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Ставрополь (8652)20-65-13

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Томск (3822)98-41-53
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ЭНКОДЕРЫ

Технические характеристики

sample picture	product family	housing	sensing distance min.	sensing distance max.	features
Линейные					
	MIL10	-	-	5 µm (4-times evaluation)	• Output signals A 90° B or A 90° B +R • Protection IP 67
Инкрементные					
	EIL580-T - through hollow shaft	ø58 mm	ø8...15 mm (through hollow shaft)	100...5000	• Compact • Industrial standard
	ExEIL580-T - through hollow shaft	ø58 mm	ø8...15 mm (through hollow shaft)	100...5000	• Industrial standard • ATEX II 3 D (Zone 22)
	EIL580P-T - through hollow shaft	ø58 mm	ø8...15 mm (through hollow shaft)	1...65536	• Compact • Industrial standard • Programmable
	ExEIL580P-T - through hollow shaft	ø58 mm	ø8...15 mm (through hollow shaft)	1...65536	• Programmable • ATEX II 3 D (Zone 22)
	EIL580-B - blind hollow shaft	ø58 mm	ø8...15 mm (blind hollow shaft)	100...5000	• Compact • Industrial standard
	ExEIL580-B - blind hollow shaft	ø58 mm	ø8...15 mm (blind hollow shaft)	100...5000	• Industrial standard • ATEX II 3 D (Zone 22)

	EIL580P-B - blind hollow shaft	ø58 mm	ø8...15 mm (blind hollow shaft)	1...65536	• Compact • Industrial standard • Programmable
	ExEIL580P-B - blind hollow shaft	ø58 mm	ø8...15 mm (blind hollow shaft)	1...65536	• Programmable • ATEX II 3 D (Zone 22)
	EIL580-SC - clamping flange	ø58 mm	ø10 x 20 mm, solid shaft with flat (clamping flange) ø3/8" x 4/5" (ø9.525 x 20.32 mm), solid shaft with flat	100...5000	• Compact • Industrial standard
	ExEIL580-SC - clamping flange	ø58 mm	ø10 x 20 mm, solid shaft with flat (clamping flange)	100...5000	• Industrial standard • ATEX II 3 D (Zone 22)
	EIL580P-SC - clamping flange	ø58 mm	ø10 x 20 mm, solid shaft with flat (clamping flange) ø3/8" x 4/5" (ø9.525 x 20.32 mm), solid shaft with flat	1...65536	• Compact • Industrial standard • Programmable
	ExEIL580P-SC - clamping flange	ø58 mm	ø10 x 20 mm, solid shaft with flat (clamping flange)	1...65536	• Programmable • ATEX II 3 D (Zone 22)
	EIL580-S1B1 - EURO flange B10	ø115 mm	ø11 x 30 mm solid shaft with woodruff key	100...5000	• Compact • Industrial standard
	EIL580-SQ10 - Square flange	2.5 x 2.5" (63.5 x 63.5 mm)	ø10 x 20 mm, solid shaft with flat ø3/8" x 4/5" (ø9.525 x 20.32 mm), solid shaft with flat	100...5000	• Compact • Industrial standard

	EIL580P-SQ10 - Square flange	2.5 x 2.5" (63.5 x 63.5 mm)	ø10 x 20 mm, solid shaft with flat ø3/8" x 4/5" (ø9.525 x 20.32 mm), solid shaft with flat	1...65536	• Compact • Industrial standard • Programmable
	EIL580-SY - synchro flange	ø58 mm	ø6 x 10 mm, solid shaft with flat (synchro flange)	100...5000	• Compact • Industrial standard
	ExEIL580-SY - synchro flange	ø58 mm	ø6 x 10 mm, solid shaft with flat (synchro flange)	100...5000	• Industrial standard • ATEX II 3 D (Zone 22)
	EIL580P-SY - synchro flange	ø58 mm	ø6 x 10 mm, solid shaft with flat (synchro flange)	1...65536	• Compact • Industrial standard • Programmable
	ExEIL580P-SY - synchro flange	ø58 mm	ø6 x 10 mm, solid shaft with flat (synchro flange)	1...65536	• Programmable • ATEX II 3 D (Zone 22)
	EIL580-T - through hollow shaft - Option 6301	ø58 mm	ø8...15 mm (through hollow shaft)	100...5000	• Compact • Industrial standard
	EIL580-B - blind hollow shaft - Option 6301	ø58 mm	ø8...15 mm (blind hollow shaft)	100...5000	• Compact • Industrial standard
	AG 14	ø139 mm	ø70 mm (through hollow shaft)	250...2500	• Attached encoder • Short overall length • Large through hollow shaft

	BDH	ø55 mm	ø10 mm solid shaft (clamping flange)	10...5000	• Small profile depth
	BDH - HighRes	ø55 mm	ø10 mm solid shaft (clamping flange)	7200...320000	• Small profile depth
	BDK	ø30 mm	ø5 mm solid shaft	10...2048	• Operation speed max. 12000 rpm
	BDT	ø58 mm	ø6 mm solid shaft (synchro flange)	10...5000	• Small profile depth
	BDT - HighRes	ø58 mm	ø6 mm solid shaft (synchro flange)	7200...320000	• Small profile depth
	BDT sine	ø58 mm	ø6 mm solid shaft (synchro flange)	1000...5000	• Sine output
	BHF	ø58 mm	ø12 mm (blind hollow shaft)	10...5000	• Small profile depth
	BHF - HighRes	ø58 mm	ø12 mm (blind hollow shaft)	4096...320000	• High resolution • Programmable

	BHF sine	ø58 mm	ø12 mm (blind hollow shaft)	1000...5000	• Sine output
	BHG	ø58 mm	ø12 mm (through hollow shaft)	10...5000	• Small profile depth
	BHG - HighRes	ø58 mm	ø12 mm (through hollow shaft)	4096...320000	• High resolution • Programmable
	BHG sine	ø58 mm	ø12 mm (through hollow shaft)	1000...5000	• Sine output
	BHK	ø40 mm	ø6 mm (through hollow shaft) ø12 mm (blind hollow shaft)	10...2048	• Operation speed max. 12000 rpm
	BHT	ø58 mm	ø9.52 mm (blind hollow shaft) ø10 mm (blind hollow shaft)	20...5000	• Integrated flexible coupling
	BHT sine	ø58 mm	ø9.52 mm (blind hollow shaft) ø10 mm (blind hollow shaft)	1000...5000	• Sine output
	BHW - HighRes	ø80 mm	ø27 mm (through hollow shaft)	10000...320000	• High resolution • Programmable

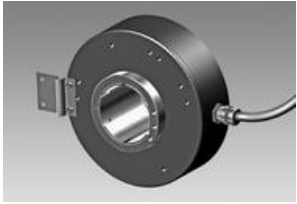
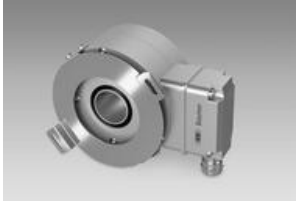
	BNIV	ø40 mm	ø6 mm solid shaft	100...25000	• Programmable via HEX-switch
	BRID - EcoMag	ø58 mm	ø12 mm (through hollow shaft)	64...2048	• Wide pulse number range
	BRIH - EcoMag	ø58 mm	ø12 mm (blind hollow shaft)	64...2048	• Wide pulse number range
	BRIH 40 - EcoMag	ø40 mm	ø6 mm (blind hollow shaft) ø12 mm (blind hollow shaft)	2...1024	• Wide pulse number range
	BRIV 30 - EcoMag	ø30 mm	ø5 mm solid shaft	2...1024	• Wide pulse number range
	BRIV 30R - EcoMag	ø30 mm	ø6 mm solid shaft ø8 mm solid shaft	2...1024	• Temperature range -40...+85 °C
	BRIV 58K - EcoMag	ø58 mm	ø10 mm solid shaft (clamping flange)	64...2048	• Clamping flange
	BRIV 58S - EcoMag	ø58 mm	ø6 mm solid shaft (synchro flange)	64...2048	• Synchro flange

	ExG25	2.5 x 2.5" (63.5 x 63.5 mm) ø2.283" (ø58 mm)	ø0.375" (ø9.52 mm) solid shaft	5...6000	• Square flange • Inch dimensions • MIL connector
	EEx HOG 161	ø160 mm	ø30...70 mm (through hollow shaft)	250...2500	• ATEX II 2 G • IECEx approval
	EEx OG 9	ø115 mm	ø11 mm solid shaft	25...5000	• ATEX II 2 G • IECEx approval
	EEx OG 9 S	ø115 mm	ø11 mm solid shaft	1024...2048	• ATEX II 2 G • IECEx approval
	FOG 9 + GT 7.08	ø115 mm	ø11 mm solid shaft	100...5000	• Encoder combination with tachogenerator • Connector with metal mating connector • EURO flange B10 • High response speed
	FOG 9	ø115 mm	ø10...11 mm solid shaft	100...5000	• Flange connector with metal mating connector • EURO flange B10 • ATEX II 3 G / 3 D • Function control with Enhanced Monitoring System
	FOG 9 + GT 7.16	ø115 mm	ø11 mm solid shaft	100...5000	• Encoder combination with tachogenerator • Connector with metal mating connector • EURO flange B10 • High response speed • No auxiliary

					energy source required
	G 305	62.5 x 70 mm	ø7 mm solid shaft single / dual shaft	5...120	• Surface mount housing
	G0333	ø58 mm	ø12 mm (through hollow shaft)	6000...80000	• High resolution
	G0355	ø58 mm	ø10 mm solid shaft	6000...80000	• High resolution
	G0356	ø58 mm	ø6 mm solid shaft	6000...80000	• High resolution
	G110H	ø75 mm	ø20 mm (through hollow shaft) ø25 mm (through hollow shaft) ø25.4 mm (through hollow shaft)	1024...16384	• Large hollow shaft
	G110S	ø75 mm	ø20 mm (blind hollow shaft) ø25 mm (blind hollow shaft)	1024...16384	• Large diameter blind shaft
	G25	2.5 x 2.5" (63.5 x 63.5 mm)	ø0.375" (ø9.52 mm) solid shaft	5...6000	• Square flange • Inch dimensions • MIL connector or cable
	GE333	ø58 mm	ø12 mm (through hollow shaft)	5...6000	• Stainless steel design

	GE355	ø58 mm	ø10 mm solid shaft (clamping flange)	5...6000	• Stainless steel design
	GI330	ø58 mm	ø12 mm (blind hollow shaft)	5...6000	• High resolution
	GI331	ø58 mm	ø12 mm (through hollow shaft)	5...6000	• High resolution
	GI332	ø58 mm	ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft)	5...6000	• High resolution
	GI333	ø58 mm	ø12 mm (through hollow shaft) ø14 mm (through hollow shaft)	5...6000	• High resolution
	GI341	ø58 mm	ø10...15 mm (blind hollow shaft)	5...2048	• Compact
	GI342	ø58 mm	ø10...15 mm (through hollow shaft)	5...2048	• Compact
	GI352	63.5 x 63.5 mm	ø9.52 mm solid shaft	5...6000	• Square flange • Inch dimensions • MIL connector

