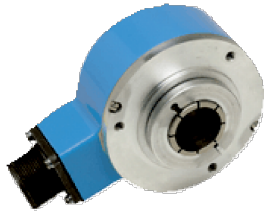


DGS3x

Large hollow shaft encoders for rough environmental conditions

INCREMENTAL ENCODERS

SICK
Sensor Intelligence.



Technical data overview

Pulses per revolution	120 ... 16,384
Mechanical design	Blind hollow shaft / through hollow shaft (depending on type)
Shaft diameter	1" ¹⁾ 30 mm ²⁾
Connection type	Cable, 11-wire, radial Male connector, MS, 10-pin, radial
Communication interface	Incremental
Communication Interface detail	HTL / Push pull TTL / RS-422 TTL / HTL Open Collector
Supply voltage	8 ... 24 V 4.5 ... 5.5 V 5 ... 15 V
Enclosure rating	IP66
Output frequency	300 kHz 600 kHz (depending on type)
Operating temperature range	-20 °C ... +70 °C

¹⁾ Separately order collets for 1/2", 3/4", 5/8", 7/8", 10 mm, 12 mm, 14 mm, 15 mm, 18 mm, 20 mm, 22 mm, 24 mm and 25 mm as accessories.

²⁾ Separately order collets for 24 mm and 25 mm as accessories.

Product description

The high-resolution DGS34/DGS35 hollow shaft incremental encoder family is a rugged solution for very challenging encoder applications. With generous hollow shaft diameters of up to 1-1/8" or 30 mm, they are ideal for mounting directly on the motor shaft.

At a glance

- Incremental encoder Ø 3.5"
- Electrical interface
- 5V TTL / RS422
- 8 ... 24V TTL / RS422
- 8 ... 24V HTL / push pull
- 8 ... 24V Open Collector"
- Blind hollow shaft Ø 30 mm; 1", 1/2", 5/8", 3/4", 7/8"
- Cable connection with 1 m, 1.5 m, 3 m, 5 m, 10 m
- Number of lines 120 ... 16,384

Your benefits

- The high output frequency means that mechanical gear reduction is not required.
- Hollow shaft design does not require couplings or mounting bracket.
- Large selection of stator couplings available for virtually any AC asynchronous motor

Fields of application

- Crane winches
- Stages and theaters
- Steel industry
- Elevators
- Packaging industry

Ordering information

Other models and accessories → www.sick.com/DGS3x

Mechanical design	Shaft diameter	Communication interface	Supply voltage	Connection type	Pulses per revolution	Type	Part no.						
Blind hollow shaft	1" ¹⁾	Incremental / HTL / Push pull	8 V ... 24 V	Cable, 11-wire, radial, 1.5 m	1,024	DGS34-5HK01024	7101733						
					2,048	DGS34-5HK02048	7101734						
					360	DGS34-5HK00360	7101732						
					4,096	DGS34-5HK04096	7101735						
					8,192	DGS34-5HK08192	7101736						
				Cable, 11-wire, radial, 1 m	2,048	DGS34-5H202048	7102608						
					2,048	DGS34-5HM02048	7102376						
				Male connector, MS, 10-pin, radial	1,024	DGS34-5H401024	7101718						
					2,048	DGS34-5H402048	7101719						
				Blind hollow shaft	1" ¹⁾	Incremental / HTL / Push pull	8 V ... 24 V	Male connector, MS, 10-pin, radial	360	DGS34-5H400360	7101717		
DGS34-5J400360	1073724												
4,096	DGS34-5H404096	7101720											
	DGS34-5J404096	7102201											
8,192	DGS34-5H408192	7101721											
5,000	DGS34-9H405000	1049806											
Incremental / Open Collector	8 V ... 24 V	Male connector, MS, 10-pin, radial	5,000			DGS34-9H405000	1049806						
								Incremental / TTL / HTL	5 V ... 15 V	Cable, 11-wire, radial, 1.5 m	1,024	DGS34-7HK01024	7101738
											2,048	DGS34-7HK02048	7101739
											360	DGS34-7HK00360	7101737
4,096	DGS34-7HK04096	7101740											

¹⁾ Separately order collets for 1/2", 3/4", 5/8", 7/8", 10 mm, 12 mm, 14 mm, 15 mm, 18 mm, 20 mm, 22 mm, 24 mm and 25 mm as accessories.

