

Incremental Encoder Resolution up to 6000 pulses



GI355, GI356



GI355 clamping flange



GI356 servo flange

Features

- Standard encoder with 58 mm diameter
- Speed up to 10000 rpm
- Resolution up to 6000 pulses/revolution
- Signal outputs A, A inv., B, B inv., N, N inv.
- Temperature range at 5 VDC up to 100 °C

Electrical data

Operating voltage	5 VDC \pm 10 % 4.75...30 VDC with reverse voltage protection
Current consumption	Max. 30 mA (w/o load), at 24 VDC Max. 60 mA (w/o load), at 5 VDC
Limit frequency	150 kHz
Output signals	Channel A, B, N + inverted
Output stages	5 VDC 4.75...30 VDC
	Line driver to RS422 Push-pull outp., short-circuit-proof or Line driver to RS422

Mechanical data

Speed	Max. 10000 rpm
Start-up torque	
without sealing (IP54)	< 0.010 Nm
with sealing (IP65)	< 0.015 Nm
Shaft loading	
axial	< 20 N
radial	< 40 N
Moment of inertia	1.45×10^{-6} kgm ²
Housing material	Aluminium
Weight	Approx. 250 g

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Order designation

Order No.	Flange/Shaft			
	GI355			
0	Clamping flange/10 mm IP 54			
A	Clamping flange/10 mm IP 65			
	GI356			
1	Servo flange/6 mm IP 54			
B	Servo flange/6 mm IP 65			
	Operating Voltage/Signals			
22	5 VDC/Line driver RS422			
70	4.75...30 VDC/Push-pull + inv.			
72	4,75...30 VDC/Line driver RS422			
	Connection			
C2	C housing plug, 12-pin, axial			
C3	C housing plug, 12-pin, radial			
31	Cable 1 m, axial			
41	Cable 1 m, radial			
	Pulse no./Order no.			
	Pulse	No.	Pulse	No.
	5	49	500	15
	10	36	1000	22
	25	50	1024	23
	50	39	1250	24
	60	40	1500	26
	100	41	2000	28
	128	57	2500	30
	200	06	3600	31
	250	09	5000	35
	360	13	6000	48
	400	14		

Additional pulse numbers on request.

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clamping flange
servo flange

Accessories

Order No.	
Z 119.006	Eccentric mounting
Z 119.013	Adapter plate for clamping flange
Z 119.015	Mounting bell for servo flange
Z 119.017	Angular mounting for clamping flange
Z 119.025	Adapter plate for clamping flange
Z 119.033	Adapter plate, ø65 mm for clamping flange
Z 119.035	Bearing flange for servo flange
	Extension cord with connector on one end
Z 141.001	Connector without cable
Z 141.003	Connector with 2 m cable
Z 141.005	Connector with 5 m cable
Z 141.007	Connector with 10 m cable

Additional accessories (couplings, measuring wheels, cable pulls or protective housings) from page 164.

Ambient conditions

Operating temperature	-20...+100 °C at 5 VDC -20...+85 °C at 4.75...30 VDC
Protection type	Shaft without sealing IP 54 Shaft with sealing IP 65
Humidity	Max. relative humidity 95 %, non-condensing
Resistance	
Vibration	DIN EN 60068-2-6 ≤100 m/s ² , 16-2000 Hz
Shock	DIN EN 60068-2-27 ≤1000 m/s ² , 4 ms
Interference resistance	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4

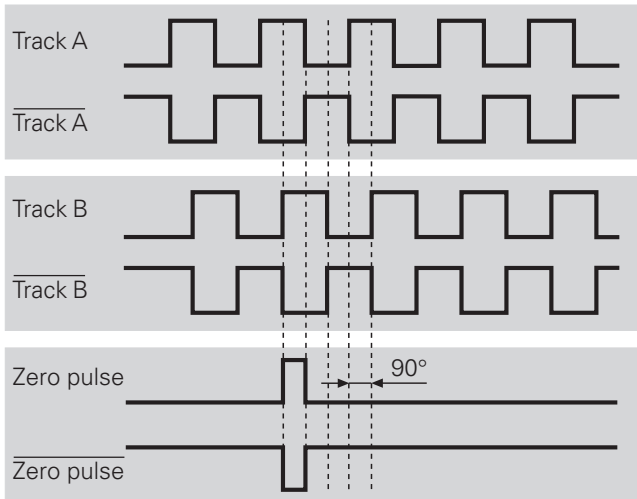
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Output signals

Signals with clockwise rotation when looking at the flange.



