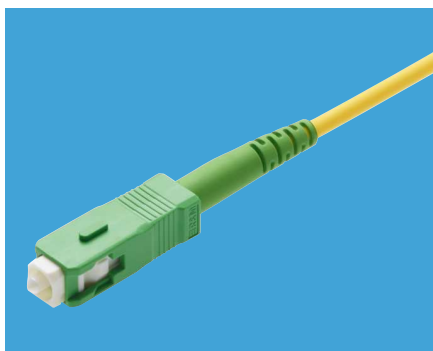




- Our Connectors are the key components for a low loss, broad-band data transmission in fiber optic networks.
- The constantly growing demand for higher data transmission capacities places exceptionally stringent qualitative criteria on present and future telecommunication networks. Interconnectivity components are the key for powerful fiber optic networks.
- Mechanical, optical and geometrical precision are the quality features necessary to reduce transmission losses to an absolute minimum at fiber transition. Our SM connectors are tuneable in 60° steps. Independent of the Grade all assemblies are 100% tested. Constant Quality Control ensures best performance.
- All tests on SC connectors are done according to IEC 61753-1-1 Category U – uncontrolled environment.

## Technical data sheet connector

### Performance according IEC 61753-1

| Optical performance, IL                             | Grade A* | Grade B  | Grade C  | Grade D  |
|-----------------------------------------------------|----------|----------|----------|----------|
| Insertion loss (IL) 97%<br>IEC 61300-3-34           | ≤ 0.15dB | ≤ 0.25dB | ≤ 0.50dB | ≤ 1.00dB |
| Insertion loss (IL) typical value<br>IEC 61300-3-34 | ≤ 0.07dB | ≤ 0.12dB | ≤ 0.25dB | ≤ 0.50dB |

Grade-A\* is not fully defined in IEC 61753-1.

| Optical performance, IL                             | Grade Am* | Grade Bm* |
|-----------------------------------------------------|-----------|-----------|
| Insertion loss (IL) 100%                            | ≤ 0.25dB  | ≤ 0.50dB  |
| Insertion loss (IL) 95%<br>IEC 61300-3-34           | ≤ 0.15dB  | ≤ 0.25dB  |
| Insertion loss (IL) typical value<br>IEC 61300-3-34 | ≤ 0.10dB  | ≤ 0.15dB  |

Grade-Am\*/Bm\* is not fully defined in IEC 61753-1.

| Optical performance, RL           | Grade 1                        | Grade 2 | Grade 3 | Grade 4 | Grade 5 |
|-----------------------------------|--------------------------------|---------|---------|---------|---------|
| Return loss (RL)<br>IEC 61300-3-6 | ≥ 60dB mated<br>≥ 55dB unmated | ≥ 45dB  | ≥ 35dB  | ≥ 26dB  | ≥ 20dB  |

### Performance according definition R&M

| Definition IL / RL @ R&M                         | Grade A*/1 | Grade A*/2   | Grade B/1 | Grade B/2    | Grade C/1 |
|--------------------------------------------------|------------|--------------|-----------|--------------|-----------|
| Insertion loss (IL) 97%                          | ≤ 0.15dB   | ≤ 0.15dB     | ≤ 0.25dB  | ≤ 0.25dB     | ≤ 0.50dB  |
| Insertion loss (IL) typical value                | ≤ 0.07dB   | ≤ 0.07dB     | ≤ 0.12dB  | ≤ 0.12dB     | ≤ 0.25dB  |
| Return loss (RL) 500x mating's                   | ≥ 80dB     | ≥ 50dB       | ≥ 65dB    | ≥ 45dB       | ≥ 60dB    |
| Typical value UPC=first 10 mating's              | ≥ 90dB     | ≥ 55dB (UPC) | ≥ 85dB    | ≥ 55dB (UPC) | ≥ 80dB    |
| Laser power, mated<br>IEC 61300-2-14, 500h, 23°C | ≤ 2W       | ≤ 300mW      | ≤ 1W      | ≤ 300mW      | ≤ 500mW   |

| Definition IL / RL @ R&M                         | Grade C/2    | Grade D/3 | Grade Am/2                 | Grade Bm/3                 |
|--------------------------------------------------|--------------|-----------|----------------------------|----------------------------|
| Insertion loss (IL) 97%                          | ≤ 0.50dB     | ≤ 1.00dB  | ≤ 0.25dB <sub>(100%)</sub> | ≤ 0.50dB <sub>(100%)</sub> |
| Insertion loss (IL) typical value                | ≤ 0.25dB     | ≤ 0.50dB  | ≤ 0.10dB                   | ≤ 0.15dB                   |
| Return loss (RL) 500x mating's                   | ≥ 45dB       | ≥ 35dB    | ≥ 45dB                     | ≥ 35dB                     |
| Typical value UPC=first 10 mating's              | ≥ 55dB (UPC) | ≥ 45dB    |                            |                            |
| Laser power, mated<br>IEC 61300-2-14, 500h, 23°C | ≤ 300mW      |           |                            |                            |