²⁾ Separately order collets for 24 mm and 25 mm as accessories.

Mechanical design	Shaft diameter	Communication interface	Supply voltage	Connection type	Pulses per revolution	Type	Part no.
				Male connector, MS, 10-pin, radial	8,192	DGS34-7HK08192	7101741
					1,024	DGS34-7H401024	7101723
					2,048	DGS34-7H402048	7101724
					360	DGS34-7H400360	7101722
					4,096	DGS34-7H404096	7101725
					8,192	DGS34-7H408192	7101726
				Cable, 11-wire, radial, 1.5 m	1,024	DGS34-1HK01024	7101728
					2,048	DGS34-1HK02048	7101729
					360	DGS34-1HK00360	7101727
					4,096	DGS34-1HK04096	7101730
		Cable, 11-wire, radial, 3 m	1,024	DGS34-1HK08192	7101731		
			1,024	DGS34-1HL01024	7102243		
		Cable, 11-wire, radial, 5 m	2,500	DGS34-1JM02500	7126898		
		Male connector, MS, 10-pin, radial	1,024	DGS34-1H401024	7101713		
			2,048	DGS34-1H402048	7101714		
			360	DGS34-1H400360	7101712		
			4,096	DGS34-1H404096	7101715		
				DGS34-1J404096	7102629		
			8,192	DGS34-1H408192	7101716		
			8 V ... 24 V		Male connector, MS, 10-pin, radial	2,048	DGS34-3H402048
Blind hollow shaft	30 mm ²⁾	Incremental / HTL / Push pull	8 V ... 24 V	Cable, 11-wire, radial, 1.5 m	1,024	DGS34-5LK01024	7101763
					2,048	DGS34-5LK02048	7101764
					360	DGS34-5LK00360	7101762
					4,096	DGS34-5LK04096	7101765
					8,192	DGS34-5LK08192	7101766
						DGS34-5L401024	7101748
				Male connector, MS, 10-pin, radial	2,048	DGS34-5L402048	7101749
					360	DGS34-5L400360	7101747
					4,096	DGS34-5L404096	7101750
					8,192	DGS34-5L408192	7101751

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²⁾ Separately order collets for 24 mm and 25 mm as accessories.

Mechanical design	Shaft diameter	Communication interface	Supply voltage	Connection type	Pulses per revolution	Type	Part no.
		Incremental / TTL / HTL	5 V ... 15 V	Cable, 11-wire, radial, 1.5 m	1,024	DGS34-7LK01024	7101768
					2,048	DGS34-7LK02048	7101769
					360	DGS34-7LK00360	7101767
					4,096	DGS34-7LK04096	7101770
					8,192	DGS34-7LK08192	7101771
				Male connector, MS, 10-pin, radial	1,024	DGS34-7L401024	7101753
					2,048	DGS34-7L402048	7101754
					360	DGS34-7L400360	7101752
					4,096	DGS34-7L404096	7101755
					8,192	DGS34-7L408192	7101756
		Incremental / TTL / RS-422	4.5 V ... 5.5 V	Cable, 11-wire, radial, 1.5 m	1,024	DGS34-1LK01024	7101758
					2,048	DGS34-1LK02048	7101759
					360	DGS34-1LK00360	7101757
					4,096	DGS34-1LK04096	7101760
					8,192	DGS34-1LK08192	7101761
				Male connector, MS, 10-pin, radial	1,024	DGS34-1L401024	7101743
					2,048	DGS34-1L402048	7101744
					360	DGS34-1L400360	7101742
					4,096	DGS34-1L404096	7101745
					8,192	DGS34-1L408192	7101746
Through hollow shaft	1" ¹⁾	Incremental / HTL / Push pull	8 V ... 24 V	Cable, 11-wire, radial, 1.5 m	1,024	DGS35-5HK01024	7101673
					120	DGS35-5HK00120	7130703
					16,384	DGS35-4HK16384	1084990
					2,048	DGS35-5HK02048	7101674

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²⁾ Separately order collets for 24 mm and 25 mm as accessories.