	GI355	ø58 mm	ø10 mm solid shaft	5...6000	• Industrial standard
	GI356	ø58 mm	ø6 mm solid shaft	5...6000	• Industrial standard
	GI357	ø58 mm	ø6 mm solid shaft (synchro flange) ø10 mm solid shaft (clamping flange)	5...5000	• SIL2 approval
	GPI0W	ø58 mm	ø6 mm solid shaft (synchro flange) ø10 mm solid shaft (clamping flange)	50...500	• PTB approved
	HOG 10	ø105 mm	ø12...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Radial terminal box or axial terminal cover • Blind hollow shaft up to ø20 mm • ATEX II 3 G / 3 D • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 100	ø105 mm	ø16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	1024...10000	• Radial terminal box or axial terminal cover • High resolution • ATEX II 3 G / 3 D
	HOG 11 DNV	ø105 mm	ø16 mm (blind hollow shaft)	300...2500	• Very high protection IP 67 • Offshore and salt water firm • DNV approval

	HOG 11	ø105 mm	ø12...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Very high protection IP 67 • Offshore and salt water firm • Radial terminal box or axial terminal cover • ATEX II 3 G / 3 D • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 10 + DSL.E	ø105 mm	ø16 mm (blind hollow shaft)	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 2 switching speeds and 1 control output • ATEX II 3G/3D
	HOG 12	ø125 mm	ø30...45 mm (through hollow shaft)	600...1200	• Optical sensing method • Robust light-metal housing
	HOG 131	ø130 mm	ø16...36 mm (through hollow shaft)	1024...3072	• ATEX II 3 G / 3 D • Integrated lightning protection • Hybrid bearing with ceramic balls • Especially sealed for offshore applications
	HOG 14	ø158 mm	ø40...75 mm (through hollow shaft)	1024...5000	• Optical sensing method • Robust light-metal housing • ATEX II 3 G / 3 D
	HOG 10 + DSL.R	ø105 mm	ø16 mm (blind hollow shaft)	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 3 switching speeds • ATEX II 3G/3D

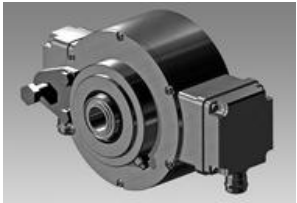
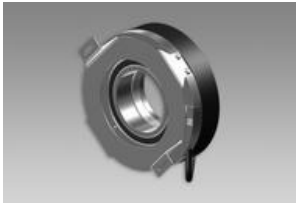
	HOG 16	ø158 mm	ø20...38 mm (through hollow shaft)	250...2500	• Through hollow shaft up to ø38 mm • Redundant sensing
	HOG 86 + DSL	ø99 mm	ø16 mm (blind hollow shaft)	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 3 switching speeds
	HOG 10 + ESL 90	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Encoder combination with electronic speed switch ESL 90 • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 161	ø158 mm	ø38...75 mm (through hollow shaft)	250...2500	• ATEX II 3 G / 3 D • Redundant sensing
	HOG 10 + ESL 93	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Encoder combination with electronic speed switch ESL 90 • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 163	ø158 mm	ø38...75 mm (through hollow shaft)	250...5000	• ATEX II 3 G / 3 D • Redundant sensing
	HOG 10 + FSL	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Encoder combination with centrifugal switch FSL • Blind hollow shaft up to ø20 mm • Redundant sensing • Function control

					with Enhanced Monitoring System
	HOG 165	ø165 mm	ø20...38 mm (blind hollow shaft)	1024...8192	• Special protection against corrosion • Large terminal box, turn by 180° • ATEX II 3 G / 3 D • Very high resistance to shock and vibrations
	HOG 86 + FSL	ø105 mm	ø16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	500...5000	• Encoder combination with centrifugal switch FSL • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 10 G	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Twin encoder combination with double sensing • ATEX II 3G/3D • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 22	ø227 mm	ø80...115 mm (through hollow shaft)	720...4000	• ATEX II 3 G / 3 D • Redundant sensing • Plug-in electronics
	HOG 220	ø227 mm	ø80...115 mm (through hollow shaft)	1024	• ATEX II 3 G / 3 D • Redundant sensing
	HOG 28	ø287 mm	ø120...150 mm (through hollow shaft)	1024...2048	• Large terminal box, turn by 180° • Option: Plug-in electronics • ATEX II 3 G / 3 D • Redundant sensing

	HOG 11 + ESL 90	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Encoder combination with electronic speed switch ESL 90 • Offshore and salt water firm • High protection IP 67 • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 60	ø58 mm	ø8...12 mm (blind hollow shaft)	200...10000	• High resistance to shock • High protection IP 65 • ATEX II 3 G / 3 D
	HOG 11 + ESL 93	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Encoder combination with electronic speed switch ESL 90 • Offshore and salt water firm • High protection IP 67 • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 70	ø60 mm	ø12...14 mm (blind hollow shaft)	10...10000	• ATEX II 3 G / 3 D
	HOG 11 + FSL	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Encoder combination with centrifugal switch FSL • Offshore and salt water firm • High protection IP 67 • Redundant sensing • Function control with Enhanced Monitoring System

	HOG 71	ø60 mm	ø12...14 mm (blind hollow shaft)	64...2048	• ATEX II 3 G / 3 D
	HOG 11 G	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Twin encoder combination with double sensing • High protection IP 67 • Offshore and salt water firm • ATEX II 3G/3D • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 75 K	ø75 mm	ø17 mm (cone shaft 1:10)	250...2500	• Very high resistance to vibrations • ATEX II 3 G / 3 D
	HOG 75	ø75 mm	ø12...26 mm (through hollow shaft)	250...2500	• Very high resistance to vibrations • ATEX II 3 G / 3 D
	HOG 8	ø86.5 mm	ø10...16 mm (through hollow shaft)	1...5000	• Compact, robust die-cast housing
	HOG 86	ø99 mm	ø12...16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	500...5000	• Function control with Enhanced Monitoring System • ATEX II 3 G / 3 D
	HOG 86E	ø99 mm	ø12...16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	500...2500	• ATEX II 3 G / 3 D

	HOG 86 M	ø99 mm	ø12...16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	500...5000	• Function control with Enhanced Monitoring System • Redundant sensing • ATEX II 3 G / 3 D
	HOG 16 + DSL.E	ø158 mm	ø20...50 mm (through hollow shaft)	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 2 switching speeds and 1 control output
	HOG 16 + DSL.R	ø158 mm	ø20...50 mm (through hollow shaft)	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 3 switching speeds
	HOG 9	ø97 mm	ø12...16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• ATEX II 3 G / 3 D • Function control with Enhanced Monitoring System
	HOG 9 G	ø97 mm	ø16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Twin encoder combination with double sensing • ATEX II 3G/3D • Function control with Enhanced Monitoring System
	HOGS 100	ø105 mm	ø16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	720...5000	• Radial terminal box or axial terminal cover • Top-quality SinCos output-signals • ATEX II 3 G / 3 D
	HOGS 100 S	ø105 mm	ø16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	1024...5000	• SIL2 approval • Radial terminal box or axial terminal cover • Top-quality SinCos output-signals • ATEX II 3 G / 3 D

	HOG 165 + DSL.E	ø165 mm	ø25 mm (through hollow shaft)	512...4096	• Incremental encoder combination with digital speed switch • Programmable for 2 switching speeds and 1 control output • ATEX II 3G/3D
	HOGS 14	ø158 mm	ø40...75 mm (through hollow shaft)	1024...5000	• Top-quality SinCos output-signals • ATEX II 3 G / 3 D
	HOG 165 + DSL.R	ø165 mm	ø25 mm (through hollow shaft)	512...4096	• Incremental encoder combination with digital speed switch • Programmable for 3 switching speeds • ATEX II 3G/3D
	HOGS 151	ø168 mm	ø60...70 mm (through hollow shaft)	1024...5000	• ATEX II 3 G / 3 D • Top-quality SinCos output-signals
	HOGS 71	ø60 mm	ø12...14 mm (blind hollow shaft)	1024...5000	• ATEX II 3 G / 3 D • Top-quality SinCos output-signals
	HOGS 75 K	ø75 mm	ø17 mm (cone shaft 1:10)	720...5000	• Very high resistance to vibrations • ATEX II 3 G / 3 D
	HOGS 75	ø75 mm	ø14...26 mm (through hollow shaft)	720...5000	• Very high resistance to vibrations • ATEX II 3 G / 3 D
	HS35F	ø3.15" (ø80 mm)	ø0.375...1" (ø9.525...25.4 mm) (through hollow shaft isolated)	1024...80000	• Industrial standard • Inch dimensions • Very high IP protection • Isolated shaft

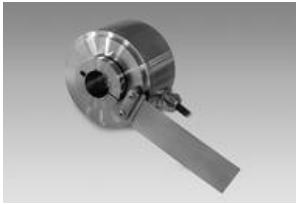
	HS35P - Programmable	ø3.15" (ø80 mm)	ø0.375...1" (ø9.525... 25.4 mm) (through hollow shaft isolated)	1...8192	• Programmable • Inch dimensions • Very high IP protection • Isolated shaft
	HS35S - Sine	ø3.15" (ø80 mm)	ø0.375...1" (ø9.525... 25.4 mm) (through hollow shaft isolated)	1024...5000	• Top-quality sine signals • Inch dimensions • Very high IP protection
	ExHS35	ø3.15" (ø80 mm)	ø0.375...1" (ø9.525... 25.4 mm) (through hollow shaft isolated)	1024...5000	• Intrinsically safe encoder • Inch dimensions • Very high IP protection
	ITD 01 A 4 Y 1	ø24 mm	ø4 mm (blind hollow shaft)	30...1024	• Mini encoder
	ITD 01 A 4 Y 4	ø24 mm	ø4 mm (blind hollow shaft)	30...1024	• Mini encoder
	ITD 01 B14	ø24 mm	ø4 mm solid shaft	30...1024	• Mini encoder
	ITD 2 A 4 Y22	ø58 mm	ø10 mm (blind hollow shaft) ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft)	2...60	• Compact • Industrial standard
	ITD 2 A 4 Y36	ø58 mm	ø10 mm (blind hollow shaft) ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft)	2...60	• Compact • Industrial standard

