DUV60

Quickly configurable and versatile measuring wheel incremental encoder

MEASURING WHEEL ENCODERS

SICK
Sensor Intelligence.

DUV60
MEASURING WHEEL ENCODERS

Technical data overview

Spring deflection spring arm	± 3 mm / ± 10 mm (depending on type) (depending on type)
Measuring wheel circumference	Without measuring wheel 300 mm 12 ″ (depending on type)
Measuring wheel surface	O-ring NBR70 / smooth plastic (urethane) (depending on type) (depending on type)
Communication interface	Incremental
Communication Interface detail	TTL
Connection type	Male connector, M12, 8-pin, universal Male connector, M12, 4-pin, universal Cable, 8-wire, universal (depending on type)
Supply voltage	4.75 V … 30 V

Product description

The DUV60 is a measuring wheel encoder with DIP switch configuration, designed to be optimized for conveyor and web feedback. The ability to configure the output voltage, resolution, and counting direction reduces the number of variants, enables easy replacement and quick commissioning, and increases the likelihood that spare parts will be in stock – all without any additional programming tools. The on-board status and signal LEDs and optional fault output quickly indicate the functionality of the encoder, minimizing time required for both installation and troubleshooting. The DUV60 offers a range of mounting configurations for dual or single wheel applications, making the DUV60 the ideal solution for conveyor, web, and logistics applications.

At a glance
- Single or dual wheel measuring wheel encoder
- DIP switches for programming resolution, signal output,
- And counting direction
- Universal 4.5 V … 30 V supply
- LEDs that indicate encoder status and output signal.
- M12 male connector, 4- or 8-pin, or universal cable outlet
- Optional fault output directly from encoder

Your benefits
- Quickly commission the encoder using the built-in DIP switches. No additional programming tool or laptop required
- Status and signal LEDs quickly indicate whether the encoder is properly connected, functional, or needs to be replaced
- Universal voltage supply and multiple bracket options for the measuring wheel encoder provide increased installation flexibility
- Maintain a high level of productivity using the anti-dither functionality
- Compatible with existing and low-cost input cards with output types like Clockwise/Counterclockwise and Signal/Direction
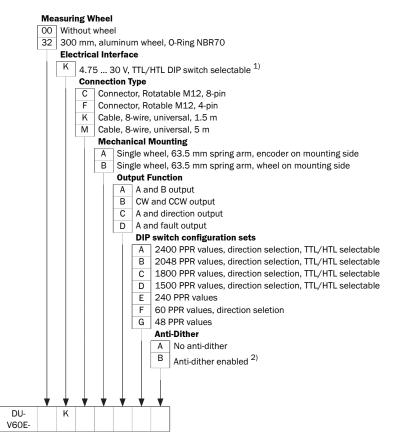
Fields of application

Measuring the position, speed and distance in applications with low speeds and low resolution in the logistics and factory automation markets.
- Conveyor belts
- Packaging machines
- Printing machines
- Storage systems
- Web tracking applications

Type code

Other models and accessories ➜ www.sick.com/DUV60

Single wheel mount

Measuring Wheel

00	Without wheel
32	300 mm, aluminum wheel, O-Ring NBR70

Electrical Interface

K	4.75 ... 30 V, TTL/HTL DIP switch selectable [1]

Connection Type

C	Connector, Rotatable M12, 8-pin
F	Connector, Rotable M12, 4-pin
K	Cable, 8-wire, universal, 1.5 m
M	Cable, 8-wire, universal, 5 m

Mechanical Mounting

A	Single wheel, 63.5 mm spring arm, encoder on mounting side
B	Single wheel, 63.5 mm spring arm, wheel on mounting side

Output Function

A	A and B output
B	CW and CCW output
C	A and direction output
D	A and fault output

DIP switch configuration sets

A	2400 PPR values, direction selection, TTL/HTL selectable
B	2048 PPR values, direction selection, TTL/HTL selectable
C	1800 PPR values, direction selection, TTL/HTL selectable
D	1500 PPR values, direction selection, TTL/HTL selectable
E	240 PPR values
F	60 PPR values, direction seletion
G	48 PPR values

Anti-Dither

A	No anti-dither
B	Anti-dither enabled [2]

DU-V60E-		K					

[1] Output voltage selection not available for DIP switch configurations E, F, and G. Output voltage level is dependent on supply voltage.

