

Incremental Encoder



Model	G 080	G 305	GE333	GE355, GE356	GI328
Supply voltage	12...260 V	10...30 VDC	5 VDC ± 10%, 4,75...30 VDC	5 VDC ± 10%, 4,75...30 VDC	5 VDC ± 10%, 10...30 VDC
Resolution	10	120	6000	6000	2048
Code swit. speed	25 Hz	10 kHz	150 kHz	150 kHz	50 kHz, 100 kHz
Current consump.	--	Max. 40 mA	Max. 30 mA, 60 mA	Max. 30 mA, 60 mA	Max. 80 mA
Operating temp.	-10...60 °C	0...60 °C	-20...100 °C	-20...100 °C	-20...85 °C
Protection type	IP 52	IP 30, IP 52	IP 54	IP 67	IP 42, IP64
Max. speed	1500 rpm	6000 rpm	6000 rpm	10000 rpm	12000 rpm
Shaft diameter	7 mm	7 mm	12 mm hollow shaft	6 or 10 mm	5 mm
Special features	Contact sensor	Plastic housing	Stainless steel	Stainless steel	



GI341, GI342	GI352	GI355, GI356	G0355, G0356	GI338	GI330 - GI333
5 VDC ± 10%, 4.75...30 VDC	5 VDC ± 10%, 10...30 VDC	5 VDC ± 10%, 10...30 / 4.75...30 VDC	5 VDC ± 10%, 10...30 VDC	5 VDC ± 10%, 10...30 VDC	5 VDC ± 10%, 10...30 / 4.75...30 VDC
2048	6000	6000	20000	2048	6000
150 kHz	150 kHz	150 kHz	300 kHz	50 kHz, 100 kHz	150 kHz
Max. 30 mA, 60 mA	Max. 30 mA, 60 mA	Max. 30 mA, 60 mA	Max. 30 mA, 60 mA	Max. 60 mA	Max. 30 mA, 60 mA
-20...85 °C	-20...85 °C	-20...100 °C	-20...85 °C	-20...85 °C	-20...100 °C
IP 64	IP 54, IP 65	IP 54, IP 65	IP 54, IP 65	IP 43, IP 65	IP 54
6000 rpm	10000 rpm	10000 rpm	10000 rpm	12000 rpm	6000 rpm
up to 14 mm hollow shaft	9.52 mm	6 or 10 mm	6 or 10 mm	6...12 mm hollow shaft	12 mm hollow shaft
New! Plastic encoder	Square flange	--	--	Hollow shaft	Hollow shaft or end shaft

Magnetic Absolute Encoder (shaft and end shaft)



Model	GCA2W	GCM2S	GCM2W
Interface	SSI	SSI	SSI
Single-/Multiturn	Singleturn	Multiturn	Multiturn
Programmable	No	No	No
Resolution	10 bit	22 bit	22 bit
Current consump.	Max. 60 mA	Max. 60 mA	Max. 60 mA
Operating temp.	-20...85 °C	-20...85 °C	-20...85 °C
Protection type	IP 54, IP 65	IP 54	IP 54, IP 65
Max. Speed	10000 rpm	6000 rpm	10000 rpm
Special features	Zeroing input	With end shaft	Zeroing input



GCAMW	GCMMS	GCMMW
magtivo	magtivo	magtivo
CAN, CANopen, LWL, DeviceNet, Profibus, SSI	CANopen, LWL, SSI DeviceNet, Profibus	CAN, CANopen, LWL, DeviceNet, Profibus, SSI
Singleturn	Multiturn	Multiturn
Yes	Yes	Yes
10 bit	26 bit	26 bit
Max. 120 mA	Max. 120 mA	Max. 120 mA
-20...85 °C	-20...85 °C	-20...85 °C
IP 54, IP 65	IP 54	IP 54, IP 65
10000 rpm	6000 rpm	10000 rpm
<u>With Bus cover</u>	<u>With Bus cover</u>	<u>With Bus cover</u>