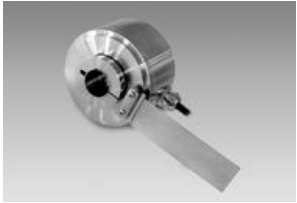
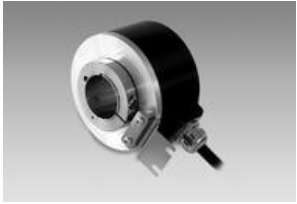
	ITD 20 A 4	ø58 mm	ø8...14 mm (blind hollow shaft)	50...1024	• Compact • Industrial standard
	ITD 20 A 4 Y10	ø58 mm	ø6...16 mm (blind hollow shaft)	50...1024	• Encoder with bellhousing • High IP protection
	ITD 20 A 4 Y114	-	ø10 mm (blind hollow shaft) ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft)	100...2048	• Terminal box axial, screw connection sideways
	ITD 20 A 4 Y120	60 x 72 mm	ø10 mm (through hollow shaft) ø12 mm (through hollow shaft) ø14 mm (through hollow shaft) ø16 mm (through hollow shaft)	200...2048	• Compact • High IP protection
	ITD 20 A 4 Y130	ø58 mm	ø12 mm (blind hollow shaft)	50...1024	• Electric isolated • High IP protection • Compact
	ITD 20 A 4 Y22	ø58 mm	ø10 mm (blind hollow shaft) ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft)	50...1024	• Compact • High IP protection
	ITD 20 A 4 Y36	ø58 mm	ø10 mm (blind hollow shaft) ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft)	50...1024	• Compact • Industrial standard
	ITD 20 B14	ø58 mm	ø6 mm solid shaft	50...1024	• Industrial standard • Synchro flange • High IP protection

	ITD 20 B14 Y 1	ø58 mm	ø6 mm solid shaft	50...1024	• Industrial standard • Synchro flange • High IP protection
	ITD 20 B14 Y 9	ø58 mm	ø10 mm solid shaft (clamping flange)	50...1024	• Industrial standard • Clamping flange • High IP protection
	ITD 20 B14 Y11	ø58 mm	ø10 mm solid shaft (clamping flange)	50...1024	• Industrial standard • Clamping flange • High IP protection
	ITD 21 A 4 Y10	ø58 mm	ø6...16 mm (blind hollow shaft)	1000...10000	• Encoder with bellhousing • High resolutions • High IP protection
	ITD 21 A 4 Y109	ø68 mm	ø10 mm (blind hollow shaft) ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft)	200...6000	• Anodised • High resolutions • Very high IP protection
	ITD 21 A 4 Y21	ø58 mm	ø10 mm (blind hollow shaft) ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft)	200...6000	• Compact • High resolutions • High IP protection
	ITD 21 A 4 Y22	ø58 mm	ø10 mm (blind hollow shaft) ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft)	200...6000	• Compact • High resolutions • High IP protection
	ITD 21 A 4 Y36	ø58 mm	ø10 mm (blind hollow shaft) ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft)	200...6000	• Compact • High resolutions • High IP protection

	ITD 21 A 4 Y65	ø68 mm	ø10 mm (through hollow shaft) ø12 mm (through hollow shaft) ø14 mm (through hollow shaft)	200...6000	• Stainless steel • High resolutions • High IP protection
	ITD 21 B14	ø58 mm	ø6 mm solid shaft (synchro flange)	1000...10000	• Synchro flange • High resolutions • High IP protection
	ITD 21 B14 Y 1	ø58 mm	ø6 mm solid shaft (synchro flange)	1000...10000	• Synchro flange • High resolutions • High IP protection
	ITD 21 B14 Y 9	ø58 mm	ø10 mm solid shaft (clamping flange)	1000...6000	• Clamping flange • High resolutions • High IP protection
	ITD 21 B14 Y11	ø58 mm	ø10 mm solid shaft (clamping flange)	1000...6000	• Clamping flange • High resolutions • High IP protection
	ITD 22 A 4 Y36	ø58 mm	ø10 mm (blind hollow shaft) ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft)	1024...5000	• Top-quality sine signals • Compact
	ITD 23 A 4 Y 2	60 x 72 mm	ø14 mm (through hollow shaft)	128	• Compact • Tangential cable output
	ITD 27 A 4 Y15	ø58 mm	ø9...14 mm (through hollow shaft)	1...32	• Compact • Magnetic sensing

	ITD 28 A 4	ø58 mm	ø10...14 mm (blind hollow shaft)	50...1024	• Encoder redundant • High IP protection
	ITD 4 A 4	ø80 mm	ø10...16 mm (blind hollow shaft)	5...100	• Industrial standard
	ITD 4 B10	ø82 mm	ø11 mm solid shaft	5...60	• EURO flange B10 • Industrial standard • High IP protection
	ITD 4 B10 Y 1	ø82 mm	ø11 mm solid shaft	5...60	• EURO flange B10 • Industrial standard • High IP protection
	ITD 4 B10 Y 4	ø82 mm	ø11 mm solid shaft	5...60	• EURO flange B10 • Dual bearing • High IP protection
	ITD 4 B10 Y 5	ø82 mm	ø11 mm solid shaft	5...60	• EURO flange B10 • Industrial standard • High IP protection
	ITD 40 A 4	ø80 mm	ø10...16 mm (blind hollow shaft)	200...2048	• Industrial standard
	ITD 40 A 4 Y109	ø80 mm	ø10...16 mm (blind hollow shaft)	200...2048	• High IP protection

	ITD 40 A 4 Y138	ø80 mm	ø14 mm (through hollow shaft)	200...2048	• High resistance to shock and vibrations • Electric isolated
	ITD 40 A 4 Y141	ø89 mm	ø20 mm (blind hollow shaft) ø22 mm (blind hollow shaft) ø25 mm (blind hollow shaft) ø27 mm (blind hollow shaft)	200...2048	• Stainless steel • Large hollow shaft • Very high IP protection
	ITD 40 A 4 Y22	ø80 mm	ø17...27 mm (through hollow shaft)	200...2048	• Large hollow shaft
	ITD 40 A 4 Y79	ø80 mm	ø20...27 mm (through hollow shaft)	200...2048	• Large hollow shaft
	ITD 40 B10	ø82 mm	ø11 mm solid shaft	200...2048	• EURO flange B10 • Industrial standard • High IP protection
	ITD 40 B10 Y 1	ø82 mm	ø11 mm solid shaft	200...2048	• EURO flange B10 • Industrial standard • High IP protection
	ITD 40 B10 Y 4	ø82 mm	ø11 mm solid shaft	200...2048	• EURO flange B10 • Dual bearing • High IP protection
	ITD 40 B10 Y 5	ø82 mm	ø11 mm solid shaft	200...2048	• EURO flange B10 • Dual bearing • Terminal box axial, screw connection sideways

	ITD 41 A 4	ø80 mm	ø10...16 mm (blind hollow shaft)	2000...10000	• Industrial standard • High resolutions • High IP protection
	ITD 41 A 4 Y 1	ø80 mm	ø10...16 mm (blind hollow shaft)	2000...10000	• High resolutions • High IP protection
	ITD 41 A 4 Y 2	ø80 mm	ø10...16 mm (through hollow shaft)	2000...10000	• High resolutions • High IP protection
	ITD 41 A 4 Y100	ø80 mm	ø20 mm (through hollow shaft) ø25 mm (through hollow shaft)	2000...10000	• Large hollow shaft • Electric isolated • High resolutions
	ITD 41 A 4 Y117	ø80 mm	ø14 mm (through hollow shaft)	2000...10000	• Electric isolated • High resolutions • High IP protection
	ITD 41 A 4 Y141	ø89 mm	ø20...27 mm (blind hollow shaft)	2000...10000	• Stainless steel • Very high IP protection • High resolutions
	ITD 41 A 4 Y22	ø80 mm	ø17...27 mm (through hollow shaft)	2000...10000	• Large hollow shaft • High resolutions • High IP protection
	ITD 41 A 4 Y68	ø80 mm	ø28...30 mm (through hollow shaft)	1024...10000	• Large hollow shaft • High resolutions

	ITD 41 A 4 Y70	ø80 mm	ø28...30 mm (through hollow shaft)	1024...10000	• Large hollow shaft • High resolutions
	ITD 41 A 4 Y79	ø80 mm	ø20 mm (through hollow shaft) ø22 mm (through hollow shaft) ø25 mm (through hollow shaft) ø27 mm (through hollow shaft)	2000...10000	• Large hollow shaft • High resolutions
	ITD 41 B10	ø82 mm	ø11 mm solid shaft	1000...6000	• EURO flange B10 • Industrial standard • High resolutions
	ITD 41 B10 Y 1	ø82 mm	ø11 mm solid shaft	1000...6000	• EURO flange B10 • Industrial standard • High IP protection
	ITD 41 B10 Y 4	ø82 mm	ø11 mm solid shaft	1000...6000	• EURO flange B10 • Dual bearing • High IP protection
	ITD 41 B10 Y 5	ø82 mm	ø11 mm solid shaft	1000...6000	• EURO flange B10 • Dual bearing • High resolutions • Terminal box axial, screw connection sideways
	ITD 42 A 4	ø80 mm	ø10...16 mm (blind hollow shaft)	1024...2048	• Top-quality sine signals
	ITD 42 A 4 Y141	ø89 mm	ø20 mm (blind hollow shaft) ø27 mm (blind hollow shaft) ø25 mm (blind hollow shaft) ø22 mm (blind	1024...2048	• Stainless steel • Very high IP protection • Top-quality sine signals

			hollow shaft)		
	ITD 42 A 4 Y79	ø80 mm	ø20 mm (through hollow shaft) ø22 mm (through hollow shaft) ø25 mm (through hollow shaft) ø27 mm (through hollow shaft)	1024...2048	• Top-quality sine signals • Large hollow shaft
	ITD61H00	ø120 mm	ø30...50 mm (through hollow shaft)	1024...10000	• Large hollow shaft • Stainless steel • Flat design
	ITD 70 A 4 Y 2	ø150 mm	ø38...65 mm (through hollow shaft)	1000...2500	• Large hollow shaft
	ITD 70 A 4 Y 7	ø150 mm	ø40...65 mm (through hollow shaft)	1000...2500	• Large hollow shaft
	ITD 70 A 4 Y 9	ø150 mm	ø40...65 mm (through hollow shaft)	1000...2500	• Large hollow shaft
	ITD21H00	ø58 mm	ø10 mm (through hollow shaft) ø12 mm (through hollow shaft) ø14 mm (through hollow shaft)	100...80000	• Space-saving installation • Flexible cable concept
	ITD21H00 HT	ø58 mm	ø10 mm (through hollow shaft) ø12 mm (through hollow shaft) ø14 mm (through hollow shaft)	100...8192	• Space-saving installation • Flexible cable concept • Extended operating temperature

