

# Qualified Partner Programme QPP

Fiber Optic Products - The VISIONsystem

Felice Guarna

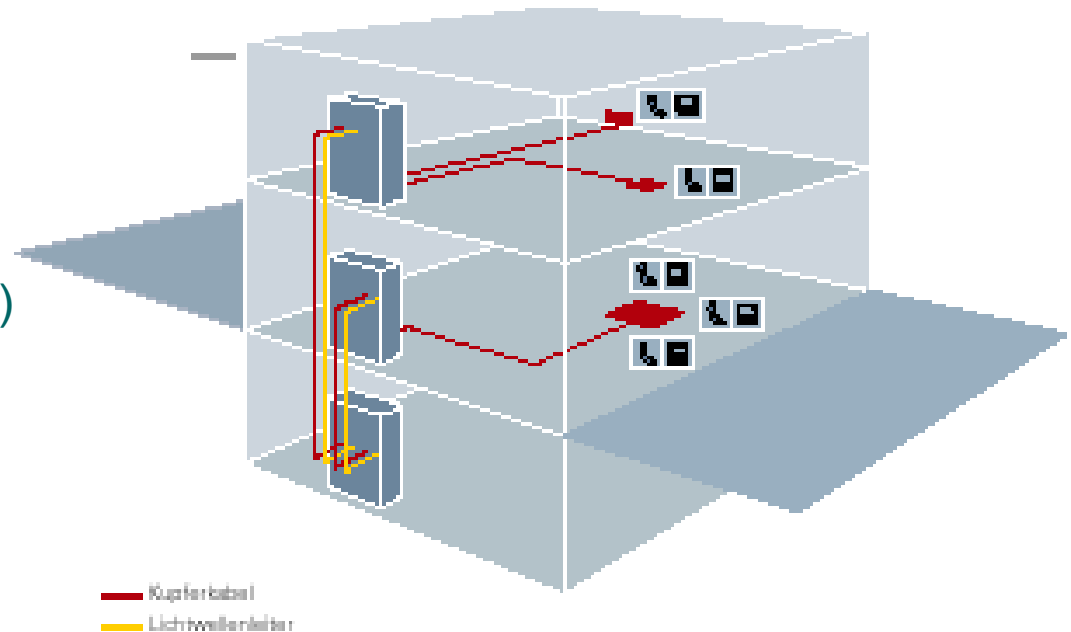


Convincing cabling solutions

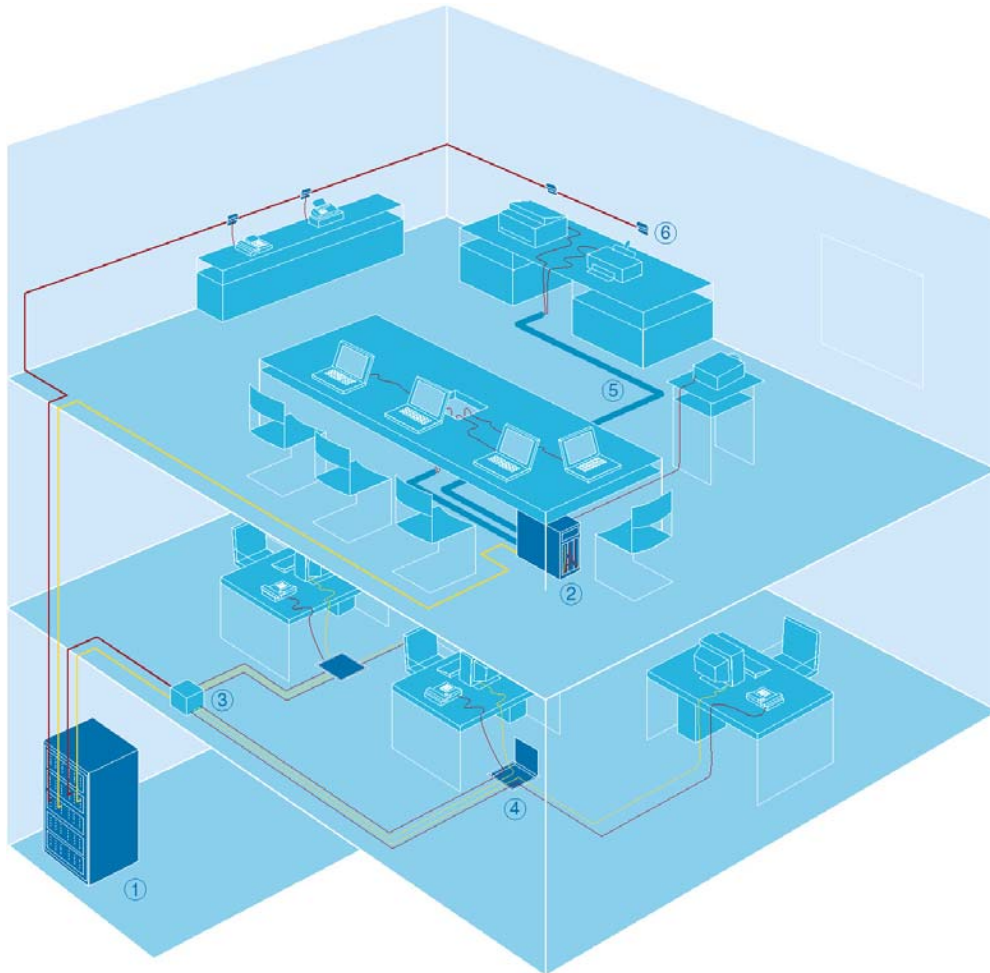
# VISIONsystem

## The good old Days

- Universal structured cabling
- From the building distributor with Fiber and/or copper cables to the floor distributor (secondary cabling)
- The workstations are cabled with twisted pair copper cables (horizontal cabling)