Line driver

Level high	$\geq 2.5 \text{ V}$	(with $I = -20 \text{ mA}$)
Level low	$\leq 0.5 \text{ V}$	(with $I = 20 \text{ mA}$)
Loading high	$\leq 20 \text{ mA}^*$	
Loading low	$\leq 20 \text{ mA}^*$	

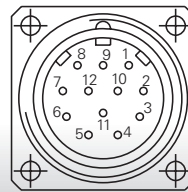
* Models with 4.75...30 VDC Line driver to RS422
max. $\leq 10 \text{ mA}$ at UB $< 10 \text{ V}$

Push-pull output

Level high	$\geq \text{UB} - 3 \text{ V}$	(with $I = -20 \text{ mA}$)
Level low	$\leq 0.5 \text{ V}$	(with $I = 20 \text{ mA}$)
Loading high	$\leq 20 \text{ mA}$	
Loading low	$\leq 20 \text{ mA}$	

Connection assignment

Plug	Cable Color	Assignment
Pin 1	pink	Track B inv.
Pin 2	blue	UB Sense
Pin 3	red	Track N (zero pulse)
Pin 4	black	Tr. N inv. (zero pulse inv.)
Pin 5	brown	Track A
Pin 6	green	Track A inv.
Pin 7	–	–
Pin 8	gray	Track B
Pin 9	–	–
Pin 10	white/green	GND
Pin 11	white	GND Sense
Pin 12	brown/green	UB

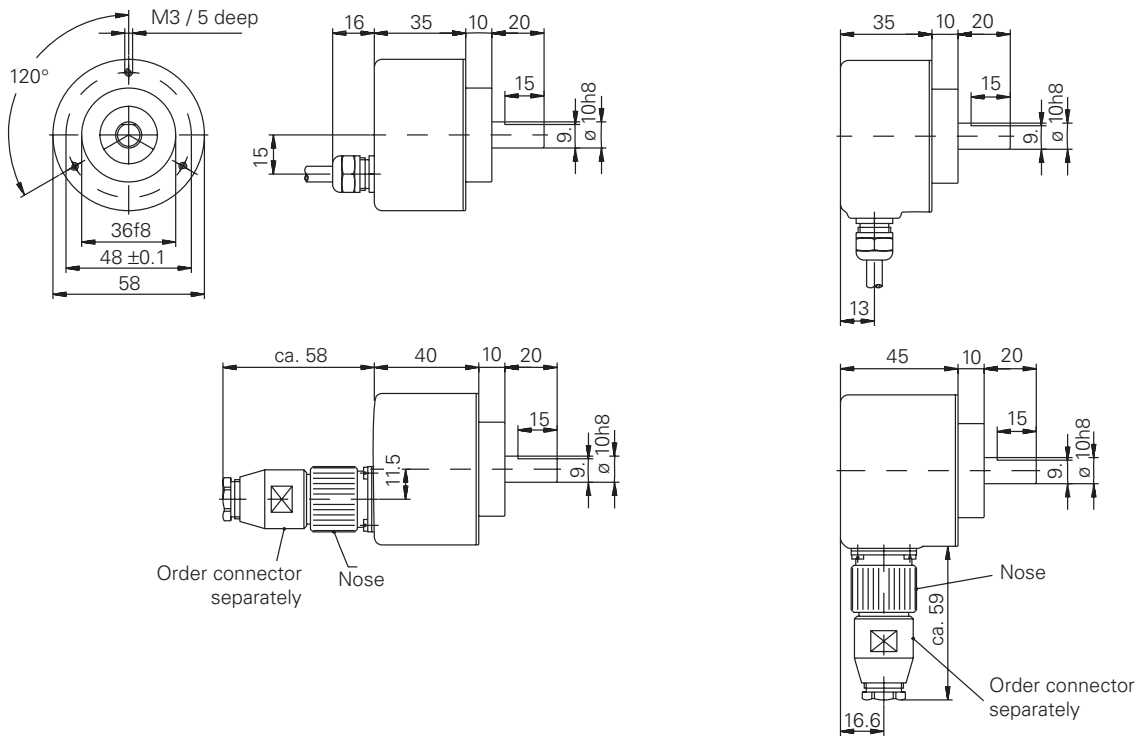


UB Sense and GND Sense are directly connected to UB and GND respectively.
Recommendation: Please use leads twisted in pairs (e.g. A/A inv.) for cable lengths of 10 m or more.

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Dimensions

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