	ITD22H00	ø58 mm	ø10 mm (through hollow shaft) ø12 mm (through hollow shaft) ø14 mm (through hollow shaft)	1024...2048	• Top-quality sine signals • Space-saving installation • Flexible cable concept
	ITD22H00 SIL	ø58 mm	ø10 mm (through hollow shaft) ø12 mm (through hollow shaft) ø14 mm (through hollow shaft)	1024...2048	• SIL2 approval • Top-quality sine signals • Space-saving installation • Flexible cable concept
	ITD21H01	ø58 mm	ø14 mm (through hollow shaft)	100...80000	• Space-saving installation • Flexible cable concept
	ITD21H01 HT	ø58 mm	ø14 mm (through hollow shaft)	100...8192	• Space-saving installation • Flexible cable concept
	MA20	ø40 mm	ø6 mm solid shaft	100...25000	• Programmable via HEX-switch
	OG 6	ø58 mm	ø6 mm solid shaft	100...512	• Solid shaft ø6 mm • Synchro flange
	OG 60	ø58 mm	ø6 mm solid shaft	10...10000	• Solid shaft ø6 mm • Synchro flange
	OG 71	ø58 mm	ø6 mm solid shaft	100...1024	• Solid shaft ø6 mm • High resistance to shock • ATEX II 3 G / 3 D

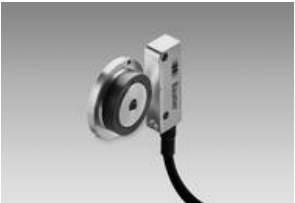
	OG 8	ø115 mm	ø11 mm solid shaft	1...5000	• Solid shaft ø11 mm • EURO flange B10
	OG 9	ø115 mm	ø11 mm solid shaft	25...5000	• Solid shaft ø11 mm • EURO flange B10 • Operating temperature up to +100 °C • ATEX II 3 G / 3 D
	OGS 71	ø58 mm	ø6 mm solid shaft	1024...5000	• ATEX II 3 G / 3 D
	POG 10	ø115 mm	ø11 mm solid shaft	300...5000	• EURO flange B10 • Encoder with solid shaft ø11 mm • Radial terminal box • ATEX II 3 G / 3 D • Redundant sensing • Function control with Enhanced Monitoring System
	POG 11	ø115 mm	ø11 mm solid shaft	300...5000	• Very high protection IP 67 • Offshore and salt water firm • Radial terminal box • ATEX II 3 G / 3 D • Redundant sensing • Function control with Enhanced Monitoring System
	POG 86	ø115 mm	ø11 mm solid shaft	500...5000	• Encoder with solid shaft ø11 mm • EURO flange B10 • ATEX II 3 G / 3 D • Function control with Enhanced

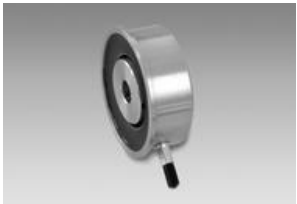
					Monitoring System
	POG 86E	ø115 mm	ø11 mm solid shaft	500...5000	- Encoder with solid shaft ø11 mm - EURO flange B10 - ATEX II 3 G / 3 D - Function control with Enhanced Monitoring System
	POG 9	ø115 mm	ø11 mm solid shaft	300...5000	- Encoder with solid shaft ø11 mm - EURO flange B10 - ATEX II 3 G / 3 D - Function control with Enhanced Monitoring System
	POG 90	ø115 mm	ø11 mm solid shaft	1024...10000	ATEX II 3 G / 3 D
	POGS 90	ø115 mm	ø11 mm solid shaft	720...5000	ATEX II 3 G / 3 D
	TIL	60 x 72 mm	ø10 mm (through hollow shaft) ø12 mm (through hollow shaft) ø14 mm (through hollow shaft) ø16 mm (through hollow shaft)	100...2048	Tangential cable output
	TIL Y 1	60 x 72 mm	ø12 mm (blind hollow shaft)	100...2048	- Tangential cable output - High IP protection
	X 700 - incremental	ø70 mm	ø10 mm solid shaft (clamping flange)	5...5000	Ex II 2D/2G (ATEX)

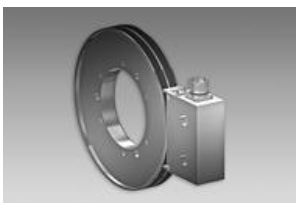
	POG 90 + ESL 90	ø115 mm	ø11 mm solid shaft	1024...10000	• Encoder combination with electronic speed switch ESL 90 • EURO flange B10 or foot mounting
	POG 90 + ESL 93	ø115 mm	ø11 mm solid shaft	1024...10000	• Encoder combination with electronic speed switch ESL 93 • EURO flange B10 or foot mounting
	OG 60 + GT 5	ø58 mm	ø6 mm solid shaft	10...10000	• Encoder combination with tachogenerator • Connector with metal mating connector • Synchro flange • Recognition of sense of rotation
	POG 10 + DSL.E	ø115 mm	ø11 mm solid shaft	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 2 switching speeds and 1 control output • ATEX II 3G/3D
	POG 90 + FSL	ø115 mm	ø11 mm solid shaft	1024...10000	• Encoder combination with centrifugal switch FSL • EURO flange B10
	POG 10 + DSL.R	ø115 mm	ø11 mm solid shaft	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 3 switching speeds • ATEX II 3G/3D
	POG 10 + ESL 90	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with electronic speed switch ESL 90 • EURO flange B10 or foot mounting • Redundant sensing

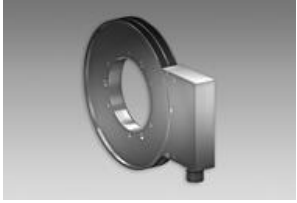
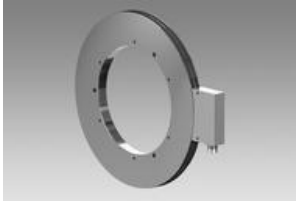
					• Function control with Enhanced Monitoring System
	POG 10 + ESL 93	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with electronic speed switch ESL 93 • EURO flange B10 or foot mounting • Redundant sensing • Function control with Enhanced Monitoring System
	POG 10 + FSL	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with centrifugal switch FSL • EURO flange B10 or foot mounting • Redundant sensing • Function control with Enhanced Monitoring System
	POG 10 G	ø115 mm	ø11 mm solid shaft	300...5000	• Twin encoder combination with double sensing • EURO flange B10 • ATEX II 3G/3D • Redundant sensing • Function control with Enhanced Monitoring System
	POG 11 + ESL 90	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with electronic speed switch ESL 90 • Offshore and salt water firm • High protection IP 67 • EURO flange B10 or foot mounting • Redundant sensing • Function control with Enhanced Monitoring System

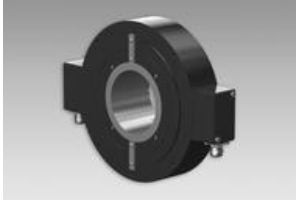
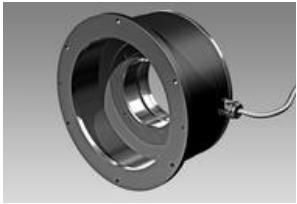
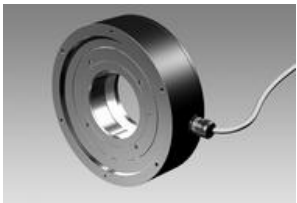
	POG 11 + ESL 93	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with electronic speed switch ESL 93 • Offshore and salt water firm • High protection IP 67 • EURO flange B10 or foot mounting • Redundant sensing • Function control with Enhanced Monitoring System
	POG 11 + FSL	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with centrifugal switch FSL • Offshore and salt water firm • High protection IP 67 • EURO flange B10 or foot mounting • Redundant sensing • Function control with Enhanced Monitoring System
	POG 11 G	ø115 mm	ø11 mm solid shaft	300...5000	• Twin encoder with double sensing • High protection IP 67 • Offshore and salt water firm • EURO flange B10 • ATEX II 3G/3D • Redundant sensing • Function control EMS
	POG 9 + ESL 90	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with electronic speed switch ESL 90 • EURO flange B10 • Function control with Enhanced Monitoring System

	POG 9 + ESL 93	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with electronic speed switch ESL 93 • EURO flange B10 • Function control with Enhanced Monitoring System
	POG 86 + FSL	ø115 mm	ø11 mm solid shaft	500...5000	• Encoder combination with centrifugal switch FSL • EURO flange B10 • Function control with Enhanced Monitoring System
	POG 9 + FSL	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with centrifugal switch FSL • EURO flange B10 • Function control with Enhanced Monitoring System
	POG 86 G	ø115 mm	ø11 mm solid shaft	500...5000	• Twin encoder combination with double sensing • ATEX II 3G/3D • Function control with Enhanced Monitoring System
	POG 9 G	ø115 mm	ø11 mm solid shaft	300...5000	• Twin encoder combination with double sensing • ATEX II 3G/3D • Function control with Enhanced Monitoring System
	MIL10	-	-	-	• Output signals A 90° B or A 90° B +R • Protection IP 67
	MIR10	-	ø6...43.5 mm (through hollow shaft)	320...4096	• Max. 4096 pulses per revolution • Output signals A 90° B or A 90° B +R • Protection IP 67

	MIR 3000F - HDmag flex	-	ø300...3183 mm (through hollow shaft)	512...131072512...1638 4	• Integrated signal processing • Magnetic sensing • Protection IP 67 • Square-wave or sine signals
	MIR 350A - HDmag flex	-	ø90...300 mm (through hollow shaft)	512...131072512...1638 4	• Integrated signal processing • Magnetic sensing • Protection IP 67 • Square-wave or sine signals
	MDFK 08 - push-pull	-	ø6...43.5 mm (through hollow shaft)	256...1024	• Resolution up to 1024 pulses • Output signals A 90° B or A 90° B +N • Protection IP 67
	MDFK 08 - RS422	-	ø6...43.5 mm (through hollow shaft)	256...1024	• Resolution up to 1024 pulses • Output signals A 90° B or A 90° B +N • Protection IP 67
	ITD 27 A 4 Y27	ø58 mm	ø10...16 mm (blind hollow shaft)	1...32	• Magnetic sensing • Protection IP 67
	ITD 67 A 4 Y 9	-	ø10...45 mm (through hollow shaft)	20...50	• Magnetic sensing • Flat design • Protection IP 67
	ITD 75 A 4	ø150 mm	ø60...85 mm (through hollow shaft)	1000...2500	• Large hollow shaft • Incremental encoder without bearings
	ITD49H00	-	ø9...28 mm (through hollow shaft)	64...2048	• Square-wave signals • Flat design • Protection IP 67