Optical Absolute Encoder, Parallel and SSI



Model	GA210, GA211	GXA1W	GA240, GA241	GXN1W	GXP1W
Interface	Parallel	Parallel	Parallel	Parallel Cam encoder	Parallel
Single-/Multiturn	Singleturn	Singleturn	Singleturn	Multiturn	Multiturn
Programmable	No	No	No	Yes	Yes
Resolution	10 bit	Up to 12 bit	13 bit	24 bit	24 bit
Current consump.	Max. 60 mA	Max. 50 mA	Max. 60 mA	Max. 50 mA	Max. 50 mA
Operating temp.	-20...85 °C	-20...85 °C	-20...85 °C	-20...70 °C	-20...70 °C
Protection type	IP 54, IP 65	IP 54, IP 65	IP 54, IP 65	IP 54, IP 65	IP 54, IP 65
Max. Speed	10000 rpm	10000 rpm	10000 rpm	10000 rpm	10000 rpm
Special features	Zeroing input	Gray Excess Code	Diagnostic output	16 outputs, 250 cams	Diagnostic output



GA240, GA241	GM400, GM401	GM400 +signals	GXP2W
SSI	SSI	SSI with Incr. signals	SSI
Singleturn	Multiturn	Multiturn	Multiturn
No	No	No	Yes
13 bit	25 bit	25 bit	25 bit
Max. 50 mA	Max. 50 mA	Max. 50 mA	Max. 50 mA
-20...85 °C	-20...70 °C	-20...70 °C	-20...70 °C
IP 54, IP 65	IP 54, IP 65	IP 54, IP 65	IP 54, IP 65
10000 rpm	10000 rpm	10000 rpm	10000 rpm
Diagnostic output	Compact design	With incremental signals	Diagnostic output

Optical Absolute Encoder, Bus Interfaces



Model	GXP5W	GXP6W	GXP8W	GXM7W	GXP9W
Interface	CANopen with Lift-Protocol	Interbus	DeviceNet	RS485	Suconet K
Single-/Multiturn	Multiturn	Multiturn	Multiturn	Multiturn	Multiturn
Programmable	Yes	Yes	Yes	No	Yes
Resolution	29 bit	25 bit	29 bit	25 bit	25 bit
Current consump.	Max. 50 mA	Max. 60 mA	Max. 50 mA	Max. 50 mA	Max. 50 mA
Operating temp.	-20...85 °C	-20...70 °C	-20...85 °C	-20...70 °C	-20...70 °C
Protection type	IP 54, IP 65	IP 54, IP 64	IP 54, IP 65	IP 54, IP 64	IP 54, IP 64
Max. Speed	10000 rpm	10000 rpm	10000 rpm	10000 rpm	10000 rpm
Special features	--	2 x C-plug	--	SLIN interface	Baud rate up to 375 kBd



GXAMW	GXMMW	GXMMW with Incr. tracks	GEMMW Stainless-steel
CAN, CANopen, LWL, DeviceNet, Profibus, SSI	CAN, CANopen, LWL, DeviceNet, Profibus, SSI	CANopen, LWL, SSI, DeviceNet, Profibus	CAN, CANopen, LWL, DeviceNet, Profibus, SSI
Singleturn	Multiturn	Multiturn	Multiturn
Yes	Yes	Yes	Yes
13 bit	29 bit	29 bit	29 bit
Max. 50 mA	Max. 50 mA	Max. 100 mA	Max. 50 mA
-20...85 °C	-20...85 °C	-20...85 °C	-20...85 °C
IP 54, IP 65	IP 54, IP 65	IP 54, IP 65	IP 67
10000 rpm	10000 rpm	10000 rpm	10000 rpm
<u>With Bus cover</u>	<u>With Bus cover</u>	<u>With Bus cover</u>	<u>With Bus cover</u>

Optical Absolute Encoder, Hollow shaft



Model	GXN1H	GXP1H, G1P1H, G2P1H	GXM2H, G1M2H, G2M2H	GXM2S	GXP2H, G1P2H
Interface	Parallel with Cam encoder	Parallel	SSI	SSI	SSI
Single-/Multiturn	Multiturn	Multiturn	Multiturn	Multiturn	Multiturn
Programmable	Yes	Yes	No	No	Yes
Resolution	Ø 12...14 mm	Ø 12...50.8 mm	Ø 12...50.8 mm	Ø 12 end shaft	Ø 12...25.4 mm
Current consump.	24 bit	24 bit	25 bit	22 bit	25 bit
Operating temp.	Max. 50 mA	Max. 50 mA	Max. 50 mA	Max. 60 mA	Max. 50 mA
Protection type	IP 54	IP 54	IP 54	IP 54	IP 54
Max. Speed	6000 rpm	2000 - 6000 rpm	2000 - 6000 rpm	6000 rpm	2000 - 6000 rpm
Special features	16 outputs, 250 cams	2 limit values	--	With end shaft	--