# VISIONsystem



- ① Building distributor
- ② SOHO tower
- ③ Transition point
- ④ MUTO
- ⑤ Flexible duct
- ⑥ Wall outlet

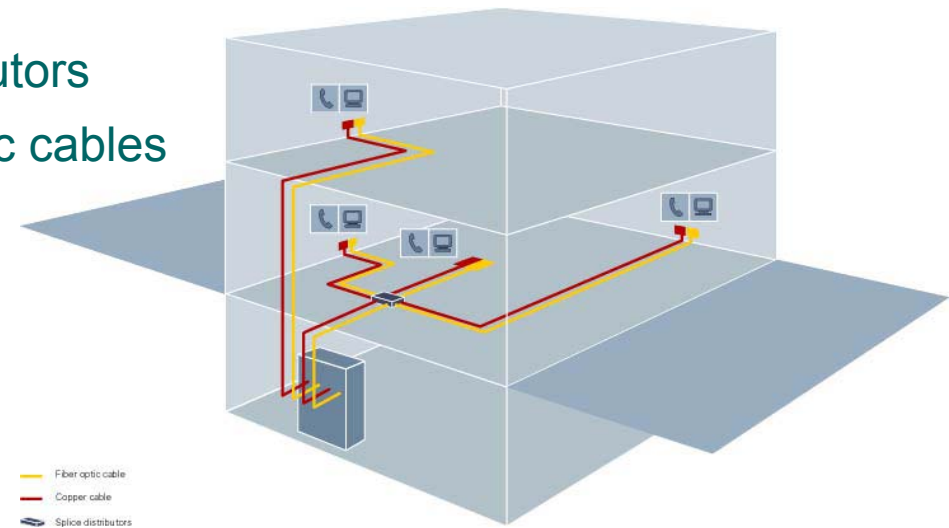
## Products:

- Fiber Optic cables
- Patch panels
- Wall outlets
- Adapters
- Patch cords
- Tool
- Connectors
  - Field terminable
  - Manufacturing made

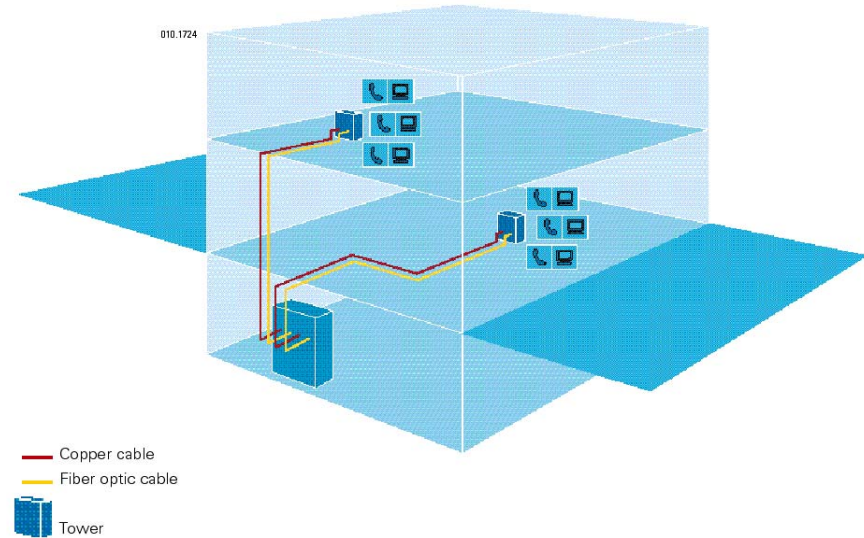
# Fiber systems

## Collapsed backbone

- Single point of administration
- The connection points are directly cabled from the building distributor
- "Fiber to the desk" configuration
- Renunciation of conventional floor distributors
- Cabling is done exclusively with fiber optic cables
- Voice over multi pair cables