	ITD49H00 sine	-	ø9...28 mm (through hollow shaft)	64	• Flat design • Protection IP 67
	ITD69H00	-	ø40...65 mm (through hollow shaft)	128...4096	• Square-wave signals • Flat design • Protection IP 67
	ITD69H00 sine	-	ø40...65 mm (through hollow shaft)	128	• Flat design • Protection IP 67
	ITD89H00	-	ø70...140 mm (through hollow shaft)	256...8192	• Very high IP protection • Square-wave signals • Flat design
	ITD89H00 sine	-	ø70...140 mm (through hollow shaft)	256	• Very high IP protection • Flat design
	MHGE 100 - HDmag	ø99,9 mm	ø16...80 mm (through hollow shaft)	64...409664	• Max. 4096 pulses per revolution • Square-wave or sine signals • Protection IP 67 • DNV approval as option
	MHGE 200 - HDmag	ø201.7 mm	ø50...180 mm (through hollow shaft)	128...8192128	• Max. 8192 pulses per revolution • Square-wave or sine signals • Protection IP 67 • DNV approval as option
	MHGE 400 - HDmag	ø405.4 mm	ø70...340 mm (through hollow shaft)	256...16384256	• Max. 16384 pulses per revolution • Square-wave or sine signals • Protection IP 67 • DNV approval as option

					option
	MHGE 800 - HDmag	ø813 mm	ø650...740 mm (through hollow shaft)	512...32768512	• Max. 32768 pulses per revolution • Square-wave or sine signals • Protection IP 67 • DNV approval as option
	MHGP 100 - HDmag	ø99,9 mm	ø16...80 mm (through hollow shaft)	64...13107264...8192	• Max. 131072 pulses per revolution • Square-wave or sine signals • Protection IP 67
	MHGP 200 - HDmag	ø201.7 mm	ø50...180 mm (through hollow shaft)	128...262144128...16384	• Max. 262144 pulses per revolution • Square-wave or sine signals • Protection IP 67
	MHGP 400 - HDmag	ø405.4 mm	ø70...340 mm (through hollow shaft)	256...524288256...32768	• Max. 524288 pulses per revolution • Square-wave or sine signals • Protection IP 67
	HG 6	ø58 mm	ø12...16 mm (blind hollow shaft)	100...512	• Fit for high operating speed • Max. 512 pulses per revolution
	HG 16	ø158 mm	ø20...45 mm (through hollow shaft)	250...2048	• Robust and wearless • Fit for high operating speed • Max. 2048 pulses per revolution
	HG 18	ø186 mm	ø65...85 mm (through hollow shaft)	250...2500	• Robust and wearless • Fit for high operating speed • Max. 2500 pulses per revolution

	HG 22	ø227 mm	ø90...120 mm (through hollow shaft)	720...4000	• Robust and wearless • Fit for high operating speed • Max. 4000 pulses per revolution
	HG 21	ø240 mm	ø85...95 mm (through hollow shaft)	2500	• Robust and wearless • Fit for high operating speed • 2500 pulses per revolution
	HG 211	ø210 mm	ø85...95 mm (through hollow shaft)	2500	• Robust and wearless • Fit for high operating speed • Resolution 2500 pulses
Грузовые					
	AMG 71	ø60 mm	ø6 mm solid shaft	ST 8192 / 13 bit MT 4096 / 12 bit	• ATEX II 3 G / 3 D
	AMG 81	ø115 mm	ø11 mm solid shaft	ST 8192 / 13 bit MT 4096 / 12 bit	• ATEX II 3 G / 3 D • SSI, Profibus, CANopen®
	AMG 11	ø115 mm	ø11 mm solid shaft	ST 8192 / 13 bit MT ≤65536 / 16 bit	• ATEX II 3 G / 3 D • SSI, Profibus, CANopen®, DeviceNet, PROFINET • Multiturn sensing with microGen technologie • Without gears and battery • Special protection against corrosion
	AMG 11 + FSL	ø115 mm	ø11 mm solid shaft	ST 8192 / 13 bit MT ≤65536 / 16 bit	• Encoder combination with centrifugal switch FSL • SSI, Profibus, CANopen®,

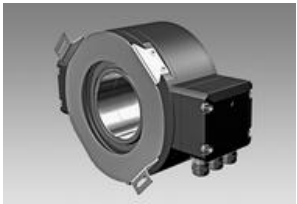
					DeviceNet • Multiturn sensing with microGen technologie • Without gears and battery • EURO flange B10 • Special protection against corrosion
	HMG 11	ø122 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	ST 8192 / 13 bit MT ≤65536 / 16 bit	• ATEX II 3G/3D • SSI, Profibus, CANopen®, DeviceNet, PROFINET • Multiturn sensing with microGen technologie • Without gears and battery • Special protection against corrosion
	HMG10-B - SSI	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	ST 1048576 / 20 bit MT 1048576 / 20 bit	• SSI • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	HMG10-T - SSI	ø105 mm	ø16...20 mm (through hollow shaft)	ST 1048576 / 20 bit MT 1048576 / 20 bit	• SSI • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	HMG10-B - CANopen®	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	ST 8192 / 13 bit MT 65536 / 16 bit	• CANopen® • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie

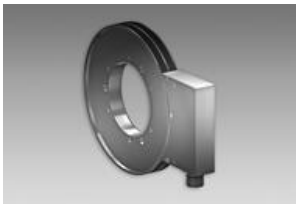
					• Without gears and battery
	HMG10-B - DeviceNet	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	ST 8192 / 13 bit MT 65536 / 16 bit	• DeviceNet • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	HMG10-B - Profibus DP	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	ST 8192 / 13 bit MT 65536 / 16 bit	• Profibus-DPV0 or DPV2 • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	HMG10-T - CANopen®	ø105 mm	ø16...20 mm (through hollow shaft)	ST 8192 / 13 bit MT 65536 / 16 bit	• CANopen® • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	HMG10-T - DeviceNet	ø105 mm	ø16...20 mm (through hollow shaft)	ST 8192 / 13 bit MT 65536 / 16 bit	• DeviceNet • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery

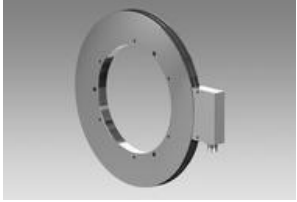
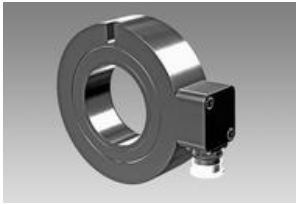
	HMG10-T - Profibus DP	ø105 mm	ø16...20 mm (through hollow shaft)	ST 8192 / 13 bit MT 65536 / 16 bit	• Profibus-DPV0 or DPV2 • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	HMG10-B EtherCAT	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	ST 8192 / 13 bit MT 65536 / 16 bit	• EtherCAT • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	HMG10-B EtherNet/IP	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	ST 8192 / 13 bit MT 65536 / 16 bit	• EtherNet/IP • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	HMG10-B PROFINET	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	ST 8192 / 13 bit MT 65536 / 16 bit	• PROFINET • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	HMG10-T EtherCAT	ø105 mm	ø16...20 mm (through hollow shaft)	ST 8192 / 13 bit MT 65536 / 16 bit	• EtherCAT • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy

					Harvesting technologie • Without gears and battery
	HMG10-T EtherNet/IP	ø105 mm	ø16...20 mm (through hollow shaft)	ST 8192 / 13 bit MT 65536 / 16 bit	• EtherNet/IP • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	HMG10-T PROFINET	ø105 mm	ø16...20 mm (through hollow shaft)	ST 8192 / 13 bit MT 65536 / 16 bit	• PROFINET • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	PMG10 - SSI	ø115 mm	ø11 mm solid shaft	ST 1048576 / 20 bit MT 1048576 / 20 bit	• SSI • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	PMG10 - CANopen®	ø115 mm	ø11 mm solid shaft	ST 8192 / 13 bit MT 65536 / 16 bit	• CANopen® • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery

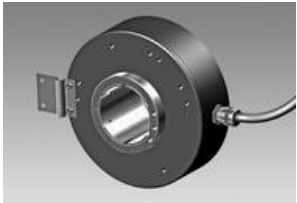
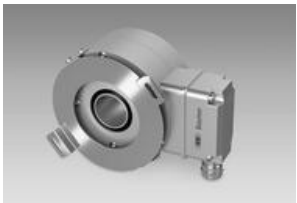
	PMG10 - DeviceNet	ø115 mm	ø11 mm solid shaft	ST 8192 / 13 bit MT 65536 / 16 bit	• DeviceNet • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	PMG10 - Profibus DP	ø115 mm	ø11 mm solid shaft	ST 8192 / 13 bit MT 65536 / 16 bit	• Profibus-DPV0 or DPV2 • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	PMG10 - EtherCAT	ø115 mm	ø11 mm solid shaft	ST 8192 / 13 bit MT 65536 / 16 bit	• EtherCAT • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	PMG10 - EtherNet/IP	ø115 mm	ø11 mm solid shaft	ST 8192 / 13 bit MT 65536 / 16 bit	• EtherNet/IP • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy Harvesting technologie • Without gears and battery
	PMG10 - PROFINET	ø115 mm	ø11 mm solid shaft	ST 8192 / 13 bit MT 65536 / 16 bit	• PROFINET • Protection against corrosion C5-M • Integrated speed switch • Multiturn sensing with Energy

					Harvesting technologie • Without gears and battery
	HMG 11 + ESL 90	ø122 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	ST 8192 / 13 bit MT ≤65536 / 16 bit	• Encoder combination with electronic speed switch ESL • SSI, Profibus, CANopen®, DeviceNet • Multiturn sensing with microGen technologie • Without gears and battery • Special protection against corrosion
	HMG 11 + ESL 93	ø122 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	ST 8192 / 13 bit MT ≤65536 / 16 bit	• Encoder combination with electronic speed switch ESL • SSI, Profibus, CANopen®, DeviceNet • Multiturn sensing with microGen technologie • Without gears and battery • Special protection against corrosion
	HMG 11 + FSL	ø122 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	ST 8192 / 13 bit MT ≤65536 / 16 bit	• Encoder combination with centrifugal switch FSL • SSI, Profibus, CANopen®, DeviceNet • Multiturn sensing with microGen technologie • Without gears and battery • Special protection against corrosion
	HMG 161	ø160 mm	ø38...70 mm (through hollow shaft)	ST 8192 / 13 bit MT ≤65536 / 16 bit	• ATEX II 3 G / 3 D • SSI, Profibus, CANopen®, DeviceNet • Multiturn sensing

					with microGen technologie • Without gears and battery • Special protection against corrosion
	MQR 3000F - HDmag flex	-	ø300...3183 mm (through hollow shaft)	-	• "Quasi-absolut", i. e. providing a valid absolute position only after initialization • Integrated signal processing • SSI, resolution up to 20 bit • Magnetic sensing • Protection IP 67 • Incremental outputs as option
	MQR 350A - HDmag flex	-	ø90...300 mm (through hollow shaft)	-	• "Quasi-absolut", i. e. providing a valid absolute position only after initialization • Integrated signal processing • SSI, resolution up to 20 bit • Magnetic sensing • Protection IP 67 • Incremental outputs as option
	MHAD 50 - HDmag	-	ø30 mm (through hollow shaft)	-	• Resolution up to 16 bit • Protection IP 67 • SSI, CANopen® • Incremental outputs as option
	MHAP 100 - HDmag	ø101.3 mm	ø16...80 mm (through hollow shaft)	-	• Resolution up to 17 bit • Protection IP 67 • SSI • Additional incremental output
	MHAP 200 - HDmag	ø203.1 mm	ø50...180 mm (through hollow shaft)	-	• Resolution up to 17 bit • Protection IP 67 • SSI • Additional incremental output

