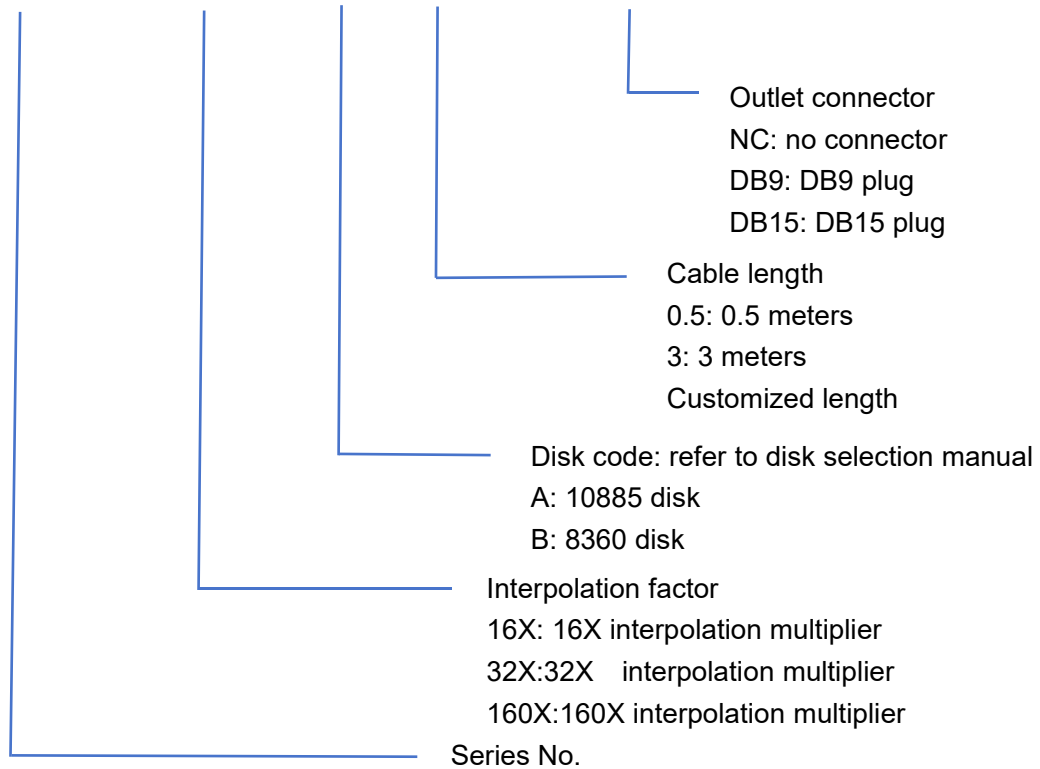


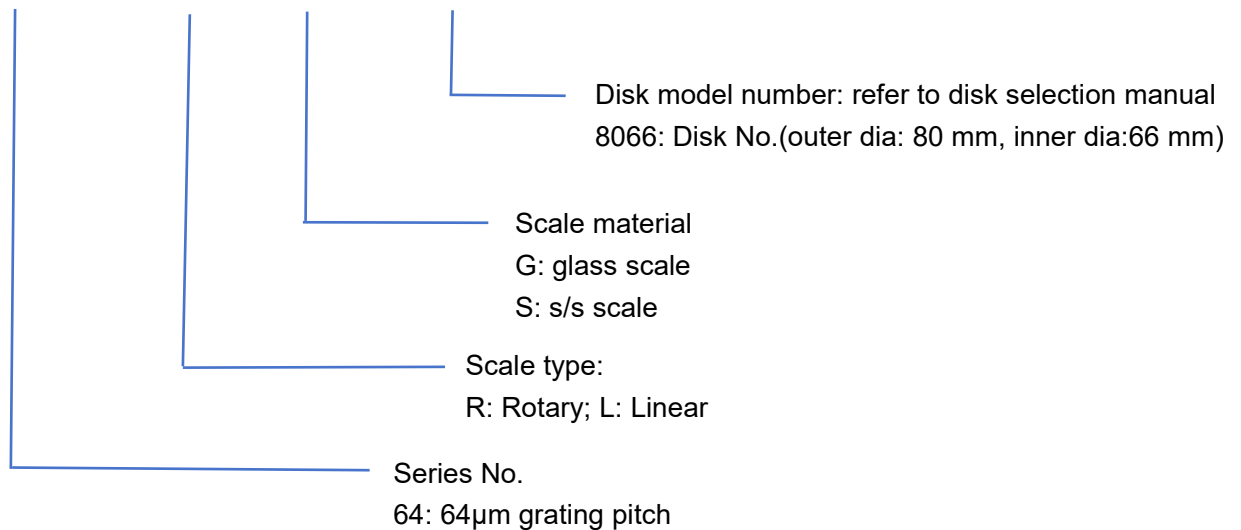
Read head

LGMR64 - 160X - A - 0.5 - DB9



Disk

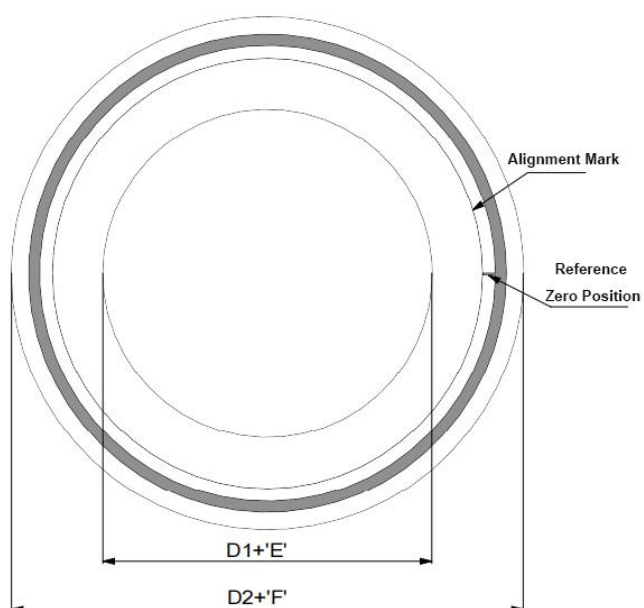
GS64 - R - G - 8066



Rotation Optical Grating Encoder disk selection:(match with LGMR64)

Technical Specifications - stainless steel encoder disk

Model	Code (selection)	D2(outer dia mm)	D1(inner dia mm)	alignment mark(mm)	E(inner dia error)	F(outer dia error)
GSR64-258228	K	258	228	240	-0.05/+0.1	-0.1/+0.05
GSR64-126100	E	126	100	118		
GSR64-10885	A	108	85	97.6		
GSR64-8360	B	83	60	72.2		
GSR64-6846	F	68	46	59.6		
GSR64-6852	J	68	52	59.6		
GSR64-5636	C	56	36	46.6		
GSR64-4630	G	46	30	36.4		
GSR64-3618	D	36	18	26		
GSR64-2612	H	26	12	18.8		
GSR64-1606	L	16	06	8.8		



Technical Specifications - glass encoder disk

Model	Code (selection)	D2(outer dia mm)	D1(inner dia mm)	alignment mark(mm)	E(inner dia error)	F(outer dia error)
GS64-R-G-5747	M	57	47	50.1	±0.1	±0.1
GS64-R-G-3013	N	30	13	20.6	±0.1	±0.1
GS64-R-G-1858	P	18.5	5	17.84	±0.2	±0.2
GS64-R-G-6654	Q	66	54	58.63	±0.2	±0.2
GS64-R-G-9572	R	95	72	81	±0.2	±0.2
GS64-R-G-10692	S	106	92	96.77	±0.2	±0.2
GS64-R-G-8066	T	80	66	71.30	±0.2	±0.2
GS64-R-G-4432	U	44	32	35.65	±0.1	±0.1
GS64-R-G-2614	V	26	14	17.83	±0.1	±0.1
GS64-R-G-1606	W	16	6	7.64	±0.1	±0.1

Stainless Steel Disk - Line count selection

(**Lines per Revolution" (LPR)** can be interpreted as "**Pulses per Revolution" (PPR)** when referring to the physical line count at 1X interpolation)

(*standard offerings*: See below LPR specification table; *Custom calculations*:

Total PPR = Base LPR (1X) × Interpolation Factor, Where: Interpolation Factor (X) = 1 to 1024)

Model	Interpolation(1X)	Interpolation(16X)	Interpolation(32X)	Interpolation(160X)	Quadrature Counting (4X Multiplication)
GSR64-258228	12000	192000	384000	1920000	
GSR64-126100	6000	96000	192000	960000	
GSR64-10885	5000	80000	160000	800000	
GSR64-8360	3750	60000	120000	600000	
GSR64-6846& GSR64-6852	3125	50000	100000	500000	
GSR64-5636	2500	40000	80000	400000	
GSR64-4630	2000	32000	64000	320000	
GSR64-3618	1500	24000	48000	240000	
GSR64-2612	1125	18000	36000	180000	
GSR64-1606	625	10000	20000	100000	

Glass Disk- Line count selection

(Lines per Revolution" (LPR) can be interpreted as "Pulses per Revolution" (PPR) when referring to the physical line count at 1X interpolation)
(standard offerings: See below LPR specification table; Custom calculations:
Total PPR = Base LPR (1X) × Interpolation Factor, Where: Interpolation Factor (X) = 1 to 1024)

Model	Interpolation (1X)	Interpolation(16X)	Interpolation (32X)	Interpolation (160X)	Quadrature Counting (4X Multiplication)
GS64-R-G-5747	2690	43040	86080	430400	
GS64-R-G-3013	1250	20000	40000	200000	
GS64-R-G-18.5/8	800	12800	25600	128000	
GS64-R-G-6654	3125	50000	100000	500000	
GS64-R-G-9572	4300	68800	137600	688000	
GS64-R-G-10692	5000	80000	160000	800000	
GS64-R-G-8066	3750	60000	120000	600000	
GS64-R-G-4432	2000	32000	64000	320000	
GS64-R-G-2614	1125	18000	36000	180000	
GS64-R-G-1606	625	10000	20000	100000	

The following selection table lists only the commonly used models.

Speed Selection:

Formula: RPM (revolutions per minute) = frequency(HZ)*60/pulses per resolution(PPR)

Eg: 160x Interpolation, GSR64-3618
RPM=4000000*60/240000=1000

Interpolation (Rotation)	Resolution	Output frequency
16	1um	3.2MHZ
32	0.5um	4MHZ
160	0.1um	4MHZ

Model	Interpolation	GSR64-3618	GSR64-5636	GSR64-8360	GSR64-10885
RPM	16	8000	4800	3200	2400
(revolutions	32	5000	3000	2000	1500
per minute)	160	1000	600	400	300

Model	Interpolation (16X)	Interpolation (32X)	Interpolation (160X)
GSR64-258228	1000	625	125
GSR64-126100	2000	1250	250
GSR64-10885	2400	1500	300
GSR64-8360	3200	2000	400
GSR64-6846& GSR64-6852	3840	2400	480
GSR64-5636	4800	3000	600
GSR64-4630	6000	3750	750
GSR64-3618	8000	5000	1000
GSR64-2612	10666	6666	1333
GSR64-1606	19200	12000	2400

Resolution selection

Formula: $\text{Resolution} = 360 \times 3600 / \text{pulses per resolution (LPR)} / 4$

(where: 1° = 60 arc-minutes, 1 arc-minute = 60 arc-seconds)

Eg: 160x Interpolation, GSR64-3618

$\text{Resolution} = 360 \times 3600 / 240000 / 4 = 1.35$ (arc-seconds)

Model	Interpolation (16X)	Interpolation (32X)	Interpolation (160X)
GSR64-258228	1.6875	0.8437	0.16875
GSR64-126100	3.375	1.6875	0.3375
GSR64-10885	4.05	2.025	0.405
GSR64-8360	5.4	2.7	0.54
GSR64-6846& GSR64-6852	6.48	3.24	0.648
GSR64-5636	8.1	4.05	0.81
GSR64-4630	10.125	5.0625	1.0125
GSR64-3618	13.5	6.75	1.35
GSR64-2612	18	9	1.8
GSR64-1606	32.4	16.2	3.24