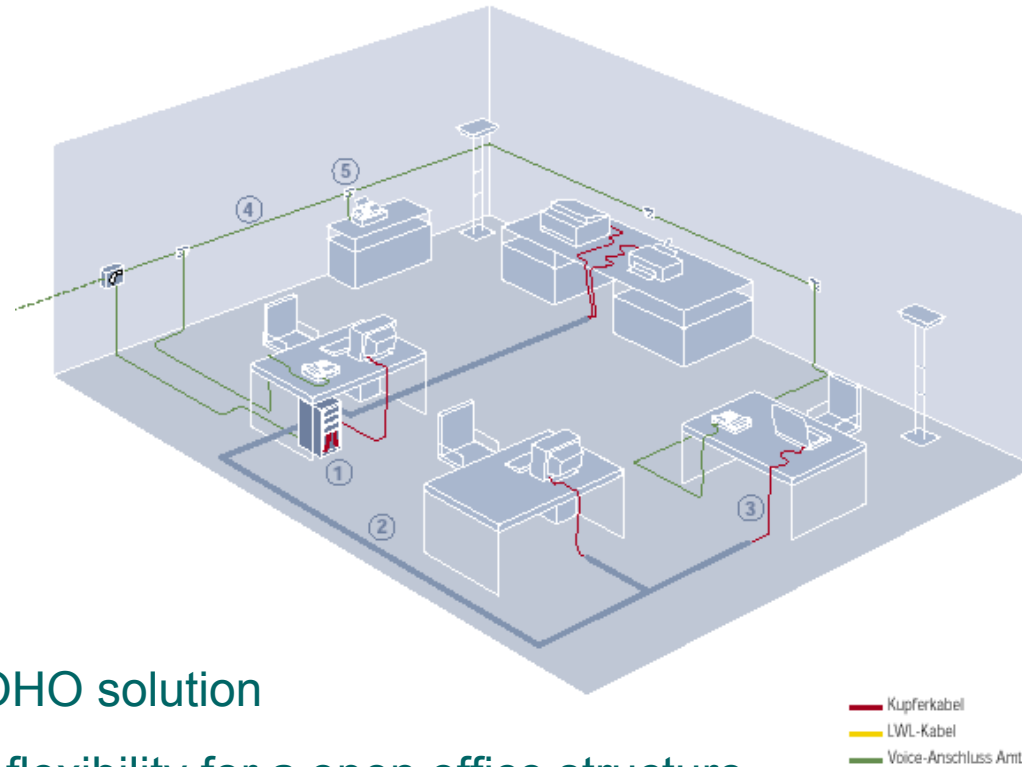
# Fiber systems



## Extended backbone

- Small number of working stations are summarized to a tower
- "Fiber to the office" configuration
- "Open office structure" most flexible cabling to working areas
- Voice integration over multi pair cables

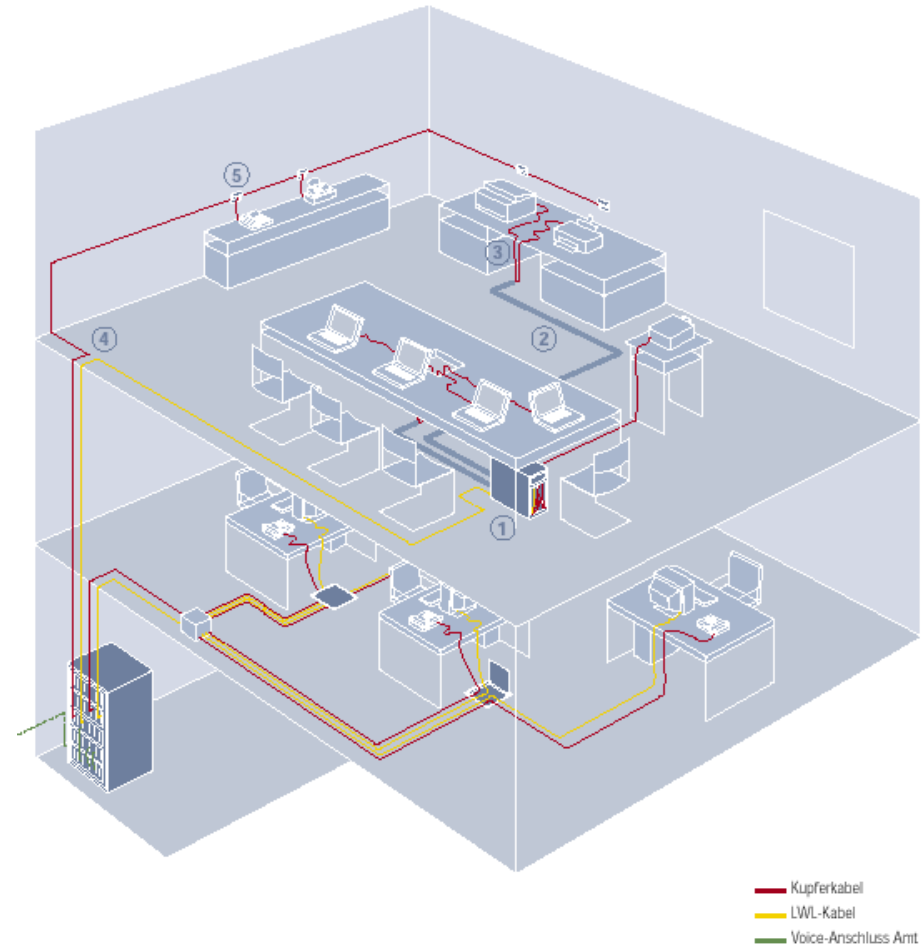
# Scenario 1 "Small Office"