	MHAP 400 - HDmag	ø406.8 mm	ø70...340 mm (through hollow shaft)	-	• Resolution up to 17 bit • Protection IP 67 • SSI • Additional incremental output
	AG 14	ø139 mm	ø70 mm (through hollow shaft)	250...2500	• Attached encoder • Short overall length • Large through hollow shaft
	ExG25	2.5 x 2.5" (63.5 x 63.5 mm) ø2.283" (ø58 mm)	ø0.375" (ø9.52 mm) solid shaft	5...6000	• Square flange • Inch dimensions • MIL connector
	EEx HOG 161	ø160 mm	ø30...70 mm (through hollow shaft)	250...2500	• ATEX II 2 G • IECEx approval
	EEx OG 9	ø115 mm	ø11 mm solid shaft	25...5000	• ATEX II 2 G • IECEx approval
	EEx OG 9 S	ø115 mm	ø11 mm solid shaft	1024...2048	• ATEX II 2 G • IECEx approval
	FOG 9 + GT 7.08	ø115 mm	ø11 mm solid shaft	100...5000	• Encoder combination with tachogenerator • Connector with metal mating connector • EURO flange B10 • High response speed
	FOG 9	ø115 mm	ø10...11 mm solid shaft	100...5000	• Flange connector with metal mating connector • EURO flange B10 • ATEX II 3 G / 3 D

					• Function control with Enhanced Monitoring System
	FOG 9 + GT 7.16	ø115 mm	ø11 mm solid shaft	100...5000	• Encoder combination with tachogenerator • Connector with metal mating connector • EURO flange B10 • High response speed • No auxiliary energy source required
	G25	2.5 x 2.5" (63.5 x 63.5 mm)	ø0.375" (ø9.52 mm) solid shaft	5...6000	• Square flange • Inch dimensions • MIL connector or cable
	HOG 10	ø105 mm	ø12...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Radial terminal box or axial terminal cover • Blind hollow shaft up to ø20 mm • ATEX II 3 G / 3 D • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 100	ø105 mm	ø16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	1024...10000	• Radial terminal box or axial terminal cover • High resolution • ATEX II 3 G / 3 D
	HOG 11 DNV	ø105 mm	ø16 mm (blind hollow shaft)	300...2500	• Very high protection IP 67 • Offshore and salt water firm • DNV approval
	HOG 11	ø105 mm	ø12...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Very high protection IP 67 • Offshore and salt water firm • Radial terminal box or axial

					terminal cover • ATEX II 3 G / 3 D • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 10 + DSL.E	ø105 mm	ø16 mm (blind hollow shaft)	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 2 switching speeds and 1 control output • ATEX II 3G/3D
	HOG 12	ø125 mm	ø30...45 mm (through hollow shaft)	600...1200	• Optical sensing method • Robust light-metal housing
	HOG 131	ø130 mm	ø16...36 mm (through hollow shaft)	1024...3072	• ATEX II 3 G / 3 D • Integrated lightning protection • Hybrid bearing with ceramic balls • Especially sealed for offshore applications
	HOG 14	ø158 mm	ø40...75 mm (through hollow shaft)	1024...5000	• Optical sensing method • Robust light-metal housing • ATEX II 3 G / 3 D
	HOG 10 + DSL.R	ø105 mm	ø16 mm (blind hollow shaft)	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 3 switching speeds • ATEX II 3G/3D
	HOG 16	ø158 mm	ø20...38 mm (through hollow shaft)	250...2500	• Through hollow shaft up to ø38 mm • Redundant sensing

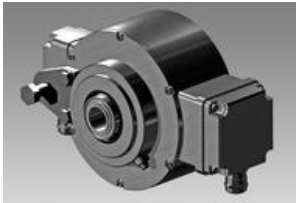
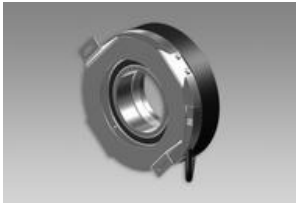
	HOG 86 + DSL	ø99 mm	ø16 mm (blind hollow shaft)	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 3 switching speeds
	HOG 10 + ESL 90	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Encoder combination with electronic speed switch ESL 90 • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 161	ø158 mm	ø38...75 mm (through hollow shaft)	250...2500	• ATEX II 3 G / 3 D • Redundant sensing
	HOG 10 + ESL 93	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Encoder combination with electronic speed switch ESL 90 • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 163	ø158 mm	ø38...75 mm (through hollow shaft)	250...5000	• ATEX II 3 G / 3 D • Redundant sensing
	HOG 10 + FSL	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Encoder combination with centrifugal switch FSL • Blind hollow shaft up to ø20 mm • Redundant sensing • Function control with Enhanced Monitoring System

	HOG 165	ø165 mm	ø20...38 mm (blind hollow shaft)	1024...8192	• Special protection against corrosion • Large terminal box, turn by 180° • ATEX II 3 G / 3 D • Very high resistance to shock and vibrations
	HOG 86 + FSL	ø105 mm	ø16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	500...5000	• Encoder combination with centrifugal switch FSL • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 10 G	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Twin encoder combination with double sensing • ATEX II 3G/3D • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 22	ø227 mm	ø80...115 mm (through hollow shaft)	720...4000	• ATEX II 3 G / 3 D • Redundant sensing • Plug-in electronics
	HOG 220	ø227 mm	ø80...115 mm (through hollow shaft)	1024	• ATEX II 3 G / 3 D • Redundant sensing
	HOG 28	ø287 mm	ø120...150 mm (through hollow shaft)	1024...2048	• Large terminal box, turn by 180° • Option: Plug-in electronics • ATEX II 3 G / 3 D • Redundant sensing

	HOG 11 + ESL 90	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Encoder combination with electronic speed switch ESL 90 • Offshore and salt water firm • High protection IP 67 • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 60	ø58 mm	ø8...12 mm (blind hollow shaft)	200...10000	• High resistance to shock • High protection IP 65 • ATEX II 3 G / 3 D
	HOG 11 + ESL 93	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Encoder combination with electronic speed switch ESL 90 • Offshore and salt water firm • High protection IP 67 • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 70	ø60 mm	ø12...14 mm (blind hollow shaft)	10...10000	• ATEX II 3 G / 3 D
	HOG 11 + FSL	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Encoder combination with centrifugal switch FSL • Offshore and salt water firm • High protection IP 67 • Redundant sensing • Function control with Enhanced Monitoring System

	HOG 71	ø60 mm	ø12...14 mm (blind hollow shaft)	64...2048	• ATEX II 3 G / 3 D
	HOG 11 G	ø105 mm	ø16...20 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Twin encoder combination with double sensing • High protection IP 67 • Offshore and salt water firm • ATEX II 3G/3D • Redundant sensing • Function control with Enhanced Monitoring System
	HOG 75 K	ø75 mm	ø17 mm (cone shaft 1:10)	250...2500	• Very high resistance to vibrations • ATEX II 3 G / 3 D
	HOG 75	ø75 mm	ø12...26 mm (through hollow shaft)	250...2500	• Very high resistance to vibrations • ATEX II 3 G / 3 D
	HOG 8	ø86.5 mm	ø10...16 mm (through hollow shaft)	1...5000	• Compact, robust die-cast housing
	HOG 86	ø99 mm	ø12...16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	500...5000	• Function control with Enhanced Monitoring System • ATEX II 3 G / 3 D
	HOG 86E	ø99 mm	ø12...16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	500...2500	• ATEX II 3 G / 3 D

	HOG 86 M	ø99 mm	ø12...16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	500...5000	• Function control with Enhanced Monitoring System • Redundant sensing • ATEX II 3 G / 3 D
	HOG 16 + DSL.E	ø158 mm	ø20...50 mm (through hollow shaft)	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 2 switching speeds and 1 control output
	HOG 16 + DSL.R	ø158 mm	ø20...50 mm (through hollow shaft)	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 3 switching speeds
	HOG 9	ø97 mm	ø12...16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• ATEX II 3 G / 3 D • Function control with Enhanced Monitoring System
	HOG 9 G	ø97 mm	ø16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	300...5000	• Twin encoder combination with double sensing • ATEX II 3G/3D • Function control with Enhanced Monitoring System
	HOGS 100	ø105 mm	ø16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	720...5000	• Radial terminal box or axial terminal cover • Top-quality SinCos output-signals • ATEX II 3 G / 3 D
	HOGS 100 S	ø105 mm	ø16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)	1024...5000	• SIL2 approval • Radial terminal box or axial terminal cover • Top-quality SinCos output-signals • ATEX II 3 G / 3 D

	HOG 165 + DSL.E	ø165 mm	ø25 mm (through hollow shaft)	512...4096	• Incremental encoder combination with digital speed switch • Programmable for 2 switching speeds and 1 control output • ATEX II 3G/3D
	HOGS 14	ø158 mm	ø40...75 mm (through hollow shaft)	1024...5000	• Top-quality SinCos output-signals • ATEX II 3 G / 3 D
	HOG 165 + DSL.R	ø165 mm	ø25 mm (through hollow shaft)	512...4096	• Incremental encoder combination with digital speed switch • Programmable for 3 switching speeds • ATEX II 3G/3D
	HOGS 151	ø168 mm	ø60...70 mm (through hollow shaft)	1024...5000	• ATEX II 3 G / 3 D • Top-quality SinCos output-signals
	HOGS 71	ø60 mm	ø12...14 mm (blind hollow shaft)	1024...5000	• ATEX II 3 G / 3 D • Top-quality SinCos output-signals
	HOGS 75 K	ø75 mm	ø17 mm (cone shaft 1:10)	720...5000	• Very high resistance to vibrations • ATEX II 3 G / 3 D
	HOGS 75	ø75 mm	ø14...26 mm (through hollow shaft)	720...5000	• Very high resistance to vibrations • ATEX II 3 G / 3 D
	HS35F	ø3.15" (ø80 mm)	ø0.375...1" (ø9.525...25.4 mm) (through hollow shaft isolated)	1024...80000	• Industrial standard • Inch dimensions • Very high IP protection • Isolated shaft