[2] Not available for Output Function A and B output (A). Connection Type must be male connector M12, 4-pin (F).

Dual wheel mount

Measuring Wheel

00	Without wheel
32	300 mm, aluminum wheel, O-Ring NBR70
D2	12 in, aluminum wheel, O-Ring NBR70
D4	12 in, plastic wheel, smooth polyurethane

Electrical Interface

K	4.75 ... 30 V, TTL/HTL DIP switch selectable [1]

Connection Type

C	Connector, Rotatable M12, 8-pin
F	Connector, Rotable M12, 4-pin
K	Cable, 8-wire, universal, 1.5 m
M	Cable, 8-wire, universal, 5 m

Mechanical Mounting

G	Dual wheel, spring tension, under-belt yoke mount
H	Dual wheel, spring tension, under-belt flange mount
J	Dual wheel, counter-weight, under-belt yoke mount
K	Dual wheel, over-belt yoke mount
W	Dual wheel, without mount

Output Function

A	A and B output
B	CW and CCW output
C	A and direction output
D	A and fault output

DIP switch configuration sets

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DU-V60E-		K						

[1] Output voltage selection not available for DIP switch configurations E, F, and G. Output voltage level is dependent on supply voltage.

[2] Not available for Output Function A and B output (A). Connection Type must be male connector M12, 4-pin (F).

Ordering information

Other models and accessories ➜ www.sick.com/DUV60

- **Measuring wheel circumference:** without measuring wheel
- **Communication interface:** 4.75 V ... 30 V, Incremental, TTL, HTL
- **Supply voltage:** 4.75 V ... 30 V

Range of pulses per revolution	Connection type	Spring arm design	Type	Part no.
1 ... 1500	Male connector, M12, 4-pin, universal [1]	Without mount	DUV60E-00KFWADA	1101409
	Male connector, M12, 8-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-00KCAADA	1088934
		Without mount	DUV60E-00KCWADA	1084729
1 ... 1800	Male connector, M12, 8-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-00KCAABA	1113768
			DUV60E-00KCAACA	1088935
1 ... 2400	Male connector, M12, 4-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-00KFAAAB	1086374
		Spring tension, under-belt flange mount	DUV60E-00KFHAAA	1096059
			DUV60E-00KFHCAB	1096221
	Male connector, M12, 8-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-00KCAAAA	1097625

[1] The universal connection is rotatable so that it is possible to position the conector in the radial or axial direction.

- **Measuring wheel circumference:** 300 mm
- **Measuring wheel surface:** O-ring NBR70
- **Communication interface:** 4.75 V ... 30 V, Incremental, TTL, HTL
- **Supply voltage:** 4.75 V ... 30 V

Range of pulses per revolution	Connection type	Spring arm design	Type	Part no.
1 ... 1500	Male connector, M12, 4-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-32KFAADA	1084921
		Spring arm, wheel on mounting side	DUV60E-32KFBADA	1084925
	Male connector, M12, 8-pin, universal [1]	Over-belt yoke mount	DUV60E-32KCKCDB	1084726
		Spring arm, encoder on mounting side	DUV60E-32KCAADA	1084919
		Spring arm, wheel on mounting side	DUV60E-32KCBADA	1084923
		Without mount	DUV60E-32KCWADA	1104231

[1] The universal connection is rotatable so that it is possible to position the conector in the radial or axial direction.

