

# HQS-2

## Have Quick/1PPS Distribution Amplifier



Brandywine Communication's Havequick/1PPS Distribution Amplifier (HQS) is a small rugged, powered Havequick/1PPS distribution module mounted in a 4" x 4" x 2.5" environmentally secure enclosure. The HQS can provide an MTBF up to 1 million hours depending on configuration.

The HQS was developed to facilitate long cable runs of both 1PPS and Have Quick signals for ships or aircraft requiring these timing reference signals at multiple locations. With the tested, ruggedized enclosure the HQS can be placed in difficult environments and difficult to reach places on ships and aircraft. The unit may be configured for single ended or differential signals as required for the application (factory configured). Various power options are also available upon request. Designed for "fit and forget" operation, the compact, reliable module provides an elegant solution for distribution of the timing references from an embedded military GPS receiver.

### Applications

- Flight Test
- Aircraft Data Collection
- Flight Instrumentation
- UAV Applications
- Shipboard Applications

### FEATURES

- **Two way signal distribution of Have Quick and 1PPS signals**
- **Compact Ruggedized Chassis**
- **Qualified for Shipboard and Airborne Operation**
- **MTBF up to 1 million hours**
- **Compact Chassis**

### Key Benefits

- Compact Sealed Operation
- High reliability: MTBF > 1,000,000 hours
- Flight Qualified

# Specifications

## Signal Input

Connector Type: D38999/20WB35PN  
1PPS

Amplitude: 0-10V per ICD-GPS-060  
Impedance: 50ohm

Have Quick:

Amplitude: 0-5V per ICD-GPS-060  
Impedance: 2kohm

## Signal Output

Connector Type: D38999/20WB35SN  
1PPS:

No of Outputs: 1  
Amplitude: 0-10V per ICD-GPS-060  
Impedance: 50ohm or low Z

Have Quick:

No of Outputs: 1  
Amplitude: 0-5V per ICD-GPS-060  
Impedance: 2kohm

## Power Input

Connector Type: D38999/20WA98PN  
Power Option 1 145 VDC to 162 VDC  
Power Option 2 15 VDC to 36 VDC  
Power Consumption:  
<5 Watts

## Physical

Size 3.94"x3.94"x2.36" w/o connectors  
3.94"x5.8"x2.36" incl. connectors

## Reliability

MTBF >1,000,000 hours

## Environmental

EMI MIL-STD-461 CE102, CS101, CS114, CS116, RE101, RE102, RS101, RS103  
Relative Humidity 95% RH non-condensing  
Temperature Operating 0 to +50°C  
Non-Operating -40 to +84°C  
Air Pressure Up to +30,000 feet  
Fungus & Salt/Fog Conformally Coated  
Settling Dust Base material coatings and surface treatments resilient to erosion.  
Operational Vibration Shipboard Type I MIL-STD-167-1A  
Transportation Vibration MIL-STD-810F Method 514, Procedure I Categories 4, 7, 8, and 10.  
Shock MIL-STD-810F [3] Method 516 20g/15ms saw tooth pulse.

# Ordering Options

001-0279  
001-0282  
001-0430

MODULE, HQ DISTR., 2 WAY, 162VDC  
MODULE, HQ/1PPS DIST., 6 WY, 15-36V  
SPLITTER, HQ/1PPS DIST 6WY RUGGED