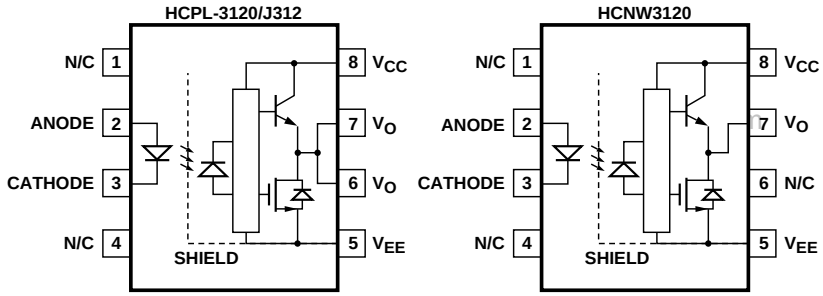
Agilent 2.5 Amp Output Current IGBT Gate Drive Optocoupler

Data Sheet

HCPL-3120
HCPL-J312
HCNW3120

Functional Diagram



TRUTH TABLE

LED	V_{CC} - V_{EE} "POSITIVE GOING" (i.e., TURN-ON)	V_{CC} - V_{EE} "NEGATIVE GOING" (i.e., TURN-OFF)	V_O
OFF	0 - 30 V	0 - 30 V	LOW
ON	0 - 11 V	0 - 9.5 V	LOW
ON	11 - 13.5 V	9.5 - 12 V	TRANSITION
ON	13.5 - 30 V	12 - 30 V	HIGH

A 0.1 µF bypass capacitor must be connected between pins 5 and 8.

Features

- **2.5 A maximum peak output current**
- **2.0 A minimum peak output current**
- **15 kV/µs minimum Common Mode Rejection (CMR) at V_{CM} = 1500 V**
- **0.5 V maximum low level output voltage (V_{OL})**
  Eliminates need for negative gate drive
- **I_{CC} = 5 mA maximum supply current**
- **Under Voltage Lock-Out protection (UVLO) with hysteresis**
- **Wide operating V_{CC} range: 15 to 30 Volts**
- **500 ns maximum switching speeds**
- **Industrial temperature range:**
  -40°C to 100°C
- **Safety Approval**
  UL Recognized
  3750 Vrms for 1 min. for HCPL-3120/J312
  5000 Vrms for 1 min. for HCNW3120
  CSA Approval
  IEC/EN/DIN EN 60747-5-2 Approved
  V_{IORM} = 630 V_{peak} for HCPL-3120 (Option 060)
  V_{IORM} = 891 V_{peak} for HCPL-J312
  V_{IORM} = 1414 V_{peak} for HCNW3120

Applications

- **IGBT/MOSFET gate drive**
- **AC/Brushless DC motor drives**
- **Industrial inverters**
- **Switch mode power supplies**

CAUTION: It is advised that normal static precautions be taken in handling and assembly of this component to prevent damage and/or degradation which may be induced by ESD.

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