INSTRUCTIONS

DFP1********03

DFP100 WITH REDUCED MINIMUM SETTING ON GND UNIT AND MINIMUM SETTING
FOR UNDERSHIELD PICKUP

Introduction

These instructions, GEK-105580 together with GEK-105545, constitute the complete
instructions for the DFP1********03.

Description

This relay has the following differences from the standard relay described in GEK-105545:

The ranges of the TOC for GND has been changed to 0.010 - 0.12 amps RMS and the
range for IOC and DEFINITE TIME has been changed to 0.010 - 1.60 amps rms. The
setting range for UNDERSHIELD pickup has new range [5 -180]. The settings range
for the OVERVOLTAGE pickup has new range [5-180].
1. In the **Calculation of Settings** section of the GEK-105545 Instruction Book, replace the following items with the corresponding items in Table 3-1:

### Table 3-1. DFP100 Relay Settings

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>SETTING NAME</th>
<th>RANGE</th>
<th>INCREMENT</th>
<th>DEFAULT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TIME OVER-CURRENT</strong> { SET }</td>
<td>DISABLE PHASE TOC</td>
<td>1 (YES)/0 (NO)</td>
<td>1 (EXT INV)</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>CURVE PHASE TOC</td>
<td>2 (VERY INV.)</td>
<td>3 (INVERSE)</td>
<td>3 (INVERSE)</td>
</tr>
<tr>
<td></td>
<td>PICKUP PHASE TOC</td>
<td>1.00 - 12.00</td>
<td>0.01 amps</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>TIME DIAL PHASE TOC</td>
<td>0.5 -10.0</td>
<td>0.1</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>DISABLE GROUND TOC</td>
<td>1 (YES)/ 0(NO)</td>
<td>1 (EXT INV)</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>CURVE GROUND TOC</td>
<td>2 (VERY INV.)</td>
<td>3 (INVERSE)</td>
<td>3 (INVERSE)</td>
</tr>
<tr>
<td></td>
<td>PICKUP GROUND TOC</td>
<td>0.01 - 0.12</td>
<td>0.01 amps</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>TIME DIAL GROUND TOC</td>
<td>0.5 -10.0</td>
<td>0.1</td>
<td>10.0</td>
</tr>
<tr>
<td><strong>DEFINITE TIME</strong> { SET }</td>
<td>DISABLE PHASE DT HIGH</td>
<td>1(YES)/0(NO)</td>
<td>1.00</td>
<td></td>
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<tr>
<td></td>
<td>PICKUP PHASE DT HIGH</td>
<td>1.00 - 160.00</td>
<td>0.01 amps</td>
<td>1.00</td>
</tr>
<tr>
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<td>DELAY PHASE DT HIGH</td>
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<td>0.01 seconds</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>DISABLE PHASE DT LOW</td>
<td>1(YES)/0(NO)</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PICKUP PHASE DT LOW</td>
<td>1.00 - 160.00</td>
<td>0.01 amps</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>DELAY PHASE DT LOW</td>
<td>0 - 100.00</td>
<td>0.01 seconds</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>DISABLE GROUND DT HIGH</td>
<td>1(YES)/0(NO)</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PICKUP GROUND DT HIGH</td>
<td>0.01 - 1.60</td>
<td>0.01 amps</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>DELAY GROUND DT HIGH</td>
<td>0 - 100.00</td>
<td>0.01 seconds</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>DISABLE GROUND DT LOW</td>
<td>1(YES)/0(NO)</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PICKUP GROUND DT LOW</td>
<td>0.01 - 1.60</td>
<td>0.01 amps</td>
<td>1.00</td>
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<tr>
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<td>DELAY GROUND DT LOW</td>
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<td>0.01 seconds</td>
<td>0</td>
</tr>
<tr>
<td><strong>INSTANTANEOUS</strong> { SET }</td>
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</tr>
<tr>
<td></td>
<td>PICKUP PHASE INST. HIGH</td>
<td>1.00 - 160.00</td>
<td>0.01 amps</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>DELAY PHASE INST. HIGH</td>
<td>0 - 2.00</td>
<td>0.01 seconds</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>DISABLE PHASE INST. LOW</td>
<td>1 (YES)/0 (NO)</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PICKUP PHASE INST. LOW</td>
<td>1.00 - 160.00</td>
<td>0.01 amps</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>DELAY PHASE INST. LOW</td>
<td>0 - 2.00</td>
<td>0.01 seconds</td>
<td>0</td>
</tr>
<tr>