Range of pulses per revolution	Connection type	Spring arm design	Type	Part no.
1 ... 1800	Male connector, M12, 4-pin, universal [1]	Counter-weight, under-belt yoke mount	DUV60E-32KFJACA	1093690
		Spring arm, encoder on mounting side	DUV60E-32KFACCA	1088797
			DUV60E-32KFADCB	1092454
		Spring tension, under-belt flange mount	DUV60E-32KFHACA	1094068
	Male connector, M12, 8-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-32KCAACA	1086888
		Spring tension, under-belt flange mount	DUV60E-32KCHABA	1114202
			DUV60E-32KCHACA	1094067
1 ... 2048	Cable, 8-wire, universal, 1.5 m [1]	Spring arm, wheel on mounting side	DUV60E-32KKBABA	1102827
			DUV60E-32KKBABB	1084503
		Spring tension, under-belt flange mount	DUV60E-32KKHABA	1096576
	Male connector, M12, 4-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-32KFAABA	1101804
		Spring arm, wheel on mounting side	DUV60E-32KFBABA	1084748
			DUV60E-32KFBABB	1084502
	Male connector, M12, 8-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-32KCAABA	1086887
1 ... 240	Male connector, M12, 4-pin, universal [1]	Spring tension, under-belt yoke mount	DUV60E-32KFGCEA	1096506
		Without mount	DUV60E-32KFWAEA	1092521
	Male connector, M12, 8-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-32KCAAEA	1086889
1 ... 2400	Cable, 8-wire, universal, 1.5 m [1]	Spring arm, encoder on mounting side	DUV60E-32KKAAAA	1090205
	Cable, 8-wire, universal, 5 m [1]	Spring arm, encoder on mounting side	DUV60E-32KMAAAA	1085276
	Male connector, M12, 4-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-32KFAAAA	1084920
			DUV60E-32KFACAB	1096348
		Spring arm, wheel on mounting side	DUV60E-32KFBAAA	1084924
		Spring tension, under-belt flange mount	DUV60E-32KFHAAA	1084933
	Male connector, M12, 8-pin, universal [1]	Over-belt yoke mount	DUV60E-32KCKAAA	1096400
			DUV60E-32KCKCAA	1096349
		Spring arm, encoder on mounting side	DUV60E-32KCAAAA	1084918
		Spring arm, wheel on mounting side	DUV60E-32KCBAAA	1084922
		Spring tension, under-belt flange mount	DUV60E-32KCHAAA	1084932
1 ... 48	Male connector, M12, 8-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-32KCAAGA	1084501

[1] The universal connection is rotatable so that it is possible to position the conector in the radial or axial direction.

Range of pulses per revolution	Connection type	Spring arm design	Type	Part no.
1 … 60	Male connector, M12, 4-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-32KFADFB	1117482
	Male connector, M12, 8-pin, universal [1]	Spring arm, encoder on mounting side	DUV60E-32KCAAFA	1086885
			DUV60E-32KCACFA	1084731

[1] The universal connection is rotatable so that it is possible to position the conector in the radial or axial direction.

- **Measuring wheel circumference:** 12 ″
- **Communication interface:** 4.75 V … 30 V, Incremental, TTL, HTL
- **Supply voltage:** 4.75 V … 30 V

Measuring wheel surface	Range of pulses per revolution	Connection type	Spring arm design	Type	Part no.
O-ring NBR70	1 … 1500	Male connector, M12, 8-pin, universal [1]	Over-belt yoke mount	DUV60E-D2KCKCDA	1100645
	1 … 1800	Cable, 8-wire, universal, 1.5 m [1]	Spring tension, under-belt flange mount	DUV60E-D2KKHABA	1118230
		Male connector, M12, 4-pin, universal [1]	Spring tension, under-belt flange mount	DUV60E-D2KFHABA	1111306
			Without mount	DUV60E-D2KFWABA	1112193
		Male connector, M12, 8-pin, universal [1]	Spring tension, under-belt flange mount	DUV60E-D2KCHACA	1091749
	1 … 2400	Male connector, M12, 4-pin, universal [1]	Without mount	DUV60E-D2KFWDAA	1109273
		Male connector, M12, 8-pin, universal [1]	Over-belt yoke mount	DUV60E-D2KCKAAA	1103004
Smooth plastic (urethane)	1 … 1500	Cable, 8-wire, universal, 1.5 m [1]	Spring tension, under-belt flange mount	DUV60E-D4KKHADA	1085779
				DUV60E-D4KKHDDB	1084727
			Without mount	DUV60E-D4KKWADA	1090501
		Cable, 8-wire, universal, 5 m [1]	Spring tension, under-belt flange mount	DUV60E-D4KMHADA	1106590
			Spring tension, under-belt yoke mount	DUV60E-D4KMGADA	1102786
		Male connector, M12, 4-pin, universal [1]	Counter-weight, under-belt yoke mount	DUV60E-D4KFJADA	1084931
			Over-belt yoke mount	DUV60E-D4KFKBDB	1089216
				DUV60E-D4KFKCDB	1092866
			Spring tension, under-belt flange mount	DUV60E-D4KFHADA	1084928
			Spring tension, under-belt yoke mount	DUV60E-D4KFGDDB	1087209
			Without mount	DUV60E-D4KFWADA	1092981
				DUV60E-D4KFWBDB	1084728
Smooth plastic (urethane)	1 … 1500	Male connector, M12, 4-pin, universal [1]	Without mount	DUV60E-D4KFWCDB	1092636

