Assembly classes

HUBER+SUHNER cable assemblies stand for PERFORMANCE and RELIABILITY

Features

- Aavailable in 3 singlemode attenuation classes to meet different customer requirements
- Full ceramic ferrules as a base for highest performance and reliability
- Optimized products and assembling processes due to HUBER+SUHNER in-house connector and cable development and manufacturing
- Outstanding mechanical and thermal strengths exceeding requirements of international standards

Singlemode 0.1 dB class

Applications

Attenuation

 $[L^{1})$

RL

- Long haul transmissions, saving costs for signal amplification
- Low loss budget transmissions
- Transmissions where uniform channel losses are required
 - Splice alternative

each-to-each measuring

IEC 6100-3-34

IEC 61300-3-6

97%

mean

PC

UPC

APC

Compatibility



Singlemode high-end class

Applications CATV / Video

- Passive Optical Networks PON
- WDM /DWDM

- All connectors are ٠ tuned
- Fiber according to ITU-T G.652-D IEC 60793-2-50
- Premium ferrule

against reference measuring

0.15 dB

IEC 61300-3-4

max.

Compatibility

All connectors are tuned acc. to IEC 61755-3-1/2, Grade B



Attenuation

	each-to-each measuring		against reference measuring		
L ¹⁾	IEC 61300-3-34 97% mean	0.25 dB 0.12 dB	IEC 61300-3-4 max.	0.35 dB	
RL	IEC 61300-3-6 PC UPC APC	> 45 dB > 50 dB > 85 dB ²⁾			

0.15 dB

0.06 dB

> 45 dB

> 50 dB

> 85 dB²⁾

Please note: 0.1dB Assemblies have max. losses lower than today's measurement accuracy in the field. Measurement equipment (power meter/OTDR) and measurement set-up, reference cables and adapters, environmental conditions and dirt easily cause measurement uncertainities of > 0.2 dB. Reliable and reproducible measurements at accuracies below 0.1 dB are feasible under laboratory conditions only.

• Fiber according to

ITU-T G.652-D IEC 60793-2-50

> 1) at 1310 nm ²⁾ measurement method 3 (OLCR)

Assembly classes

Singlemode LAN-Eco Class

Applications

- Universal premises cabling according to ٠ IS 11801, EN 50173-1, EIA/TIA 568
- Cost effective connections in PON •
- FTTX, Data center •

Compatibility

- Connectors are not ٠ tuned ٠ Fiber according to
- ITU-T G.652-D IEC 60793-2-50



Multimode HQ

Attenuation

	each-to-each measuring	against reference measuring		
1L1)	IEC 61300-3-34 97% mean	0.45 dB 0.20 dB	IEC 61300-3-4 max.	0.35 dB
RL	IEC 61300-3-6 PC UPC APC	> 45 dB > 50 dB > 85 dB ²⁾		

Applications

- Universal premises cabling according to • IS 11801, EN 50173-1, EIA/TIA 568 ٠
- FTTX, Data center

Compatibility

• Fiber according to ITU-T G.651 IEC 60793-2-10



Attenuation

	each-to-each measuring		against reference measuring		
1[³)	IEC 61300-3-34 97% mean	0.50 dB 0.20 dB	IEC 61300-3-4 max.	0.35 dB	
RL	IEC 61300-3-6	> 35 dB			

¹⁾ at 1310 nm ²⁾ measurement method 3(OLCR) ³⁾ at1300 nm, Launch conditions acc. IEC 61300-1

Assembly classes



Full ceramic ferrule

HUBER+SUHNER connectors feature full ceramic ferrules.

Only high precision full ceramic ferrules with tightest dimensional tolerances can ensure best possible optical performances as well as

- Reliability
- Stability (chemical, thermal, mechanical)
- Reproducibility
- Compatibility



Endface geometry

Tight endface geometry tolerances guarantees the customer a reliable and reproducible quality and long term behaviour. Interferometric ferrule endface inspection is mandatory for controlled and mastered manufacturing processes. Upon request a Quality Control Report can be issued for each assembled connector.

(Illustration offered by Data-Pixel, France)

Parameters: ferrule end face geometry for SM connector according to IEC 61755-3-1/2

Fiber position	Undercut	Protrusion	
riber position	according to formula	100 nm	
Apex offset	≤ 70 µm		
Radius	5 - 30 mm 5 - 12 mm		PC APC

Assembly length tolerances

Up to [m]	0.5	1	2	5	10	20	> 20
Tolerance 0 cm / +	4 cm	6 cm	10 cm	20 cm	30 cm	40 cm	2 %

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