Mechanical design	Shaft diameter	Communication interface	Supply voltage	Connection type	Pulses per revolution	Type	Part no.			
					360	DGS35-5HK00360	7101672			
					4,096	DGS35-5HK04096	7101675			
					8,192	DGS35-5HK08192	7101676			
				Cable, 11-wire, radial, 3 m	1,024	DGS35-5HL01024	7127018			
					3,600	DGS35-5HL03600	7130643			
				Cable, 11-wire, radial, 5 m	360	DGS35-5HM00360	7102806			
				Male connector, MS, 10-pin, radial	1,024	DGS35-5H401024	7101658			
					2,048	DGS35-5H402048	7101659			
					2,500	DGS35-5H402500	7102745			
					360	DGS35-5H400360	7101657			
					4,096	DGS35-5H404096	7101660			
					5,000	DGS35-5H405000	7102436			
					8,192	DGS35-5H408192	7101661			
				Incremental / Open Collector	8 V ... 24 V	Male connector, MS, 10-pin, radial	1,024	DGS35-9J401024	7102411	
							360	DGS35-9H400360	1055987	
				Incremental / TTL / HTL	5 V ... 15 V	Cable, 11-wire, radial, 1.5 m	1,024	DGS35-7HK01024	7101678	
							2,048	DGS35-7HK02048	7101679	
				1" ¹⁾	Incremental / TTL / HTL	5 V ... 15 V	Cable, 11-wire, radial, 1.5 m	360	DGS35-7HK00360	7101677
								4,096	DGS35-7HK04096	7101680
								8,192	DGS35-7HK08192	7101681
				Through hollow shaft	1" ¹⁾	Incremental / TTL / HTL	5 V ... 15 V	Male connector, MS, 10-pin, radial	1,024	DGS35-7H401024
2,048	DGS35-7H402048	7101664								
360	DGS35-7H400360	7101662								
4,096	DGS35-7H404096	7101665								
8,192	DGS35-7H408192	7101666								
Incremental / TTL / RS-422	4.5 V ... 5.5 V	Cable, 11-wire, radial, 1.5 m	1,024			DGS35-1HK01024	7101668			
			10,000			DGS35-YHK10000	7127026			
			2,048			DGS35-1HK02048	7101669			
			360			DGS35-1HK00360	7101667			
			4,096			DGS35-1HK04096	7101670			

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²⁾ Separately order collets for 24 mm and 25 mm as accessories.

Mechanical design	Shaft diameter	Communication interface	Supply voltage	Connection type	Pulses per revolution	Type	Part no.		
					8,192	DGS35-1HK08192	7101671		
				Cable, 11-wire, radial, 10 m	1,024	DGS35-1HN01024	7127203		
				Cable, 11-wire, radial, 3 m	1,024	DGS35-1JL01024	7134504		
					2,048	DGS35-1HL02048	7127340		
				Cable, 11-wire, radial, 5 m	8,192	DGS35-1HM08192	1056057		
				Male connector, MS, 10-pin, radial	1,024	DGS35-1H401024	7101653		
					120	DGS35-1H400120	7130513		
					2,048	DGS35-1H402048	7101654		
					2,500	DGS35-1H402500	7102384		
					360	DGS35-1H400360	7101652		
			4,096		DGS35-1H404096	7101655			
				8,192	DGS35-1H408192	7101656			
			8 V ... 24 V	Cable, 11-wire, radial, 1 m	4,096	DGS35-3H204096	1056086		
				Cable, 11-wire, radial, 5 m	1,024	DGS35-3HM01024	7130689		
				Male connector, MS, 10-pin, radial	1,024	DGS35-3H401024	7102196		
					2,048	DGS35-3J401024	7126765		
				2,048	DGS35-2H402048	7134048			
			30 mm ²⁾	Incremental / HTL / Push pull	8 V ... 24 V	Cable, 11-wire, radial, 1.5 m	1,024	DGS35-5KK01024	1058301
								DGS35-5LK01024	7101703
							2,048	DGS35-5LK02048	7101704
Through hollow shaft	30 mm ²⁾	Incremental / HTL / Push pull	8 V ... 24 V	Cable, 11-wire, radial, 1.5 m	360	DGS35-5LK00360	7101702		
					4,096	DGS35-5LK04096	7101705		
					8,192	DGS35-5LK08192	7101706		
				Cable, 11-wire, radial, 3 m	1,024	DGS35-4KL01024	1084135		
				Male connector, MS, 10-pin, radial	1,024	DGS35-5K401024	7134312		
						DGS35-5L401024	7101688		
					120	DGS35-5L400120	1094046		
					2,048	DGS35-4L402048	1088709		
						DGS35-5K402048	1062811		
						DGS35-5L402048	7101689		

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²⁾ Separately order collets for 24 mm and 25 mm as accessories.