[1] The universal connection is rotatable so that it is possible to position the conector in the radial or axial direction.

Measuring wheel surface	Range of pulses per revolution	Connection type	Spring arm design	Type	Part no.
		Male connector, M12, 8-pin, universal [1]	Over-belt yoke mount	DUV60E-D4KCKBDA	1095989
			Spring tension, under-belt flange mount	DUV60E-D4KCHADA	1090983
			Without mount	DUV60E-D4KCWADA	1104977
	1 ... 1800	Male connector, M12, 4-pin, universal [1]	Spring tension, under-belt flange mount	DUV60E-D4KFHACA	1087195
				DUV60E-D4KFHDCB	1090682
			Without mount	DUV60E-D4KFWACA	1092980
				DUV60E-D4KFWCCB	1098118
	1 ... 2048	Male connector, M12, 4-pin, universal [1]	Spring tension, under-belt flange mount	DUV60E-D4KFHABA	1092982
			Without mount	DUV60E-D4KFWABA	1089409
		Male connector, M12, 8-pin, universal [1]	Spring tension, under-belt flange mount	DUV60E-D4KCHABA	1096351
	1 ... 240	Male connector, M12, 4-pin, universal [1]	Spring tension, under-belt flange mount	DUV60E-D4KFHDEB	1086339
			Spring tension, under-belt yoke mount	DUV60E-D4KFGDEB	1091656
			Without mount	DUV60E-D4KFWDEB	1086306
	1 ... 2400	Male connector, M12, 4-pin, universal [1]	Counter-weight, under-belt yoke mount	DUV60E-D4KFJAAA	1084930
			Over-belt yoke mount	DUV60E-D4KFKAAA	1098944
			Spring tension, under-belt flange mount	DUV60E-D4KFHAAA	1084927
				DUV60E-D4KFHDAA	1084730
			Spring tension, under-belt yoke mount	DUV60E-D4KFGAAA	1106042
				DUV60E-D4KFGCAB	1087297
			Without mount	DUV60E-D4KFWAAA	1084635
		Male connector, M12, 8-pin, universal [1]	Counter-weight, under-belt yoke mount	DUV60E-D4KCJAAA	1084929
			Spring tension, under-belt flange mount	DUV60E-D4KCHAAA	1084926
	1 ... 48	Cable, 8-wire, universal, 1.5 m [1]	Spring tension, under-belt flange mount	DUV60E-D4KKHBGA	1103836
		Male connector, M12, 4-pin, universal [1]	Counter-weight, under-belt yoke mount	DUV60E-D4KFJAGA	1087137
				DUV60E-D4KFJCGB	1084518
			Spring tension, under-belt flange mount	DUV60E-D4KFHCGB	1084516
			Without mount	DUV60E-D4KFWCGB	1117985
				DUV60E-D4KFWDGB	1095515
	1 ... 60	Male connector, M12, 4-pin, universal [1]	Spring tension, under-belt flange mount	DUV60E-D4KFHDFB	1087569

[1] The universal connection is rotatable so that it is possible to position the conector in the radial or axial direction.

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."

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