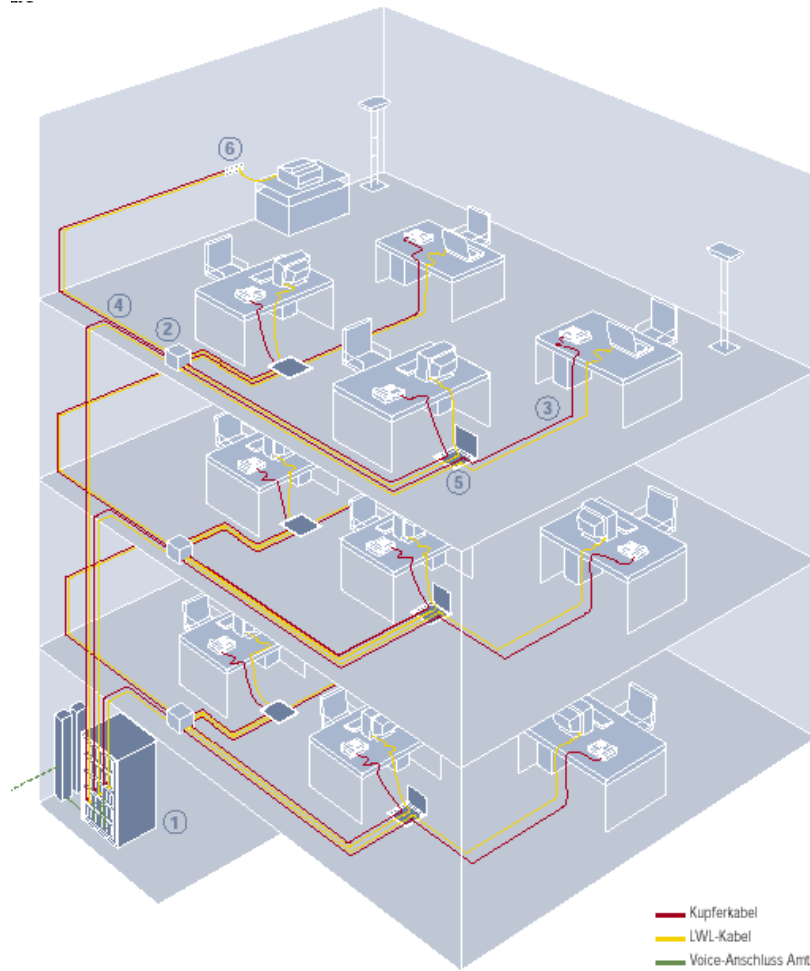
- The ideal SOHO solution
- Maximum of flexibility for a open office structure
- Ateliers, small offices, doctors offices, etc.

# Scenario 2 "Flexible Extension"

- The perfect solution for extensions
- Extended backbone solution with the maxiCase 48
- The size of a maxiCase 48 is enough to accommodate active equipment and a patch field



# Scenario 3 "Cabled Office"

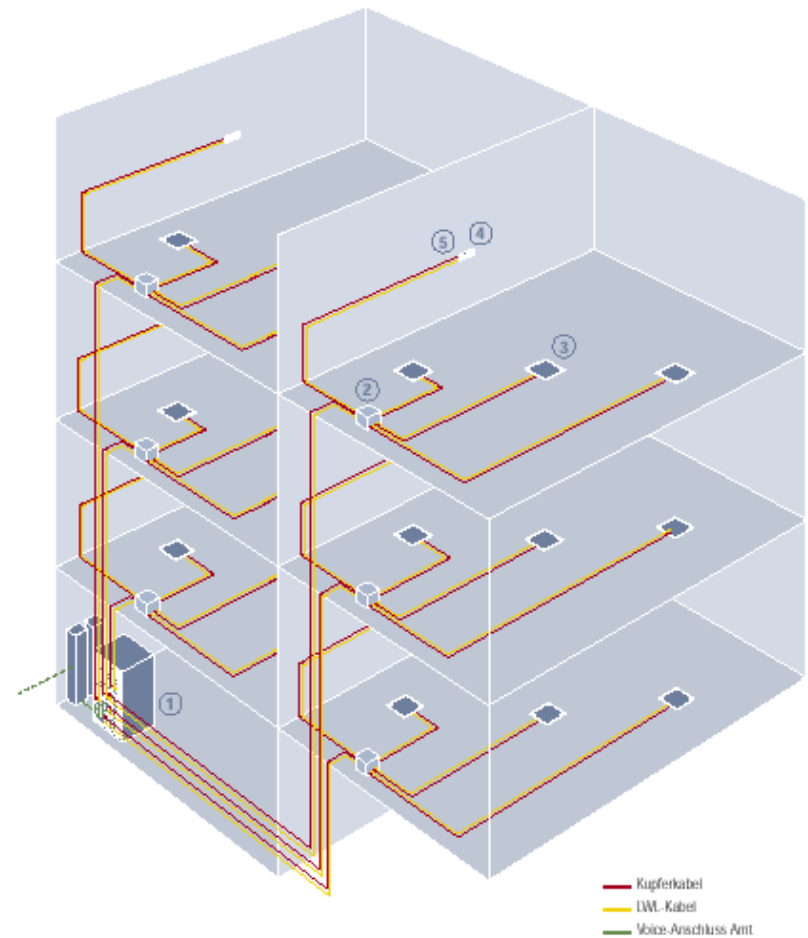


- "Collapsed backbone" structure
- Distribution of the bigger sized backbone cables to smaller sized cables
- Single point of administration structure simplifies the maintenance tremendously