Mechanical design	Shaft diameter	Communication interface	Supply voltage	Connection type	Pulses per revolution	Type	Part no.			
					2,500	DGS35-5K402500	7134638			
					360	DGS35-5L400360	7101687			
					4,096	DGS35-5L404096	7101690			
					5,000	DGS35-5K405000	7130624			
					8,192	DGS35-5L408192	7101691			
					Incremental / Open Collector	8 V ... 24 V	Male connector, MS, 10-pin, radial	120	DGS35-9L400120	7130710
								3,600	DGS35-9L403600	7133519
					Incremental / TTL / HTL	5 V ... 15 V	Cable, 11-wire, radial, 1.5 m	1,024	DGS35-7LK01024	7101708
								2,048	DGS35-7LK02048	7101709
								360	DGS35-7LK00360	7101707
		4,096	DGS35-7LK04096	7101710						
		8,192	DGS35-7LK08192	7101711						
		Male connector, MS, 10-pin, radial	1,024	DGS35-7L401024				7101693		
			2,048	DGS35-7L402048				7101694		
			360	DGS35-7L400360				7101692		
			4,096	DGS35-7L404096				7101695		
		Incremental / TTL / RS-422	4.5 V ... 5.5 V	Cable, 11-wire, radial, 1.5 m				8,192	DGS35-7L408192	7101696
					1,024	DGS35-1KK01024	1049552			
					DGS35-1LK01024	7101698				
		DGS35-YLK01024	1087276							
		Through hollow shaft	30 mm ²⁾	Incremental / TTL / RS-422	4.5 V ... 5.5 V	Cable, 11-wire, radial, 1.5 m	2,048	DGS35-1LK02048	7101699	
								DGS35-YLK02048	1099109	
							2,500	DGS35-1KK02500	1055330	
								DGS35-YLK02500	1074284	
360	DGS35-1LK00360							7101697		
4,096	DGS35-1LK04096					7101700				
8,192	DGS35-1LK08192					7101701				
Cable, 11-wire, radial, 10 m	16,384					DGS35-YLN16384	7130654			
Cable, 11-wire, radial, 1 m	120					DGS35-1K200120	1063526			
	4,096					DGS35-YK204096	1096705			

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²⁾ Separately order collets for 24 mm and 25 mm as accessories.

Mechanical design	Shaft diameter	Communication interface	Supply voltage	Connection type	Pulses per revolution	Type	Part no.
				Male connector, MS, 10-pin, radial	1,024	DGS35-1L401024	7101683
					2,048	DGS35-1K402048	7130548
						DGS35-1L402048	7101684
					2,500	DGS35-1K402500	7127251
					360	DGS35-1L400360	7101682
					4,096	DGS35-1K404096	7130702
						DGS35-1L404096	7101685
					8,192	DGS35-1K408192	1118935
						DGS35-1L408192	7101686
					8 V ... 24 V	Cable, 11-wire, radial, 1.5 m	1,024
			16,384	DGS35-2LK16384			1080222
				DGS35-2LK02048			1065581
			2,048	DGS35-3KK02048			1062810
				DGS35-3LK02048			1062354
			Cable, 11-wire, radial, 3 m	1,024		DGS35-3LL01024	1055112
			Cable, 11-wire, radial, 5 m	5,000		DGS35-2KM05000	1096730
			Male connector, MS, 10-pin, radial	1,024		DGS35-3K401024	1058110
				2,048		DGS35-3K402048	1060264
						DGS35-3L402048	1062795
				5,000	DGS35-2K405000	1100127	

1) Separately order collets for 1/2", 3/4", 5/8", 7/8", 10 mm, 12 mm, 14 mm, 15 mm, 18 mm, 20 mm, 22 mm, 24 mm and 25 mm as accessories.

2) Separately order collets for 24 mm and 25 mm as accessories.

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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