# Distribution Amplifier

*FS730 and FS735 series — CMOS Logic Distribution Amplifier*


FS730/3 Front Panel


FS735/1/4 Rear Panel with one Broadband 50 Ω distribution amplifier and one 10 MHz distribution amplifier side by side.

## FS730 & FS735 Series CMOS Logic Distribution Amplifier

- **High input impedance with hysteresis**
- **High current outputs**
- **Fast transition times**
- **Small insertion delay**
- **Low channel-to-channel timing skew**

- **FS730/3 ... $950** *(U.S. list)*
- **FS735/3/3 ... $1350** *(U.S. list)*

This distribution amplifier is intended to distribute CMOS level logic pulses. The amplifier has one input and seven outputs, all on BNC connectors. All inputs and outputs are logic levels.

The Schmitt trigger input has a switching threshold of +1.3 VDC with 0.35 V of hysteresis. The input impedance is 1 kΩ.

Each output has a 50 Ω source impedance with logic levels of 0 VDC and 5.0 VDC. The 50 Ω source impedance will reverse terminate reflected pulses when driving unterminated lines. High impedance loads will be driven to 5 V and 50 Ω loads will be driven to 2.5 Vdc. All of the outputs are driven by separate drivers to provide high isolation. The outputs have fast transition times and very low overshoot. The polarity of each output may be configured with a jumper inside the unit: installing the polarity jumper inverts the corresponding output. As shipped, the outputs are non-inverting.

The unit has two indicator LEDs. The "power" LED indicates that the unit has ac power. The "signal" LED will flash for 100 ms on each rising or falling edge seen at the input.

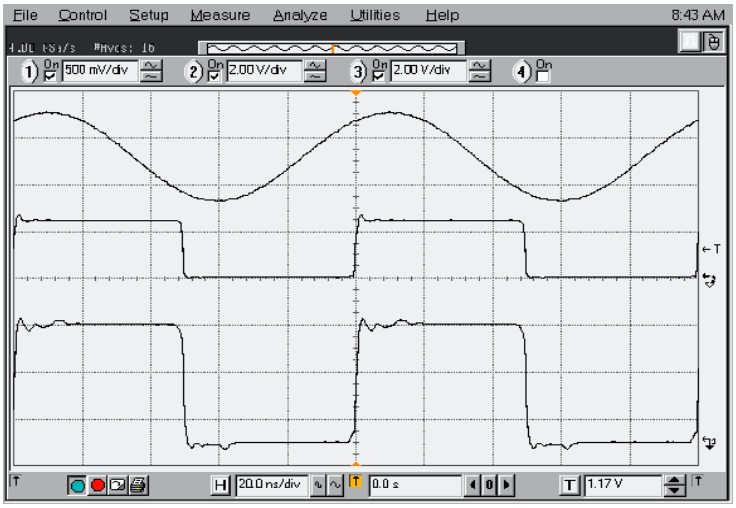
### Configuration

The FS73x series of products can be configured as half width, 1U size benchtop instruments (FS730), or in full-width, 19" rack-mount enclosures (FS735).

The FS730/3 model provides 7 output BNC connectors on the front panel, and one or two units can be rack mounted with an optional rack mount kit.

The FS735/3/3 model provides 14 output BNC connectors on the rear panel, with status indicators on the front panel. Several types of distribution amplifiers are available as listed below. Different types may be combined within the FS735 chassis.

Option 1 - 10 MHz distribution amplifier
Option 2 - 5 MHz distribution amplifier
Option 3 - CMOS logic distribution amplifier
Option 4 - Broadband 50 Ω distribution amplifier
Option 5 - Broadband 75 Ω distribution amplifier




CMOS distribution amp., small reflection artifacts

## FS730 & FS735 series Specifications

### Input

| | |
|---|---|
| Impedance | 1 kΩ |
| Threshold (L-H) | 1.50 VDC |
| Threshold (H-L) | 1.15 VDC |
| Transition time | no restriction |
| Frequency | DC-50 MHz |
| Pulse width | >5 ns |

### Output

| | |
|---|---|
| Impedance | 50 Ω ± 5 % |
| Levels (high-Z load) | 0 V & 5 V |
| Levels (50 Ω load) | 0 V & 2.5 V |
| Rise time | <1.5ns |
| Fall time | <1.0ns |
| Jitter | <10 ps rms |
| Delay | 9 ns , typ. |
| Delay skew | ±1 ns, typ. |
| Overshoot | <5 % |
| Undershoot | <5 % |
| Polarity control | internal jumper |

### General

| | |
|---|---|
| Power | 10 W, 100/120/220/240 VAC, 50/60 Hz |
| Dimensions | 8.3" × 1.5" × 8.0" (WHL) |
| Warranty | One year parts and labor on defects in materials and workmanship |

FS730/3 Rear Panel

FS735/1/4 Front Panel

## Ordering Information

| | | |
|---|---|---|
| FS730/3 | CMOS logic distribution amp with BNCs on front | $950 |
| RM1U | 1U dual rack-mount for one or two FS730s | $100 |
| FS735/3/3 | Two distribution amps with BNCs on rear | $1350 |