# Scenario 4 "Large-scale Enterprise"

- The perfect solution with "Collapsed backbone" structure
- Distribution box on floors
- Single point of administration structure simplifies the maintenance tremendously



# Patch panel

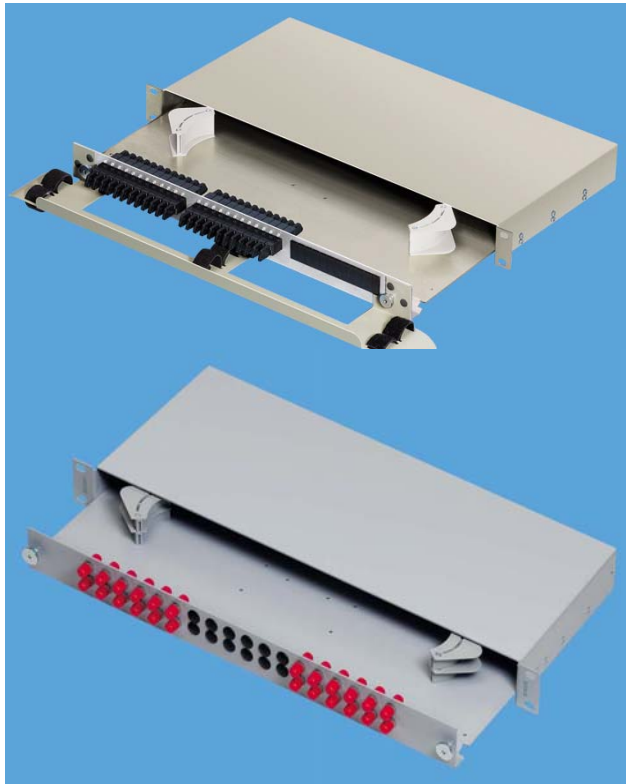


mounting depth 230 mm

## Fiber easy Rack

- Up to 24 terminations
- connector types:
  - LSH
  - SC-RJ, SC Duplex, SC Simplex
  - MT-RJ
  - ST
- sliding panel
- recessed slide-in unit (0-55 mm)
- integrated patch guide optional
- guaranteed minimum radius of 40 mm
- labeled front plate
- easy maintenance

# Patch panel

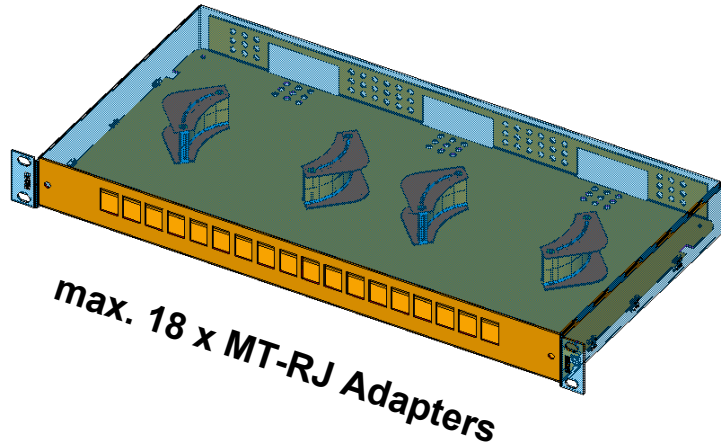


mounting depth 230 mm

## Fibereasy36

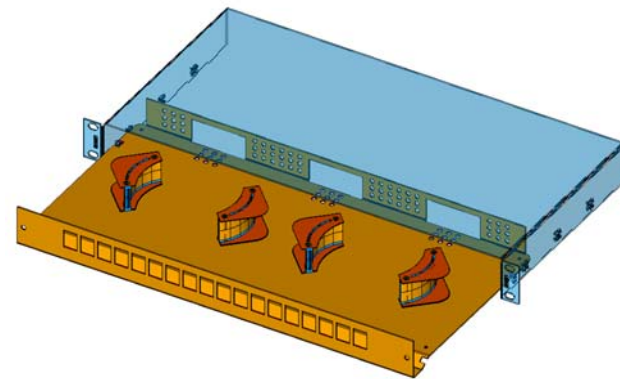
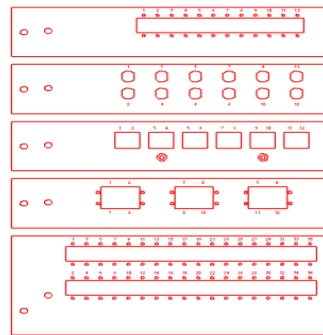
- up to 36 terminations
- **Connector types:**
  - LSH
  - SC-RJ, SC Duplex, SC Simplex
  - MT-RJ
  - ST
- for breakout or splicing
- sliding panel
- integrated patch guide optional
- guaranteed minimum radius of 40 mm
- cable entry only from the back
- inexpensive solution

