleturn	1 x AFS60A-BDIB262144 (1055356), 1 x STE-1204-WE (6048152), 1 x DOS-1204-W (6007303)	AFS60A-BDIB Sales Kit 01	1057719
		AFS60A-BDIB Sales Kit 03	1057729
	1 x AFS60A-BDIB262144 (1055356), 1 x STL-1204-W05ME90 (60479131), 1 x YG2A14-050UB3XLEAX (2095767)	AFS60A-BDIB Sales Kit 02	1057739
		AFM60A-BDIB Sales Kit 04	1057749
	1 x AFS60A-BEIB262144 (1055358), 1 x STE-1204-WE (6048152), 1 x DOS-1204-W (6007303)	AFS60A-BEIB Sales Kit 01	1057720
		AFS60A-BEIB Sales Kit 03	1057730
	1 x AFS60A-BEIB262144 (1055358), 1 x STL-1204-W05ME90 (6047913), 1 x YG2A14-050UB3XLEAX (2095767)	AFM60A-BEIB Sales Kit 04	1057750
		AFS60A-BEIB Sales Kit 02	1057740
	1 x AFS60A-BHIB262144 (1055360), 1 x STE-1204-WE (6048152), 1 x DOS-1204-W (6007303)	AFS60A-BHIB Sales Kit 03	1057731
		AFS60A-BHIB Sales Kit 01	1057721
	1 x AFS60A-BHIB262144 (1055360), 1 x STL-1204-W05ME90 (6047913), 1 x YG2A14-050UB3XLEAX (2095767)	AFM60A-BHIB Sales Kit 04	1057751
		AFS60A-BHIB Sales Kit 02	1057741
	1 x AFS60A-S1IB262144 (1055362), 1 x STE-1204-WE (6048152), 1 x DOS-1204-W (6007303)	AFS60A-S1IB Sales Kit 01	1057693
		AFS60A-S1IB Sales Kit 03	1057727
	1 x AFS60A-S1IB262144 (1055362), 1 x STL-1204-W05ME90 (6047913), 1 x YG2A14-050UB3XLEAX (2095767)	AFM60A-S1IB Sales Kit 04	1057747
		AFS60A-S1IB Sales Kit 02	1057737
	1 x AFS60A-S4IB262144 (1055364), 1 x STE-1204-WE (6048152), 1 x DOS-1204-W (6007303)	AFS60A-S4IB Sales Kit 01	1057718
		AFS60A-S4IB Sales Kit 03	1057728
	1 x AFS60A-S4IB262144 (1055364), 1 x STL-1204-W05ME90 (6047913), 1 x DOL-1204-W05MC (2095767)	AFS60A-S4IB Sales Kit 02	1057738
		AFM60A-S4IB Sales Kit 04	1057748

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com