GXP6H	GXMMS	GXAMH, G1AMH, G2AMH	GXMMH, G1MMH, G2MMH	GEMMH Stainless-steel
Interbus	CANopen, LWL, SSI DeviceNet, Profibus	CAN, CANopen, DeviceNet, Profibus	CAN, CANopen, DeviceNet, Profibus	CAN, CANopen, DeviceNet, Profibus
Multiturn	Multiturn	Singleturn	Multiturn	Multiturn
Yes	Yes	Yes	Yes	Yes
Ø 12...14 mm	Ø 12 mm end shaft	Ø 12...50.8 mm	Ø 12...50.8 mm	Ø 12...14 mm
25 bit	29 bit	29 bit	29 bit	29 bit
Max. 60 mA	Max. 100 mA	Max. 50/100 mA	Max. 50/100 mA	Max. 100 mA
IP 54	IP 54	IP 54	IP 54	IP 64
6000 rpm	6000 rpm	2000 - 6000 rpm	2000 - 6000 rpm	6000 rpm
2 C-plug	<u>With Bus cover</u>	<u>With Bus cover</u>	<u>With Bus cover</u>	<u>With Bus cover</u>

Optical Absolute Encoder, High-Resolution



Model	GDA2W	GDM2W	GDAMW	GDMMW	GDA2S
Interface	SSI	SSI	CAN, CANopen, LWL, DeviceNet, Profibus, SSI	CAN, CANopen, LWL, DeviceNet, Profibus, SSI	SSI
Single-/Multiturn	Singleturn	Multiturn	Singleturn	Multiturn	Singleturn
Programmable	No	No	Yes	Yes	No
Resolution	18 bit	36 bit	18 bit	31 bit	18 bit
Current consump.	Max. 80 mA	Max. 80 mA	Max. 120 mA	Max. 120 mA	Max. 80 mA
Operating temp.	-20...85 °C	-20...85 °C	-20...85 °C	-20...85 °C	-20...85 °C
Protection type	IP 64	IP 64	IP 64	IP 64	IP 64
Max. Speed	10000 rpm	10000 rpm	10000 rpm	10000 rpm	10000 rpm
Special features	Zeroing input	Zeroing input	<u>With Bus cover</u>	<u>With Bus cover</u>	Zeroing input



GDM2S	GDAMS	GDMMS
SSI	CAN, CANopen, LWL, DeviceNet, Profibus, SSI	CAN, CANopen, LWL, DeviceNet, Profibus, SSI
Multiturn	Singleturn	Multiturn
No	Yes	Yes
36 bit	18 bit	31 bit
Max. 80 mA	Max. 120 mA	Max. 120 mA
-20...85 °C	-20...85 °C	-20...85 °C
IP 64	IP 64	IP 64
10000 rpm	10000 rpm	10000 rpm
Zeroing input	<u>With Bus cover</u>	<u>With Bus cover</u>

Magnetic field Sensors and cable-pull



Model	GCI0K	GCI0L	Z 136
Supply voltage	5 VDC \pm 5%, 8...30 VDC	5 VDC \pm 5%, 8..30 or 8...8 VDC	Depending on model
Measuring range	0...20000 mm	0...20000 mm	0...15000 mm
Operating temp.	-25...85 °C	-25...85 °C	-20...80 °C
Protection type	IP 67	IP 67	IP 50 (cable-pull)
Housing material	PC	PC	Aluminium
Dimensions	15 x 45.5 x 8.5 mm	15 x 45.5 x 8.5 mm	96 x 91...187 x 56 mm
Features	Magnetic field sensors with magnetic rotor	Magnetic field sensors with magnetic tape	Encoder with cable-pull