# Patch panel



## Fibereasy36 (breakout)

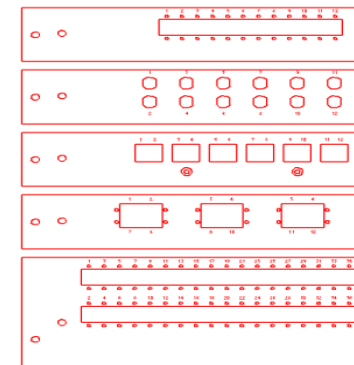
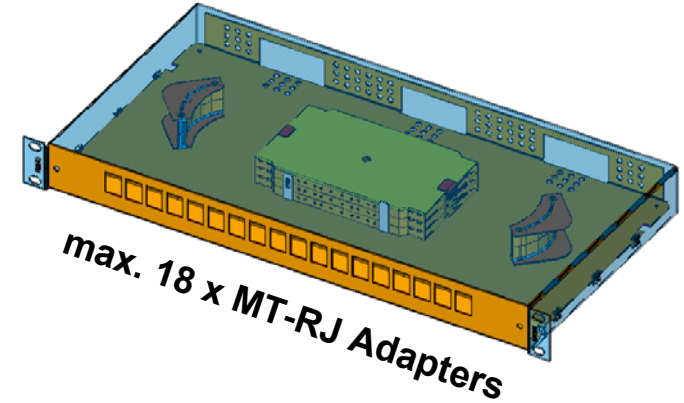
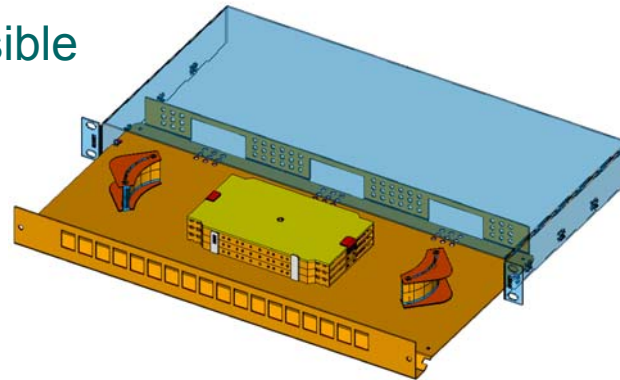
- cable entry and fixation on the tray
- 2 bending limiter
- additional limiter optional
- recessing not possible



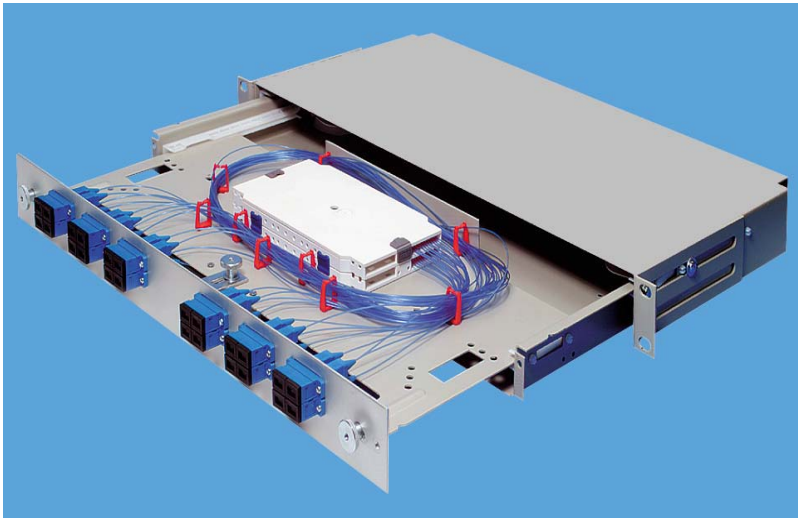
# Patch panel

## Fibereasy36 (Splice)

- cable entry and fixation on the tray
- 2 bending limiter
- splice trays has to be ordered separately
- recessing not possible



# Patch panel



## UniRack

- up to 24 terminations
- **Connector types:**
  - LSH
  - SC-RJ, SC Duplex, SC Simplex
  - ST
- easy to splice, even when installed
- sliding panel
- cable and pigtail management on separated levels
- integrated patch guide optional
- guaranteed minimum radius of 30 mm
- cable entry from the back or the side
- recessed slide-in unit (0-55 mm)

# Patch panel

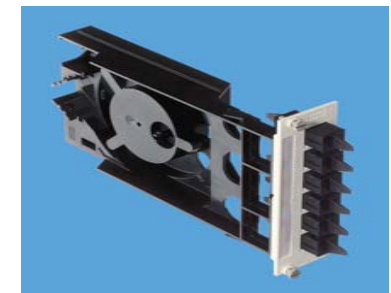
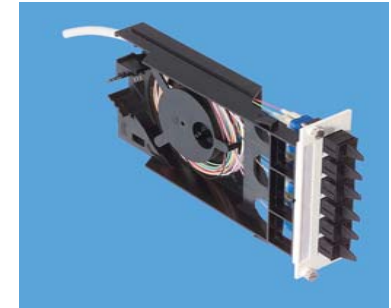
## Fiberliner (3U insertion module)

- up to 12 terminations
- connector types  
ST, SC, SC Duplex, LSH, SC-RJ, MT-RJ und FC/PC
- integrated over length storage for pigtails, riser, or breakout cables
- bending radius > 30 mm guaranteed
- cable entry 45° or 90°
- for LAN and WAN applications

