



**HOKKIM**  
Giving You Control

# Control & Protection Relays

**Model : DFR-1**

**Description : Floatless Relay - Single Tank Control**

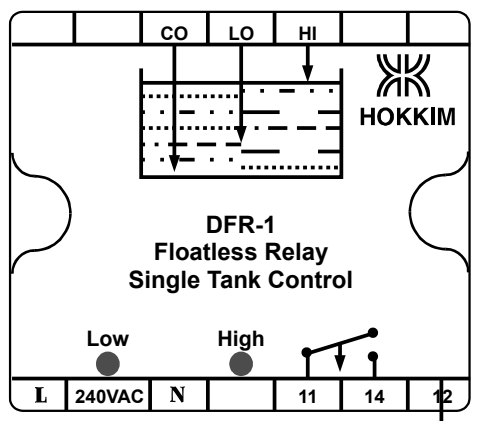
## Utilization:

The DFR-1 controls levels of conducting liquids by using 3 probes as shown in figure. The operation is as follows:

- On supply, the AMBER LED is lighted and remains lighted when the liquid level rises to contact with CO & LO.
- When the liquid level reaches probe HI the AMBER LED goes off, the RED (HIGH) LED is lighted and the relay actuates.
- When the level drops below HI the RED LED remains on and the relay remains latched.
- When the level drops below LO, the RED LED goes off, the AMBER LED lights and the relay releases. The LEDs indicate the condition of the relay.

For pump-in operation of tank, connect the starter through contacts 11 & 12.

For pump-out operation of well, connect the starter through contacts 11 & 14.



## Technical Data

Supply Voltage	: <input type="checkbox"/> 240VAC <input type="checkbox"/> 115VAC <input type="checkbox"/> 24VDC <input type="checkbox"/> 12VDC <input type="checkbox"/> 24AC/DC <input type="checkbox"/> 12AC/DC
Frequency	: 50 ~ 60Hz
Consumption	: 2VA
ON Response Time	: 100 msec.
OFF Response Time	: 100 msec.
Sensitivity of Probes	: >50kOhms
Voltage between Probes	: 31VDC
Current through Probes	: 250uA
Indication	: AMBER LED (Relay OFF) RED LED (Relay ON)
Output Contacts	: 5A 240V 50Hz AC1 Relay ON 11-14 Close 11-12 Open Relay OFF 11-14 Open 11-12 Close

The above specifications and instructions assumes that the HIGH LED is RED and the LOW LED is AMBER. Colours may differ for different production batches.

