Technical datasheet

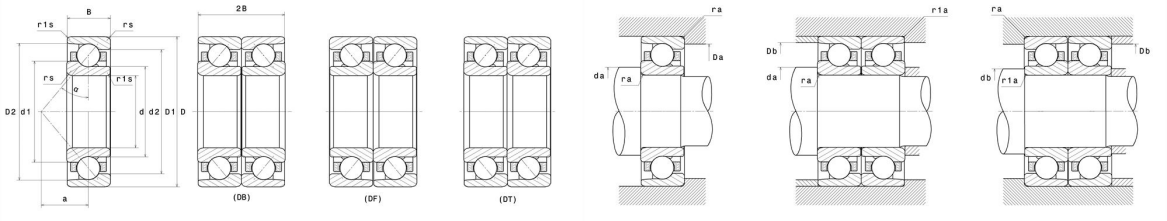
7310BL1G

Single row or matched pairs of angular contact ball bearings



Angular contact ball bearing, brass cage inner ring guided

Visual(s)



Product definition

d	50 mm
D	110 mm
B	27 mm
a	47 mm
Contact angle α	40 °
rs min	2 mm
r1s min	1 mm
Radial clearance class	CN
Mass	1.24 kg
Brand	NTN

Product performance

Dynamic load, C	64.4 kN
Static load, C0	44.3 kN
Fatigue limit load, Cu	2.01 kN
Nlim (oil)	8,100 rpm
Nlim (grease)	6,000 rpm
Min operating temperature, Tmin	-40 °C
Max operating temperature, Tmax	120 °C
Characteristic cage frequency, FTF	0.41 Hz
Characteristic rolling element frequency, BSF	4.17 Hz
Characteristic outer ring frequency, BPF0	4.52 Hz
Characteristic inner ring frequency, BPFI	6.48 Hz

Abutment dimensions

da min	60 mm
db min	55.5 mm
Da max	100 mm
Db max	104.5 mm
r1a max	1 mm
ra max	2 mm

Calculation factors

Equivalent dynamic radial load

$P = X.Fr + Y.Fa$

	e	Single or DT bearing arrangement				DB or DF arrangement			
		Fa / Fr ≤ e		Fa / Fr > e		Fa / Fr ≤ e		Fa / Fr > e	
		X	Y	X	Y	X	Y	X	Y
30°	0.8	1	0	0.9	0.76	1	0.78	0.63	1.24
40°	1.14			0.35	0.57		0.55	0.57	0.93

Equivalent static radial load

$P_0 = X_0.Fr + Y_0.Fa$

a	Single or DT bearing arrangement		DB or DF arrangement	
	X_0	Y_0	X_0	Y_0
30°	0.5	0.33	1	0.66
40°		0.26		0.52

For single or DT bearing arrangement :

If $P_0 < Fr$, then use $P_0 = Fr$