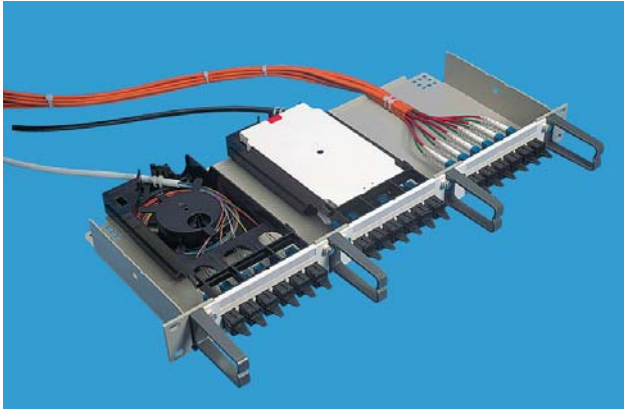
**max. 6 MT-RJ adapters**



Convincing cabling solutions



# Patch panel



## Fiberliner panels

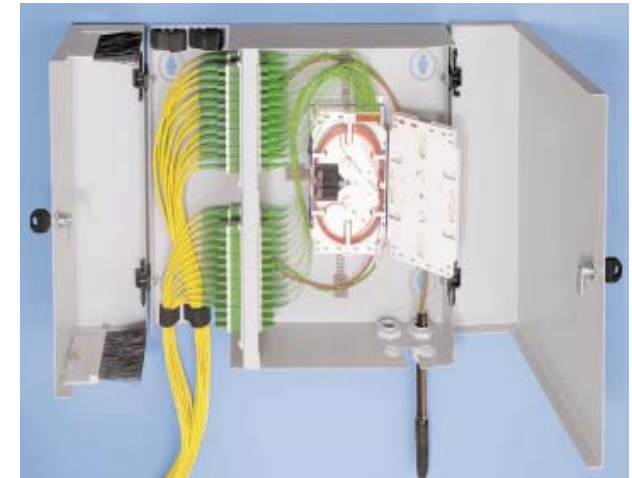
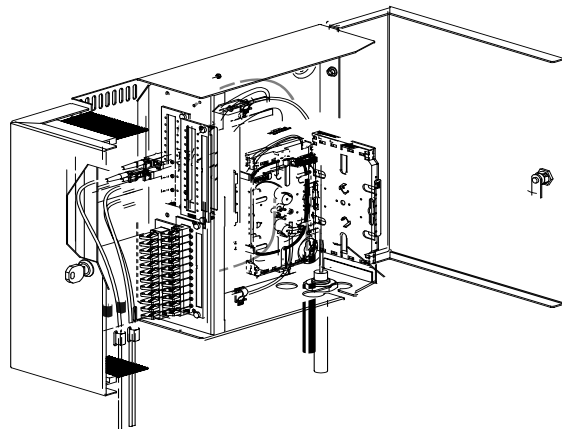
- 1U SubRack
  - Up to 36 terminations
- 3U "Global" SubRack
  - Up to 120 terminations
- modular set up
- mixable with copper insertion modules
- integrated cable support (only the copper global SubRack)



# Floor distributor

## R&M FiberCon48

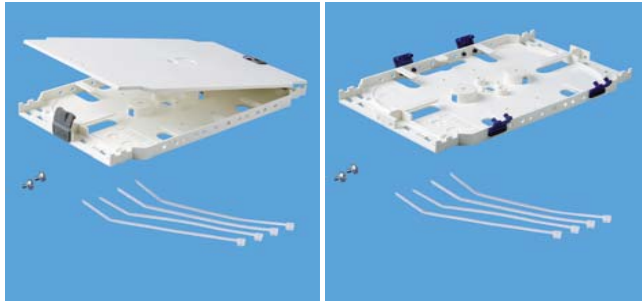
- up to 96 fiber optic terminations
- Patch field is to build up modular (max. 48 terminations)
- separated patch and cable area
- doors are individual lockable
- robust stainless steel



Dimensions 330x405x100 mm

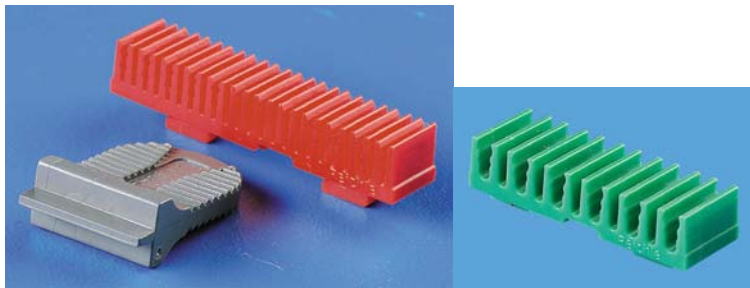
# Accessories

- splice trays (basic & extending set)



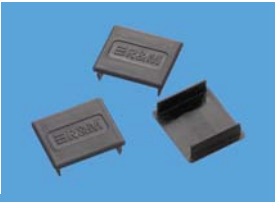
- splice holders
- splice protectors

(ANT, Fujikura, 3M)



