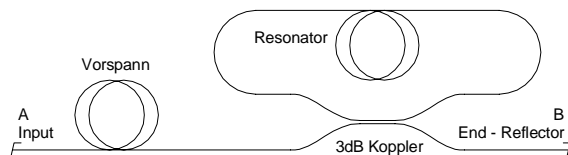




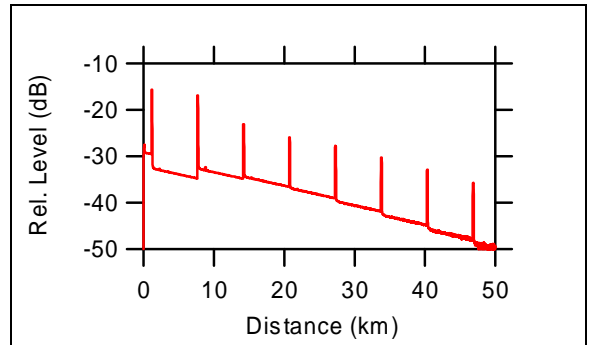
## OTDR Distance Scale Calibration System (DSCS)



The Distance Scale Calibration System (DSCS) allows calibrating the distance scale of singlemode and of multimode OTDRs according to IEC 61746. The DSCS consists of a recirculating delay line and of a lead-in fibre, as shown here below.



A measurement of the system performed with an OTDR shows a series of reflection peaks, whose positions can be directly derived from the length of the lead-in fibre and of the delay line. A typical example is shown in the figure below. The deviation of the distance scale is then determined by comparing the OTDR measurements with the calibrated position of the reflection peaks.



### Specifications

#### Fibre types

Singlemode G652  
Multimode 50  $\mu\text{m}$  or 62.5  $\mu\text{m}$

#### Typical Fibre lengths

Lead-in: 1 - 2 km,  
Recirculation delay line: 5 km to 50 km

#### Calibrated quantities and uncertainties (\*)

Lead-in and delay line lengths  $L_i$   
 $U_{L_i} = (0.005 + 1 \cdot 10^{-5} \cdot L_i)$  m (singlemode)  
 $U_{L_i} = (0.01 + 5.8 \cdot 10^{-4} \cdot L_i)$  m (multimode)

#### Wavelength domain

1200 nm - 1650 nm, other domains on request

#### Connectors

Flat or angled, with Multipurpose Adapter System.  
Available adapters: E-2000, FC, SC, ST.

Pigtails version also available

(\*) These values correspond to typical uncertainties, which may vary depending on fibre type and length.

### Ordering Information: DSCS – a – b – c/x – d/x

a fibre type	b Lead-in fibre length in kilometer	c Recirculating Delay line length in km	Input connector type	x
G652, G651_50 G651_62.5			FC-PC FC-UPC FC-APC E2000	x=A: universal adapter x=P: fixed pigtail, length 2 m.