## Mechanical properties

| Criteria                     | Date / value                                                                      | Standard       |
|------------------------------|-----------------------------------------------------------------------------------|----------------|
| Mating durability            | 500x minimum                                                                      | IEC 61300-2-2  |
| Cable retention              | 100N, 120s                                                                        | IEC 61300-2-4  |
| Fiber (Pigtail) retention    | 5N, 60s                                                                           | IEC 61300-2-4  |
| Vibration                    | 10-55Hz, 1 oktave / min.<br>3 axis of 15 cycles, 0.5h / axis<br>amplitude 0.75 mm | IEC 61300-2-1  |
| Repeated bending patch cable | 100 cycles -90° / 0° / +90° / 0°<br>Load = 5N                                     | IEC 61300-2-44 |
| Repeated bending pigtail     | 100 cycles -90° / 0° / +90° / 0°<br>Load = 0.2N                                   | IEC 61300-2-44 |
| Drop                         | 1.5 m, 5 times                                                                    | IEC 61300-2-12 |
| Static side load patch cable | 1N, 1h                                                                            | IEC 61300-2-42 |
| Static side load pigtail     | 0.2N, 5 min.                                                                      | IEC 61300-2-42 |

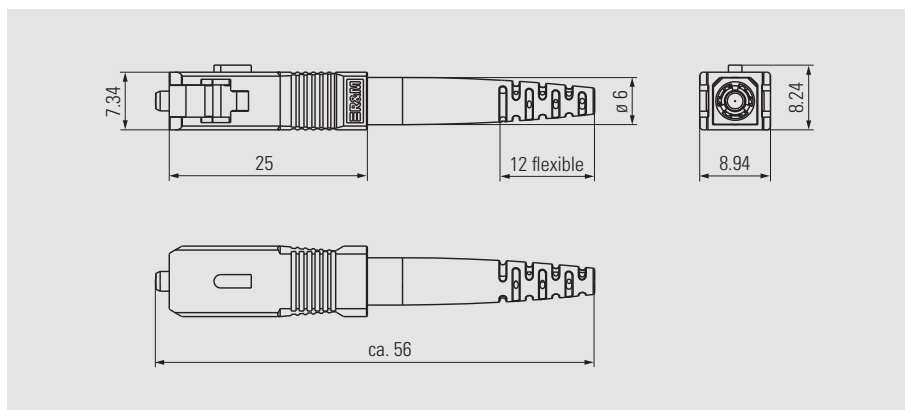
## Climatic class

| Criteria              | Date / value              | Standard       |
|-----------------------|---------------------------|----------------|
| Cold                  | -25°C, 96h                | IEC 61300-2-17 |
| Dry heat              | +70°C, 96h                | IEC 61300-2-18 |
| Change of temperature | -25°C to +70°C, 12 cycles | IEC 61300-2-22 |

## Long term endurance

| Criteria        | Date / value      | Standard       |
|-----------------|-------------------|----------------|
| Heat resistance | +70°C, 1000h      | IEC 61300-2-18 |
| Damp heat       | +40°C at 93%, 96h | IEC 61300-2-19 |

## Dimensions simplex connector



## Technical data sheet adapter

### Performance according IEC 61753-1

| Optical performance, IL                 | Grade B | Grade C | Grade D         | Grade M | Grade N         |
|-----------------------------------------|---------|---------|-----------------|---------|-----------------|
| Sleeve material                         | Ceramic | Ceramic | Phosphor bronze | Ceramic | Phosphor bronze |
| Insertion loss (IL) delta IEC 61300-3-4 | 0.1dB   | 0.2dB   | 0.3dB           | 0.2dB   | 0.3dB           |

### Mechanical properties

| Criteria          | Date / value | Standard      |
|-------------------|--------------|---------------|
| Mating durability | 500x minimum | IEC 61300-2-2 |
| Pull out force    | 70N          | IEC 61300-2-6 |

