

**HOKKIM**  
Giving You Control

# Control & Protection Relays

**Model : NFQ-1**

**Description : Gen-set Speed Sensing Relay**

**Utilization:**

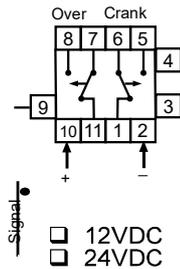
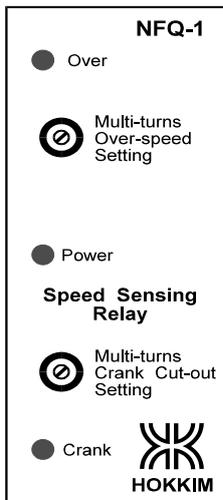
The NFQ-1 provides 2 user adjustable trip levels with LED relay state indication. Trip functions provided are:

- 11 – 8 - 7 : Dis-engages crank starter.
- 1 – 5 - 6 : Alarms or trips on over speed.

The W-Phase of the charger alternator of the gen-set, produces a high frequency pulse train directly proportional the speed of rotation. The frequency of these pulses is converted to an analogue voltage which provide the signal to the trip circuitry.

When ordering, the range of speed settings in cycles per second (Hz) for crank cut-off and over-speed must be specified. Settings are made through two precision multi-turns trimmer for greater accuracy.

As the engine starts and the frequency rises, contacts 11-8 close and 11-7 open to cut-off the crank starter. On over-speed, contacts 1-5 close to sound alarm or trip engine.



**Technical Data**

- Supply Voltage :  24VDC  12VDC
- Approx. Crank Range : 20Hz to 450Hz
- Approx. Over Range : 120Hz to 850Hz
- Consumption : 1VA
- Indication : Power - Green LED  
Crank Cut - Amber LED  
Over Speed - Red LED
- Output Contacts : 5A 240V 50Hz AC1
  - Normal 1-5 Open
  - 1-6 Close
  - 11-8 Open
  - 11-7 Close
  - Over Speed 1-5 Close
  - 1-6 Open
  - Crank Cut 11-8 Close
  - 11-7 Open