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<td>DISABLE GND INST. HIGH</td>
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<td>1.00</td>
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<tr>
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<td>0.01 - 1.60</td>
<td>0.01 amps</td>
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<tr>
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<td>DELAY GND INST. HIGH</td>
<td>0 - 2.00</td>
<td>0.01 seconds</td>
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<tr>
<td></td>
<td>DISABLE GND INST. LOW</td>
<td>1 (YES)/ 0 (NO)</td>
<td>1.00</td>
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<tr>
<td></td>
<td>PICKUP GND INST. LOW</td>
<td>0.01 - 1.60</td>
<td>0.01 amps</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>DELAY GND INST. LOW</td>
<td>0 - 2.00</td>
<td>0.01 seconds</td>
<td>0</td>
</tr>
<tr>
<td>CATEGORY</td>
<td>SETTING NAME</td>
<td>RANGE</td>
<td>INCREMENT</td>
<td>DEFAULT</td>
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<td>TORQUE Control</td>
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<td></td>
<td>n (DISABLED)</td>
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<td>1 (EXTERNNA)</td>
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<tr>
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<td></td>
<td>2 (67N)</td>
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<tr>
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<td>0.10 - 2.00</td>
<td>0.01 A</td>
<td>1.0</td>
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<tr>
<td></td>
<td>PH TRQE CNTRL SIGNAL</td>
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<td></td>
<td>2 (21PT)</td>
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<tr>
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<td></td>
<td>3 (27)</td>
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<td>4 (50PL)</td>
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<td>21PT SIGNAL</td>
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</tr>
<tr>
<td></td>
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<td>1 (OR)</td>
<td></td>
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<td></td>
<td></td>
<td>2 (AND)</td>
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<td>0.01 ohms</td>
<td>5.00</td>
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<td>21PT ANGLE</td>
<td>10.0 - 90.0</td>
<td>0.1 degrees</td>
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<td></td>
<td>59 OV PICKUP</td>
<td>5 - 180</td>
<td>0.01 volts</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>27 UV PICKUP</td>
<td>5 - 180</td>
<td>0.01 volts</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>59 TIME DELAY</td>
<td>0 - 240.00</td>
<td>0.01 seconds</td>
<td>0.20</td>
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<tr>
<td></td>
<td>27 TIME DELAY</td>
<td>0 - 240.00</td>
<td>0.01 seconds</td>
<td>0.20</td>
</tr>
</tbody>
</table>

2. Replace the following paragraphs in the Time Overcurrent Settings section.

**Pickup Ground TOC** - This setting establishes the pickup level of the ground TOC function. The range is 0.01 - 0.12 amps RMS.

3. Replace the following paragraphs in the Definite Overcurrent Settings section.

**Pickup Ground DT HIGH** - This setting establishes the pickup level of the ground DT High function. The range is 0.01 - 1.60 amps RMS.

**Pickup Ground DT LOW** - This setting establishes the pickup level of the ground DT Low function. The range is 0.01 - 1.60 amps RMS.

4. Replace the following paragraphs in the Instantaneous Overcurrent settings section.

**Pickup Ground Inst. HIGH** - This setting establishes the pickup level of the Ground Inst. High function. The range is 0.01 - 1.60 amps RMS.

**Pickup Ground Inst. LOW** - This setting establishes the pickup level of the Ground Inst. Low function. The range is 0.01 - 1.60 amps RMS.

5. Replace the following paragraphs in the Torque Control Settings section.

**27 UV Pickup** - This setting establishes the pickup level of the Undervoltage unit. The range is 5.00 - 180.00 Vrms.

**59 OV Pickup** - This setting establishes the pickup level of the Overvoltage unit. The range is 5.00 - 180.00 Vrms.