

# **DATA DISTRIBUTOR**

## **DD20**

### **Operation and Installation Manual**

## ***LIMITED WARRANTY***

Pacific Micro Systems warrants its products to be free from defects in materials and workmanship for a period of one year from date of sale to the original owner or fifteen months from date of sale from Pacific Micro Systems.

This warranty provides for the repair or replacement (at our option) of any parts found to be defective in normal and intended use, provided that such defects are in our opinion due to faulty material or workmanship.

This warranty does not apply to products that have been improperly installed, subjected to extremes beyond the limits of our specifications, or which have been physically damaged. Nor does it apply to products found to be defective due to abuse, lightning or any other electrical discharge, salt or fresh water, spray, or improper or unauthorised repair. Pacific Micro Systems will pay shipping (method to be of our choice) and insurance for return of said product provided that the returned product proved defective under the terms and conditions of this warranty.

The obligation of Pacific Micro Systems shall be limited to the repair or replacement only.

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## **OUTLINE:**

The DD20 has been designed to assist with the total integration of electronic equipment aboard a vessel.

This Data Distributor 20 receives data from one source, either current loop, RS422, or RS232. The data is then distributed to 8 current loop and 8 RS422 outputs (each capable of driving a number of current loop inputs) and 8 industry standard RS232 outputs. It has an isolated power supply that provides full dc isolation between the input supply and ground/all outputs.

## **FEATURES:**

LED Power On indicator.

LED Data in Indicator.

Wide range input supply voltage.

All necessary connectors supplied.

EMI/RFI shielded plastic case.

Isolated ground.

Low power opto isolated input (<1 ma).

Normal or inverted input data.

8 independent current loop outputs

8 RS422 outputs.

Each current loop/RS422 output is capable of driving a number of current loop loads.

8 independent RS232 outputs.

Flexible mounting capability.

**PARTS SUPPLIED:**

- 1 x DD20 Interface.
- 1 x 9 pin Female D connector.
- 8 x 9 pin Male D connectors.

**INSTALLATION:**

1. Run a two core screened data cable from the serial data source to the Data input connector of the DD20.
2. Run a two core (for current loop or RS232) or three core (for RS422) screened cable from the DD20 outputs to the inputs of the receiving equipment.
3. Connect the supply cable to a suitable 9-36v supply (Black/Red + volts, Black - volts).
4. The data input polarity factory set to non-inverted. After connecting the supply and input, check that the Data In LED is normally OFF and flashing ON. If not then the polarity jumper must be set to Inverted (INVERT) to ensure normal polarity data output. To change the polarity remove the 6 stainless steel screws retaining the front panel, the jumper is situated adjacent to the power supply module. Solder a jumper between the two INVERT pins to invert the incoming data.

**Note:**

The DD20 has dc isolation between its power supply input and ground. This makes it suitable for interfacing to onboard computer installations and all isolated ground equipment, while being powered from the vessel's battery supply, without affecting the integrity of the battery positive (+) or negative (-) relative to ground.

## **SPECIFICATIONS:**

### **Input Requirements:**

RS232, Current Loop or RS422.

Normal or Inverted.

### **Output capabilities:**

**Out A - H:** Current loop, RS422 or RS232.

### **Power Requirements:**

9-36 vdc @ 50 - 300 mA.

The power supply provides full dc isolation between power supply input and ground/all outputs.

### **Physical Parameters:**

**Enclosure:** Plastic EMI/RFI shielded.

**Weight:** 300 grams.

**Dimensions:** 92 x 155 x 37 mm.

**Mounting:** Table top or under shelf.

**Indicators:** (LED), Power ON and Data In.

Pacific Micro Systems has a policy of continued development and therefore reserves the right to change specifications without notice.

## CONNECTION DETAILS

### INPUT DATA:

Data In (INPUT)	Description
3	RX +
5	RX -
Shell	Ground
1	V+ In (Alternative Supply)
9	V- In (Alternative Supply)

### OUTPUT DATA (Current Loop/RS232/RS422):

Out A - H	Description
2	RS232 TX
8	RS422 TX +
9	RS422 TX -
5	0 v Return (Ground)
6	Current loop out
4	0 v Return (Ground)
Shell	Ground

## DATA OUTPUT POLARITY:

Set the polarity header so that the Data In LED is normally OFF and flashing ON when data is present.

