

# Electrical Communication Adapters

► AFTDS • AMT75



The AFTDS Differential Signal Adapter and the AMT75 75  $\Omega$  Adapter provide an effective means for 50  $\Omega$  terminated instruments to connect to, and analyze differential and high-speed electrical communication signals, as well as video signals. Both adapters are rugged and have the TEKPROBE™ interface, which provides convenient auto-scaling of waveforms on Tektronix TDS Series oscilloscopes. Also, the low VSWR (Return Loss) performance minimizes measurement errors commonly associated when interfacing with complex electrical signals.

Ideal for use in pulse shape compliance testing of high-speed electrical communication signals.

## ► Characteristics

AFTDS Differential Signal Adapter

**Electrical Standards –**

DS-1: (1.544 Mb/s).

DS-1A: (2.048 Mb/s).

DS-1C: (3.152 Mb/s).

DS-2: (6.312 Mb/s).

E-1: (2.048 Mb/s).

**Standards of Compliance –**

ANSI T1.102, ITU-T G7.03.

**Bandwidth (–3 dB) –** 7 kHz to 120 MHz.

**Rise Time –** <3.0 ns.

**Attenuation –**

5x, (–14 dB)  $\pm$ 5.0% (valid over 50 kHz to 30 MHz).

**Droop –**  $\leq$ 2.0% per 700 ns.

**VSWR (return loss) –**

$\leq$ 1.1:1 ( $\geq$ 26 dB), typical (valid over 50 kHz to 30 MHz).

**AFTDS Features**

**TEKPROBE Interface –**

Auto-scaling and auto-termination with Tektronix TDS oscilloscopes.

**Input Impedance –**

100  $\Omega$ , 110  $\Omega$  or 120  $\Omega$   $\pm$ 3.0% (selectable).

(Valid over 50 kHz to 30 MHz.)

**Load Impedance –** 50  $\Omega$   $\pm$ 3.0%.

**Safety –**

UL3111-1, CSA1010.1, EN61010-1, IEC61010-1 (AFTDS only).

**AMT75 75  $\Omega$  Adapter**

**Electrical Standards –**

DS-3: (44.736 Mb/s).

DS-4: (139.264 Mb/s).

STS-1: (51.84 Mb/s).

STS-3: (155.51 Mb/s).

STM-1: (155.51 Mb/s).

E-2: (8.448 Mb/s).

E-3: (34.368 Mb/s).

E-4: (139.264 Mb/s).

D-1: (270 Mb/s).

D-2: (143 Mb/s).

**Standards of Compliance –**

ANSI T1.102, ITU-T G.957, ITU-T G7.03, Bellcore GR-253-CORE.

**Bandwidth (–3 dB) –** DC to 1.0 GHz (typical).

**Rise Time –** <350 ps (typical).

**Attenuation –** 5X, (–14 dB)  $\pm$  2.0%.

## ► Features & Benefits

AFTDS Differential Signal Adapter for Electrical Communication

Complies with ANSI T1.102 and ITU-T G.703 Standards

120 MHz Bandwidth

Low VSWR (Return Loss)  $\leq$ 1.1:1, ( $\geq$ 26 dB)

Connects Directly to TDS Series Scope (TEKPROBE Interface) or Other 50  $\Omega$  Terminated Instruments

CE Certified

AMT75 75  $\Omega$  to 50  $\Omega$  Adapter for Electrical Communication and Video Signals

Complies with ANSI T1.102, ITU-T G.957, ITU-T G.703 Standards and Bellcore GR-253-CORE

1.0 GHz Bandwidth

Low VSWR (Return Loss)  $\leq$ 1.1:1, ( $\geq$ 26 dB)

Connects Directly to TDS Series Scope (TEKPROBE Interface) or Other 50  $\Omega$  Terminated Instruments

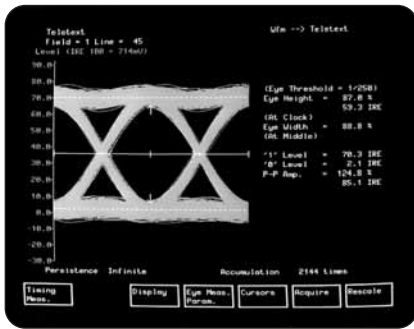
## ► Applications

Communication Pulse Shape or Eye Pattern Testing

Electrical Communication and Video Signal Interface for 50  $\Omega$  Terminated Instruments

## Electrical Communication Adapters

▶ AFTDS • AMT75



▶ AFTDS VSWR/Return Loss.

VSWR (Return Loss) –  
 $\leq 1.1:1$  ( $\geq 26$  dB), up to 1 GHz (typical).

AMT75 Features  
 TEKPROBE™ Interface –

Auto-scaling and auto-termination with Tektronix TDS scopes.

Input Impedance –  $75 \Omega \pm 1.5\%$ .

Output Impedance –  $50 \Omega \pm 1.5\%$ .

## ▶ Ordering Information

### AFTDS

Differential Signal Adapter.

Includes: Bantam (M) to Siemens (F) cable, 5 in. (012-1520-00), user's manuals (English) (070-9483-00), Certificate of Traceable Calibration.

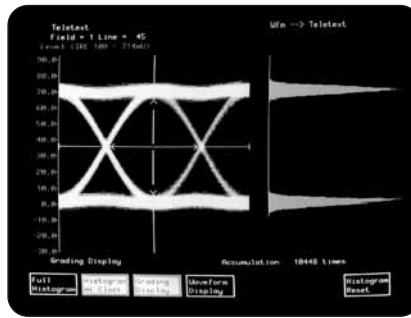
### Recommended Accessories

Siemens (M) to Siemens (M) Cable –  
 2 m (6.5 ft.), 120  $\Omega$ . Order 012-1469-00.

Bantam (M) to Bantam (M) Cable –  
 0.9 m (3 ft.). Order 012-1522-00.

Bantam (M) to RJ11 (M) Cable –  
 1.8 m (6 ft.). Order 012-1521-00.

RJ45/RJ11 (F) to RJ45 (F) Adapter –  
 Order 103-0409-00.



▶ AMT75 VSWR/Return Loss.

### AMT75

75  $\Omega$  Signal Adapter.

Includes: User's manuals (English) (070-9479-00), Certificate of Traceable Calibration.

### Recommended Accessories

50  $\Omega$ , BNC (F) to BNC (F) Feed-through Adapter – Order 103-0028-00.

Optional Accessories for Instrument Connections

50  $\Omega$ , BNC (M) to BNC (F) Coaxial Cable –  
 18 in. Order 012-0104-00.

50  $\Omega$ , BNC Coaxial Terminator Adapter –  
 Order 011-0049-02.

50  $\Omega$ , BNC (F) to SMA (M) Adapter –  
 Order 015-0554-00.

### Recommended Oscilloscopes

TDS500 Series Digitizing Oscilloscopes.

TDS600 Series Digitizing Oscilloscopes.

TDS700 Series Digitizing Oscilloscopes.

TDS5000B Series Oscilloscopes.

TDS6000B, TDS/CSA7000B Series Oscilloscopes with TCA-BNC.

11000 Series Oscilloscopes.

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Our most up-to-date product information is available at:  
[www.tektronix.com](http://www.tektronix.com)

Product(s) are manufactured in ISO registered facilities.  AFTDS. CE Not appli-cable for AMT75.  

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