

# 3NC Hybrid-Ceramic Ball Bearings

## **Suited For A Wide Range Of Extreme Applications**

Where High Temperatures, High Speeds, Or Stray Electric Currents Threaten The Viability Of Steel Ball Bearings



Bearings used in generators are subject to electric pitting - a phenomenon where the surface melts locally because sparks are generated as the electricity passes through the ultra-thin oil layer and into the bearing while rotating.

According to the Institute of Electrical and Electronics Engineers (IEEE) over half of all electric motor failures are bearing related, and electric pitting is a main cause of damage that leads to reduced bearing service life.

**Koyo**®

# Koyo 3NC Hybrid-Ceramic Ball Bearing Part Numbers

**EXPANDED  
Product  
Offering**  
For Both  
Series

## 6200 Series

3NC6203ZZ  
3NC6204ZZ  
3NC6205ZZ  
3NC6206ZZ  
3NC6207ZZ  
3NC6208ZZ  
3NC6209ZZ  
3NC6210ZZ  
3NC6211ZZ  
3NC6212ZZ  
3NC6213ZZ  
3NC6214ZZ  
3NC6215ZZ  
3NC6216ZZ  
3NC6217ZZ  
3NC6218ZZ  
3NC6219ZZ  
3NC6220ZZ  
3NC6221ZZ  
3NC6222ZZ  
3NC6224ZZ  
3NC6226ZZ  
3NC6228ZZ  
3NC6230ZZ  
3NC6232  
3NC6234ZZ FY  
3NC6236-1ZZ FY

## 6300 Series

3NC6305ZZ  
3NC6306ZZ  
3NC6307ZZ  
3NC6308ZZ  
3NC6309ZZ  
3NC6310ZZ  
3NC6311ZZ  
3NC6312ZZ  
3NC6313ZZ  
3NC6314ZZ  
3NC6315ZZ  
3NC6316ZZ  
3NC6317ZZ  
3NC6318ZZ  
3NC6319ZZ  
3NC6320ZZ  
3NC6321ZZ  
3NC6322ZZ  
3NCH6322ZZX  
3NC6324ZZ  
3NC6326-2  
3NCH6326-2  
3NCH6328  
3NCH6330CS  
3NCH6332-2CS

Koyo's 3NC Hybrid Ceramic Ball Bearings are filled with Exxon Polyrex<sup>®</sup> EM Grease

Items with "ZZ" have two metal shields



Commonly used in Wind Generator Applications



**Compared to steel balls, ceramic balls are lighter, smoother, harder, and resistant to both corrosion and electrical currents**

- Lower operating temperatures (up to as much as 40%) resulting in longer grease life.
- Lower rotational torque than steel ball bearings which means less energy is required to rotate the bearing.
- Eliminates electric arcing or fluting by insulating the bearing from stray currents.
- Reduces down time and maintenance resulting from traditional steel ball bearing failure.
- Dimensionally interchangeable with current electric motor bearing.
- No additional machining required.
- No special modifications or handling required for installation.