



SF5810-05 Series Solid Shaft



Features

- Internally equipped with an ASIC phase array chip, ultra-parallel optical components, and direct reading of code disc signals.
- High reliability, long service life, and strong anti-interference capability.
- Equipped with A, B, and Z three-channel signal output, compatible with standard line drivers (26LS31) RS422, and capable of providing 6 output signals, compatible with TTL. Additional options include open-collector, voltage-type output, and complementary output interface circuits.
- Keyed shaft connection; flange with round holes for easy installation.

Cable Definition

Signal Output Method of the Circuit	Signal	+V	0V	A	B	Z	A/	B/	Z/	NC.
	Wire Color	Red	Black	Green	White	Yellow	Brown	Gray	Orange	Shield
Open-collector, Voltage, Complementary	7-pin Socket Number	1	4	3	5	2	-	-	-	6
Driver	9-pin Socket Number	1	4	5	3	2	7	6	8	9
Open-collector, Voltage, Complementary	Computer Socket Number (15-pin)	7	5	4	2	9	-	-	-	8
Driver	Computer Socket Number (15-pin)	6	5	4	2	9	3	1	10	8

Technical Parameters

Supply Voltage (VCC)	DC 5V±0.25V or 5~30V	Maximum Mechanical Rotation Speed	6000r/min
Output Voltage	High Level 3.4V, Low Level 0.4V	Vibration Resistance	49m/s ² , 10~200Hz, 2 hours in each XYZ direction
Current Consumption	≤160mA	Shock Resistance	980m/s ² , 6ms, 3 times in each XYZ direction
Response Frequency	0~80KHz (or as per customer requirements)	Protection	Waterproof, Oil-proof, Dustproof (IP54)
Output Waveform	Square Wave	Operating Life	MTBF 50000h(+25°C,2000rpm)
Duty Cycle	0.5T±0.1T	Operating Temperature	0°C ~ +85°C
Starting Torque	2*10 ⁻² N.m (+25°C)	Storage Temperature	-30°C ~ +85°C
Moment of Inertia	1*10 ⁻⁵ kg.m ²	Operating Humidity	30 ~ 85%(No Condensation)
Maximum Shaft Load	Radial: 85N, Axial: 50N	Weight	Approximately 0.9kg (excluding cable)

Model Definition

SF5810-05 - ☐ Z - ☐ - ☐ - ☐ ☐

Product Model Number of Pulses Number of Phases Output Method Power Supply Voltage Cable Outlet Method Length

Number of Pulses:
50, 100, 120, 125, 150,
180, 200, 250, 256, 300,
360, 400, 500, 512,
600, 720, 800, 900, 1000
, 1024, 1200, 1800, 2000
, 2048, 2400, 2500, 3000
, 3600 p/r (or as per
customer requirements).

Output Method:
C = Open-collector NPN
CP = Open-collector PNP
T = Voltage Output
F = Complementary Output
L = 26LS31 Differential Output
K = 7272 Wide Voltage Output

Power Supply Voltage:
5 = 5V
24 = 5-24V
H = 5-24V Input, 5V
Output
L = 5V Input, 5-24V
Output

Cable Outlet Method:
D = Metal Side Outlet
G = Rubber Side Outlet
H = Socket Side Outlet
F = Rubber Rear Outlet

Cable Length:
0.17 = 0.17 meters
1 = 1 meter
2 = 2 meters

Installation Dimensions

