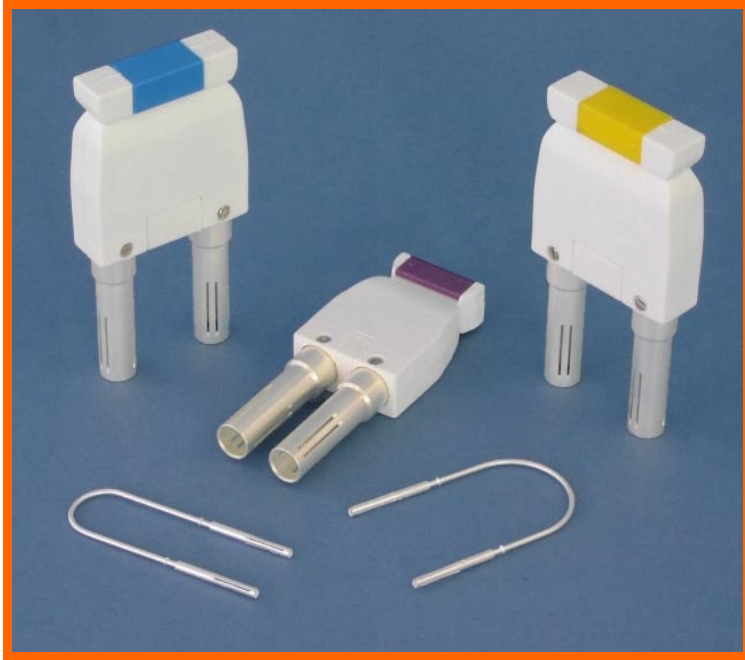


Serial Digital and HDTV MUSA U-Link

MUL 101 – MUL 110
MUL 201 – MUL 210



- ◆ **ONE-PIECE TURNED CENTRE CONTACT FOR RELIABILITY**
- ◆ **PRECISION-ENGINEERED COMPONENTS FOR MECHANICAL FEEL**
- ◆ **HANDLING CAPABILITY TO 5.0 GHz TO COVER 7TH HARMONIC SIGNALS**
- ◆ **INDEPENDENTLY TESTED BY DERA**

Bryant Broadcast & Data Communications re-invent the MUSA U-Link.

Bryant Broadcast & Data Communications have designed a range of MUSA U-Links, which increase the signal handling capacity to include HDTV signals.

The MUSA connector was originally designed for a 50 Ohm interface. Our design aim was for closer normalisation to 75 Ohm whilst maintaining full interface compatibility with existing MUSA products. Looking at the Return Loss (S_{11}) and Insertion Loss (S_{21}) graphs overleaf, the plots show a marked improvement over any product available to date in terms of the reduction of losses and the increase in operating bandwidth. Basic Fourier analysis of a square-wave signal shows that, in the frequency domain, the fundamental plus the odd harmonics are used to regenerate the signal (e.g. $f + 0.333f_3 + 0.2f_5 + 0.14f_7 + \dots$). A standard rule of thumb is that for reasonable signal fidelity the fundamental plus the harmonics up to the 7th are included in the pass-band. Therefore, the measurements were extended to 5GHz to give a closer idea of the response likely for the 7th harmonic. It would not be sensible to extend the measurements further due to limitations of the BNC coupling mechanism.

The S_{21} plot shows that the absolute maximum insertion loss for 2 adaptors and a U-link is around 1.5dB. At the fundamental and odd harmonics, this reduces to typically 0.6dB for the complete combination – a credible performance indeed.

MUL 101 – MUL 110 MUL 201 – MUL 210 Digital Video U-Links

Precision Engineered MUSA U-Links designed for reliability, feel, and unsurpassed signal handling, whilst retaining compatibility with existing analogue and Serial Digital MUSA patchbays. When combined with Bryant Broadcast's panel mount MUSA/BNC adaptors, signals up to HDTV can be accommodated.

SIZES	Available in both 1U and 2U.
CENTRE CONTACT	Precision machined, one-piece, Silver-plated centre contact.
CHASSIS	Die-Cast Zinc Alloy body.
OUTER CONTACTS	Precision machined, Silver-plated outer contacts.
BODY	Moulded white Nylon two-piece body with security clip.
IDENTIFICATION	Coloured identification clips available in 10 colours.
SIGNAL HANDLING	Analogue, Serial Digital and HDTV video signals.
OPERATING TEMPERATURE	0°C to +45°C
DIMENSIONS & WEIGHT	Length: 83mm, width: 13mm, height (1U): 31mm (2U): 44mm, weight (1U): 51g (2U): 62g.
TESTING	Independent tests were carried out in the UK Standards Laboratory for Electromagnetic Measurement at the Defence Evaluation & Research Agency.