### Climatic class

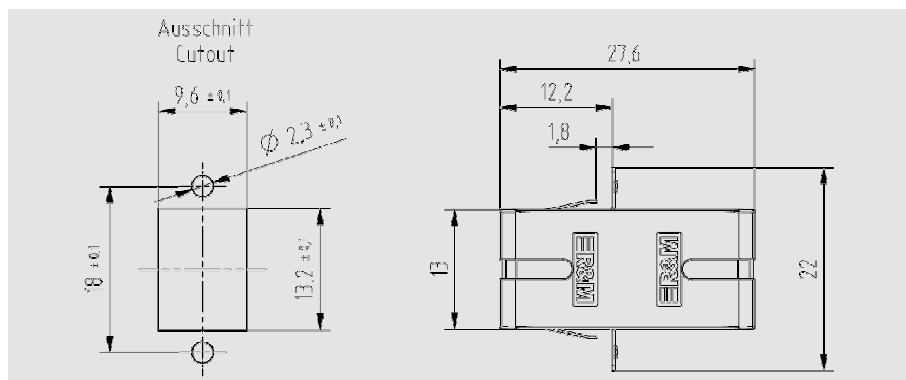
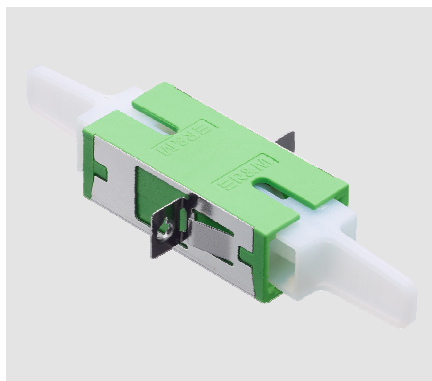
| Criteria              | Date / value              | Standard       |
|-----------------------|---------------------------|----------------|
| Cold                  | -25°C, 96h                | IEC 61300-2-17 |
| Dry heat              | +70°C, 96h                | IEC 61300-2-18 |
| Change of temperature | -25°C to +70°C, 12 cycles | IEC 61300-2-22 |

### Long term endurance

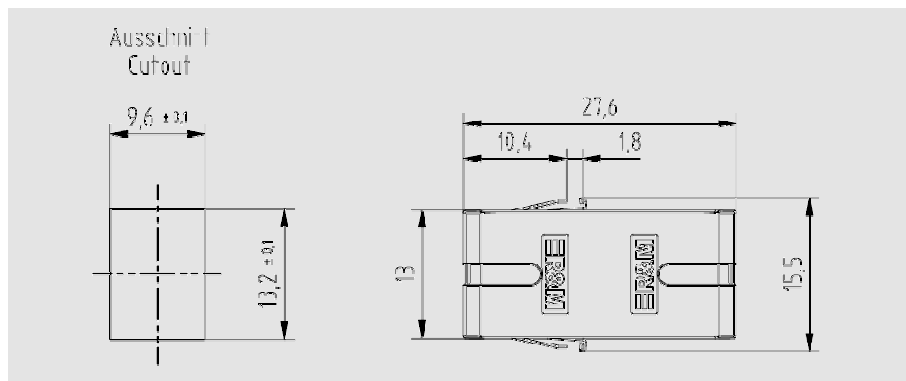
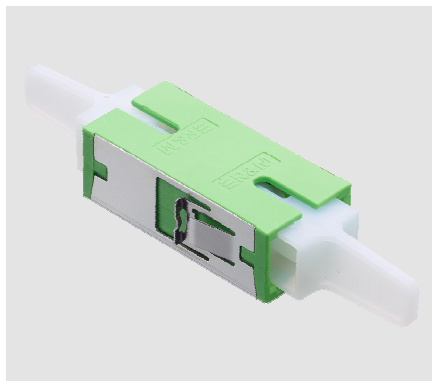
| Criteria        | Date / value      | Standard       |
|-----------------|-------------------|----------------|
| Heat resistance | +70°C, 1000h      | IEC 61300-2-18 |
| Damp heat       | +40°C at 93%, 96h | IEC 61300-2-19 |

### Dimensions simplex adapters

SC screw able

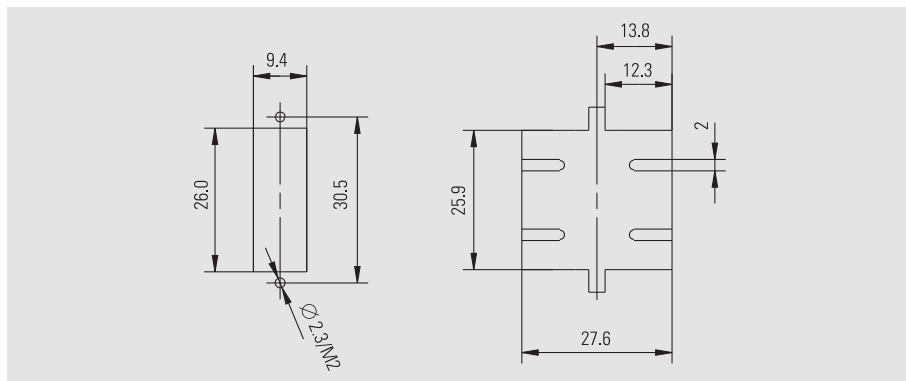
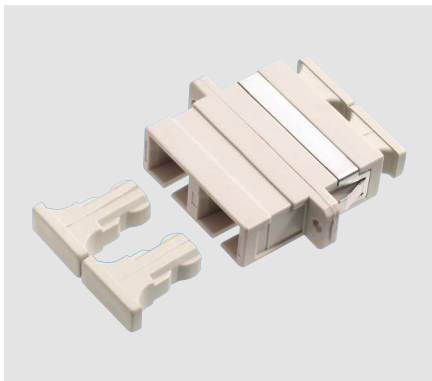


SC flangeless



## Dimensions duplex adapters

### SC-Duplex screw able



### SC-Duplex flangeless