	HS35P - Programmable	ø3.15" (ø80 mm)	ø0.375...1" (ø9.525... 25.4 mm) (through hollow shaft isolated)	1...8192	• Programmable • Inch dimensions • Very high IP protection • Isolated shaft
	HS35S - Sine	ø3.15" (ø80 mm)	ø0.375...1" (ø9.525... 25.4 mm) (through hollow shaft isolated)	1024...5000	• Top-quality sine signals • Inch dimensions • Very high IP protection
	ExHS35	ø3.15" (ø80 mm)	ø0.375...1" (ø9.525... 25.4 mm) (through hollow shaft isolated)	1024...5000	• Intrinsically safe encoder • Inch dimensions • Very high IP protection
	OG 6	ø58 mm	ø6 mm solid shaft	100...512	• Solid shaft ø6 mm • Synchro flange
	OG 60	ø58 mm	ø6 mm solid shaft	10...10000	• Solid shaft ø6 mm • Synchro flange
	OG 71	ø58 mm	ø6 mm solid shaft	100...1024	• Solid shaft ø6 mm • High resistance to shock • ATEX II 3 G / 3 D
	OG 8	ø115 mm	ø11 mm solid shaft	1...5000	• Solid shaft ø11 mm • EURO flange B10
	OG 9	ø115 mm	ø11 mm solid shaft	25...5000	• Solid shaft ø11 mm • EURO flange B10 • Operating temperature up to +100 °C • ATEX II 3 G / 3 D

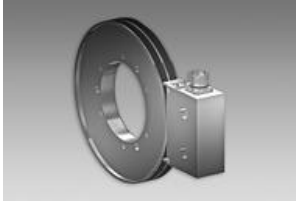
	OGS 71	ø58 mm	ø6 mm solid shaft	1024...5000	• ATEX II 3 G / 3 D
	POG 10	ø115 mm	ø11 mm solid shaft	300...5000	• EURO flange B10 • Encoder with solid shaft ø11 mm • Radial terminal box • ATEX II 3 G / 3 D • Redundant sensing • Function control with Enhanced Monitoring System
	POG 11	ø115 mm	ø11 mm solid shaft	300...5000	• Very high protection IP 67 • Offshore and salt water firm • Radial terminal box • ATEX II 3 G / 3 D • Redundant sensing • Function control with Enhanced Monitoring System
	POG 86	ø115 mm	ø11 mm solid shaft	500...5000	• Encoder with solid shaft ø11 mm • EURO flange B10 • ATEX II 3 G / 3 D • Function control with Enhanced Monitoring System
	POG 86E	ø115 mm	ø11 mm solid shaft	500...5000	• Encoder with solid shaft ø11 mm • EURO flange B10 • ATEX II 3 G / 3 D • Function control with Enhanced Monitoring System

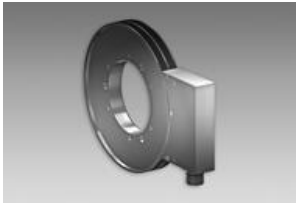
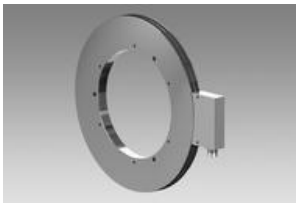
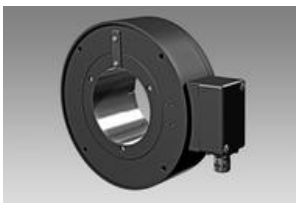
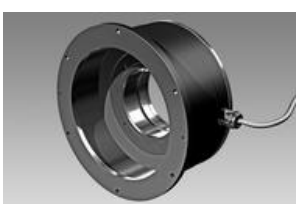
	POG 9	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder with solid shaft ø11 mm • EURO flange B10 • ATEX II 3 G / 3 D • Function control with Enhanced Monitoring System
	POG 90	ø115 mm	ø11 mm solid shaft	1024...10000	• ATEX II 3 G / 3 D
	POGS 90	ø115 mm	ø11 mm solid shaft	720...5000	• ATEX II 3 G / 3 D
	POG 90 + ESL 90	ø115 mm	ø11 mm solid shaft	1024...10000	• Encoder combination with electronic speed switch ESL 90 • EURO flange B10 or foot mounting
	POG 90 + ESL 93	ø115 mm	ø11 mm solid shaft	1024...10000	• Encoder combination with electronic speed switch ESL 93 • EURO flange B10 or foot mounting
	OG 60 + GT 5	ø58 mm	ø6 mm solid shaft	10...10000	• Encoder combination with tachogenerator • Connector with metal mating connector • Synchro flange • Recognition of sense of rotation
	POG 10 + DSL.E	ø115 mm	ø11 mm solid shaft	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 2 switching speeds and 1 control output • ATEX II 3G/3D

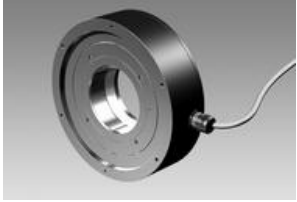
	POG 90 + FSL	ø115 mm	ø11 mm solid shaft	1024...10000	• Encoder combination with centrifugal switch FSL • EURO flange B10
	POG 10 + DSL.R	ø115 mm	ø11 mm solid shaft	512...2500	• Incremental encoder combination with digital speed switch • Programmable for 3 switching speeds • ATEX II 3G/3D
	POG 10 + ESL 90	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with electronic speed switch ESL 90 • EURO flange B10 or foot mounting • Redundant sensing • Function control with Enhanced Monitoring System
	POG 10 + ESL 93	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with electronic speed switch ESL 93 • EURO flange B10 or foot mounting • Redundant sensing • Function control with Enhanced Monitoring System
	POG 10 + FSL	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with centrifugal switch FSL • EURO flange B10 or foot mounting • Redundant sensing • Function control with Enhanced Monitoring System
	POG 10 G	ø115 mm	ø11 mm solid shaft	300...5000	• Twin encoder combination with double sensing • EURO flange B10 • ATEX II 3G/3D

					• Redundant sensing • Function control with Enhanced Monitoring System
	POG 11 + ESL 90	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with electronic speed switch ESL 90 • Offshore and salt water firm • High protection IP 67 • EURO flange B10 or foot mounting • Redundant sensing • Function control with Enhanced Monitoring System
	POG 11 + ESL 93	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with electronic speed switch ESL 93 • Offshore and salt water firm • High protection IP 67 • EURO flange B10 or foot mounting • Redundant sensing • Function control with Enhanced Monitoring System
	POG 11 + FSL	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with centrifugal switch FSL • Offshore and salt water firm • High protection IP 67 • EURO flange B10 or foot mounting • Redundant sensing • Function control with Enhanced Monitoring System

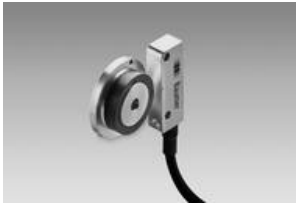
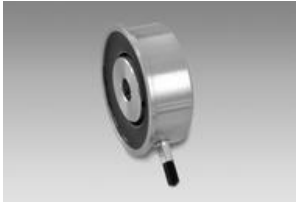
	POG 11 G	ø115 mm	ø11 mm solid shaft	300...5000	• Twin encoder with double sensing • High protection IP 67 • Offshore and salt water firm • EURO flange B10 • ATEX II 3G/3D • Redundant sensing • Function control EMS
	POG 9 + ESL 90	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with electronic speed switch ESL 90 • EURO flange B10 • Function control with Enhanced Monitoring System
	POG 9 + ESL 93	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with electronic speed switch ESL 93 • EURO flange B10 • Function control with Enhanced Monitoring System
	POG 86 + FSL	ø115 mm	ø11 mm solid shaft	500...5000	• Encoder combination with centrifugal switch FSL • EURO flange B10 • Function control with Enhanced Monitoring System
	POG 9 + FSL	ø115 mm	ø11 mm solid shaft	300...5000	• Encoder combination with centrifugal switch FSL • EURO flange B10 • Function control with Enhanced Monitoring System
	POG 86 G	ø115 mm	ø11 mm solid shaft	500...5000	• Twin encoder combination with double sensing • ATEX II 3G/3D • Function control with Enhanced Monitoring System

	POG 9 G	ø115 mm	ø11 mm solid shaft	300...5000	• Twin encoder combination with double sensing • ATEX II 3G/3D • Function control with Enhanced Monitoring System
	MIR 3000F - HDmag flex	-	ø300...3183 mm (through hollow shaft)	512...131072512...16384	• Integrated signal processing • Magnetic sensing • Protection IP 67 • Square-wave or sine signals
	MIR 350A - HDmag flex	-	ø90...300 mm (through hollow shaft)	512...131072512...16384	• Integrated signal processing • Magnetic sensing • Protection IP 67 • Square-wave or sine signals
	MHGE 100 - HDmag	ø99,9 mm	ø16...80 mm (through hollow shaft)	64...409664	• Max. 4096 pulses per revolution • Square-wave or sine signals • Protection IP 67 • DNV approval as option
	MHGE 200 - HDmag	ø201.7 mm	ø50...180 mm (through hollow shaft)	128...8192128	• Max. 8192 pulses per revolution • Square-wave or sine signals • Protection IP 67 • DNV approval as option
	MHGE 400 - HDmag	ø405.4 mm	ø70...340 mm (through hollow shaft)	256...16384256	• Max. 16384 pulses per revolution • Square-wave or sine signals • Protection IP 67 • DNV approval as option
	MHGE 800 - HDmag	ø813 mm	ø650...740 mm (through hollow shaft)	512...32768512	• Max. 32768 pulses per revolution • Square-wave or sine signals • Protection IP 67 • DNV approval as option

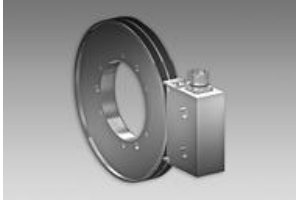
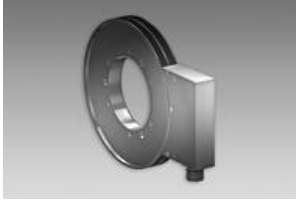
	MHGP 100 - HDmag	ø99,9 mm	ø16...80 mm (through hollow shaft)	64...13107264...8192	• Max. 131072 pulses per revolution • Square-wave or sine signals • Protection IP 67
	MHGP 200 - HDmag	ø201.7 mm	ø50...180 mm (through hollow shaft)	128...262144128...16384	• Max. 262144 pulses per revolution • Square-wave or sine signals • Protection IP 67
	MHGP 400 - HDmag	ø405.4 mm	ø70...340 mm (through hollow shaft)	256...524288256...32768	• Max. 524288 pulses per revolution • Square-wave or sine signals • Protection IP 67
	HG 6	ø58 mm	ø12...16 mm (blind hollow shaft)	100...512	• Fit for high operating speed • Max. 512 pulses per revolution
	HG 16	ø158 mm	ø20...45 mm (through hollow shaft)	250...2048	• Robust and wearless • Fit for high operating speed • Max. 2048 pulses per revolution
	HG 18	ø186 mm	ø65...85 mm (through hollow shaft)	250...2500	• Robust and wearless • Fit for high operating speed • Max. 2500 pulses per revolution
	HG 22	ø227 mm	ø90...120 mm (through hollow shaft)	720...4000	• Robust and wearless • Fit for high operating speed • Max. 4000 pulses per revolution
	HG 21	ø240 mm	ø85...95 mm (through hollow shaft)	2500	• Robust and wearless • Fit for high operating speed • 2500 pulses per revolution

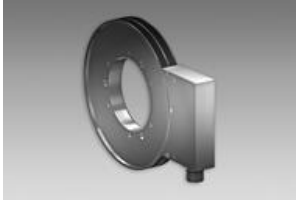
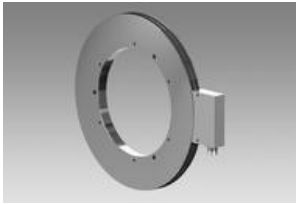
	HG 211	ø210 mm	ø85...95 mm (through hollow shaft)	2500	• Robust and wearless • Fit for high operating speed • Resolution 2500 pulses
Бесподшипниковые					
	EAM360 - Kit SSI - MAGRES	ø6 mm (magnet bore) ø8 mm (magnet bore) ø12 mm (magnet bore)	-	ST ≤16384 / 14 bit MT ≤262144 / 18 bit	• SSI
	EAM360 - Kit CANopen® - MAGRES	ø6 mm (magnet bore) ø8 mm (magnet bore) ø12 mm (magnet bore)	-	ST ≤16384 / 14 bit MT ≤262144 / 18 bit	• CANopen®
	EAM360R - Kit CANopen®/SAE J1939 - MAGRES	ø6 mm (magnet bore) ø8 mm (magnet bore) ø12 mm (magnet bore)	-	ST ≤16384 / 14 bit MT ≤262144 / 18 bit	• CANopen® • SAE J1939
	EAM360R - Kit analog - MAGRES	ø6 mm (magnet bore) ø8 mm (magnet bore) ø12 mm (magnet bore)	-	-	• Analog
	EAM580 - Kit SSI - MAGRES	ø6 mm (magnet bore) ø8 mm (magnet bore) ø12 mm (magnet bore)	-	ST ≤16384 / 14 bit MT ≤262144 / 18 bit	• SSI
	EAM580 - Kit CANopen® - MAGRES	ø6 mm (magnet bore) ø8 mm (magnet bore) ø12 mm (magnet bore)	-	ST ≤16384 / 14 bit MT ≤262144 / 18 bit	• CANopen®
	EAM580 - Kit PROFINET - MAGRES	ø6 mm (magnet bore) ø8 mm (magnet bore) ø12 mm (magnet bore)	-	ST ≤16384 / 14 bit MT ≤65536 / 16 bit	• PROFINET IO

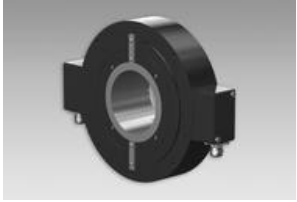
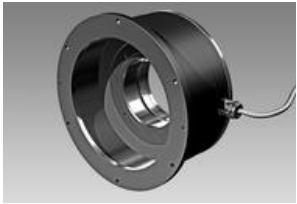
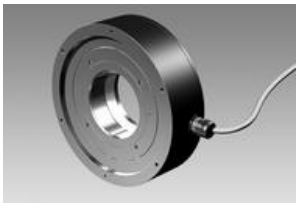
		bore)			
	EAM580R - Kit CANopen®/SAE J1939 - MAGRES	ø6 mm (magnet bore) ø8 mm (magnet bore) ø12 mm (magnet bore)	-	ST ≤16384 / 14 bit MT ≤262144 / 18 bit	• CANopen® • SAE J1939
	EAM580R - Kit analog - MAGRES	ø6 mm (magnet bore) ø8 mm (magnet bore) ø12 mm (magnet bore)	-	-	• Analog
	MQR 3000F - HDmag flex	ø300...3183 mm (through hollow shaft)	1024...4096	-	• "Quasi-absolut", i. e. providing a valid absolute position only after initialization • Integrated signal processing • SSI, resolution up to 20 bit • Magnetic sensing • Protection IP 67 • Incremental outputs as option
	MQR 350A - HDmag flex	ø90...300 mm (through hollow shaft)	1024...4096	-	• "Quasi-absolut", i. e. providing a valid absolute position only after initialization • Integrated signal processing • SSI, resolution up to 20 bit • Magnetic sensing • Protection IP 67 • Incremental outputs as option
	MHAD 50 - HDmag	ø30 mm (through hollow shaft)	1024...8192	-	• Resolution up to 16 bit • Protection IP 67 • SSI, CANopen® • Incremental outputs as option

	MIL10	-	-	5 µm (4-times evaluation)	• Output signals A 90° B or A 90° B +R • Protection IP 67
	MIR10	ø6...43.5 mm (through hollow shaft)	320...4096	-	• Max. 4096 pulses per revolution • Output signals A 90° B or A 90° B +R • Protection IP 67
	MIR 3000F - HDmag flex	ø300...3183 mm (through hollow shaft)	512...131072	-	• Integrated signal processing • Magnetic sensing • Protection IP 67 • Square-wave or sine signals
	MIR 350A - HDmag flex	ø90...300 mm (through hollow shaft)	512...131072	-	• Integrated signal processing • Magnetic sensing • Protection IP 67 • Square-wave or sine signals
	MDFK 08 - push-pull	ø6...43.5 mm (through hollow shaft)	256...1024	-	• Resolution up to 1024 pulses • Output signals A 90° B or A 90° B +N • Protection IP 67
	MDFK 08 - RS422	ø6...43.5 mm (through hollow shaft)	256...1024	-	• Resolution up to 1024 pulses • Output signals A 90° B or A 90° B +N • Protection IP 67
	ITD 27 A 4 Y27	ø10...16 mm (blind hollow shaft)	1...32	-	• Magnetic sensing • Protection IP 67
	ITD 67 A 4 Y 9	ø10...45 mm (through hollow shaft)	20...50	-	• Magnetic sensing • Flat design • Protection IP 67

	ITD 75 A 4	ø60...85 mm (through hollow shaft)	1000...2500	-	• Large hollow shaft • Incremental encoder without bearings
	ITD49H00	ø9...28 mm (through hollow shaft)	64...2048	-	• Square-wave signals • Flat design • Protection IP 67
	ITD49H00 sine	ø9...28 mm (through hollow shaft)	-	-	• Flat design • Protection IP 67
	ITD69H00	ø40...65 mm (through hollow shaft)	128...4096	-	• Square-wave signals • Flat design • Protection IP 67
	ITD69H00 sine	ø40...65 mm (through hollow shaft)	-	-	• Flat design • Protection IP 67
	ITD89H00	ø70...140 mm (through hollow shaft)	256...8192	-	• Very high IP protection • Square-wave signals • Flat design
	ITD89H00 sine	ø70...140 mm (through hollow shaft)	-	-	• Very high IP protection • Flat design
	MHGE 100 - HDmag	ø16...80 mm (through hollow shaft)	64...4096	-	• Max. 4096 pulses per revolution • Square-wave or sine signals • Protection IP 67 • DNV approval as option

	MHGE 200 - HDmag	ø50...180 mm (through hollow shaft)	128...8192	-	• Max. 8192 pulses per revolution • Square-wave or sine signals • Protection IP 67 • DNV approval as option
	MHGE 400 - HDmag	ø70...340 mm (through hollow shaft)	256...16384	-	• Max. 16384 pulses per revolution • Square-wave or sine signals • Protection IP 67 • DNV approval as option
	MHGE 800 - HDmag	ø650...740 mm (through hollow shaft)	512...32768	-	• Max. 32768 pulses per revolution • Square-wave or sine signals • Protection IP 67 • DNV approval as option
	MHGP 100 - HDmag	ø16...80 mm (through hollow shaft)	64...131072	-	• Max. 131072 pulses per revolution • Square-wave or sine signals • Protection IP 67
	MHGP 200 - HDmag	ø50...180 mm (through hollow shaft)	128...262144	-	• Max. 262144 pulses per revolution • Square-wave or sine signals • Protection IP 67
	MHGP 400 - HDmag	ø70...340 mm (through hollow shaft)	256...524288	-	• Max. 524288 pulses per revolution • Square-wave or sine signals • Protection IP 67
	MHAP 100 - HDmag	ø16...80 mm (through hollow shaft)	1...131072	-	• Resolution up to 17 bit • Protection IP 67 • SSI • Additional incremental output

	MHAP 200 - HDmag	ø50...180 mm (through hollow shaft)	1...262144	-	• Resolution up to 17 bit • Protection IP 67 • SSI • Additional incremental output
	MHAP 400 - HDmag	ø70...340 mm (through hollow shaft)	1...524288	-	• Resolution up to 17 bit • Protection IP 67 • SSI • Additional incremental output
	BMMK 58 flexible - MAGRES	ø12 mm (magnet bore)	-	ST ≤4096 / 12 bit MT ≤262144 / 18 bit	• Encoder kit multeturn • CANopen®, DeviceNet, Profibus • EtherCAT, EtherNet/IP • PROFINET, POWERLINK
	BMSK 58 flexible - MAGRES	ø12 mm (magnet bore)	-	ST ≤4096 / 12 bit	• Encoder kit singleturn • CANopen®, DeviceNet, Profibus • EtherCAT, EtherNet/IP • PROFINET, POWERLINK
	HG 6	ø12...16 mm (blind hollow shaft)	100...512	-	• Fit for high operating speed • Max. 512 pulses per revolution
	HG 16	ø20...45 mm (through hollow shaft)	250...2048	-	• Robust and wearless • Fit for high operating speed • Max. 2048 pulses per revolution
	HG 18	ø65...85 mm (through hollow shaft)	250...2500	-	• Robust and wearless • Fit for high operating speed • Max. 2500 pulses per revolution

	HG 22	ø90...120 mm (through hollow shaft)	720...4000	-	• Robust and wearless • Fit for high operating speed • Max. 4000 pulses per revolution
	HG 21	ø85...95 mm (through hollow shaft)	2500	-	• Robust and wearless • Fit for high operating speed • 2500 pulses per revolution
	HG 211	ø85...95 mm (through hollow shaft)	2500	-	• Robust and wearless • Fit for high operating speed • Resolution 2500 pulses

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