- retention devices for pigtails

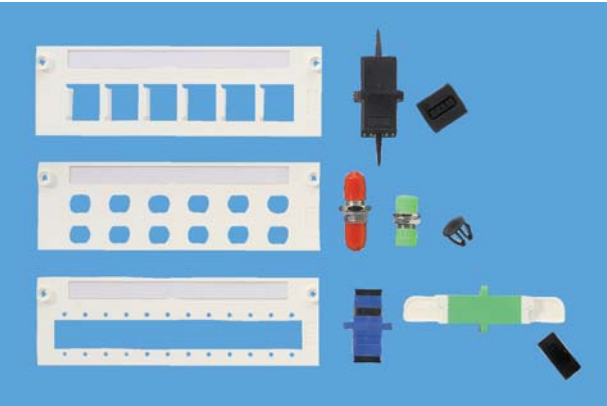
# Accessories



- dummy plugs



- tension relief belt

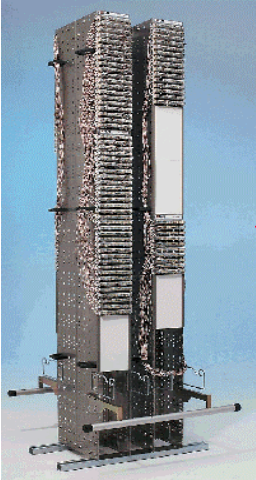


- adapter & front plates

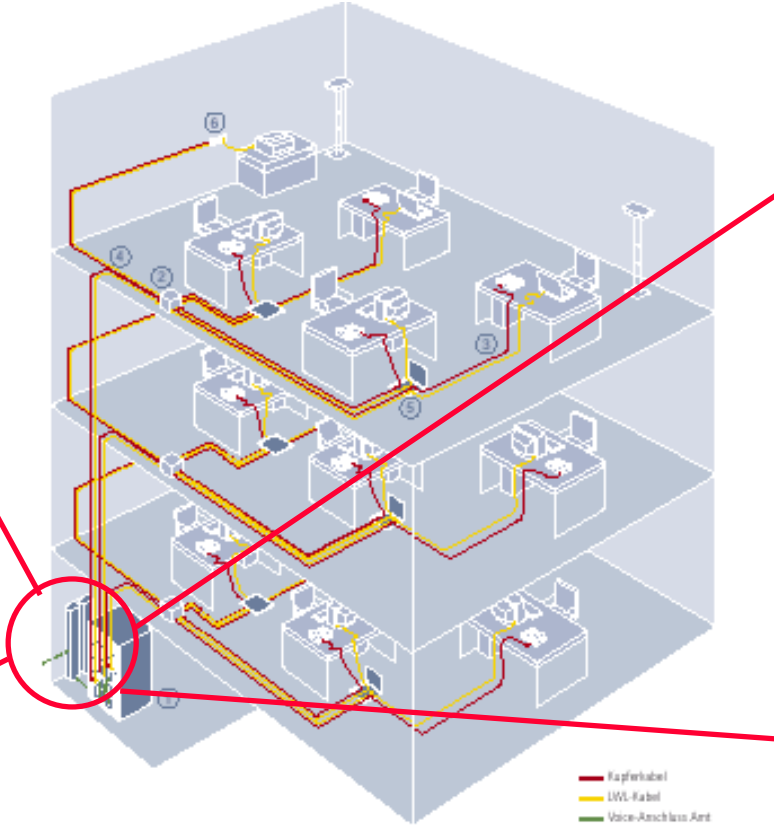


# Voice integration

Distribution frame vertical/vertical



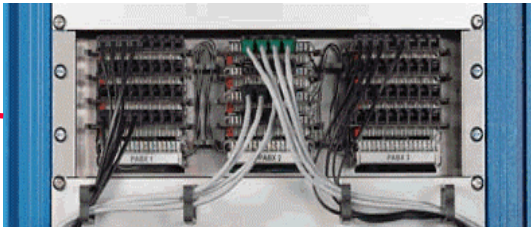
Wall distributor



Distribution boxes



19" Distribution panel



# Fiber Optic outlets



## FO Outlet 50x50 mm:

### Adapters:

- ST-duplex
- SC-duplex SM/MM
- MT-RJ duplex

### Advantages:

- compact outlets
- integrated cable management
- integrated retention device for cables
- protection cap for cable
- various mounting holders for different duct manufacturer
- various face plates:
  - 80x80 mm DIN-version
  - 80x86 mm and 88x88 mm Edizio-versions

# Fiber Optic outlets



mounting holder for outlet 50x50 mm/80x86 mm/8x88 mm:

Tehalit; all types

horizontal

Tehalit; all types

**vertical**

Ackermann; te li ko (WIK+ISS)

horizontal

Ackermann; te li ko (WIK+ISS)

**vertical**

Niedax; GK

horizontal

OBO/Bettermann; BBK, BBST, BBA,

horizontal

OBO/Bettermann; BS

horizontal

Rehau; Signo BK, BS, BA

horizontal

Nowa Plast; HS, BR, Alu, FB

horizontal

Nowa Past; BR PVC, BR Stahlblech

horizontal

Thorsmann; Inka with Thorsmann-Adap.

horizontal

Kleinhuis; System 670

Kleinhuis; HKL 601

Kleinhuis; GL 601

Kleinhuis; BS

Kleinhuis; BSA

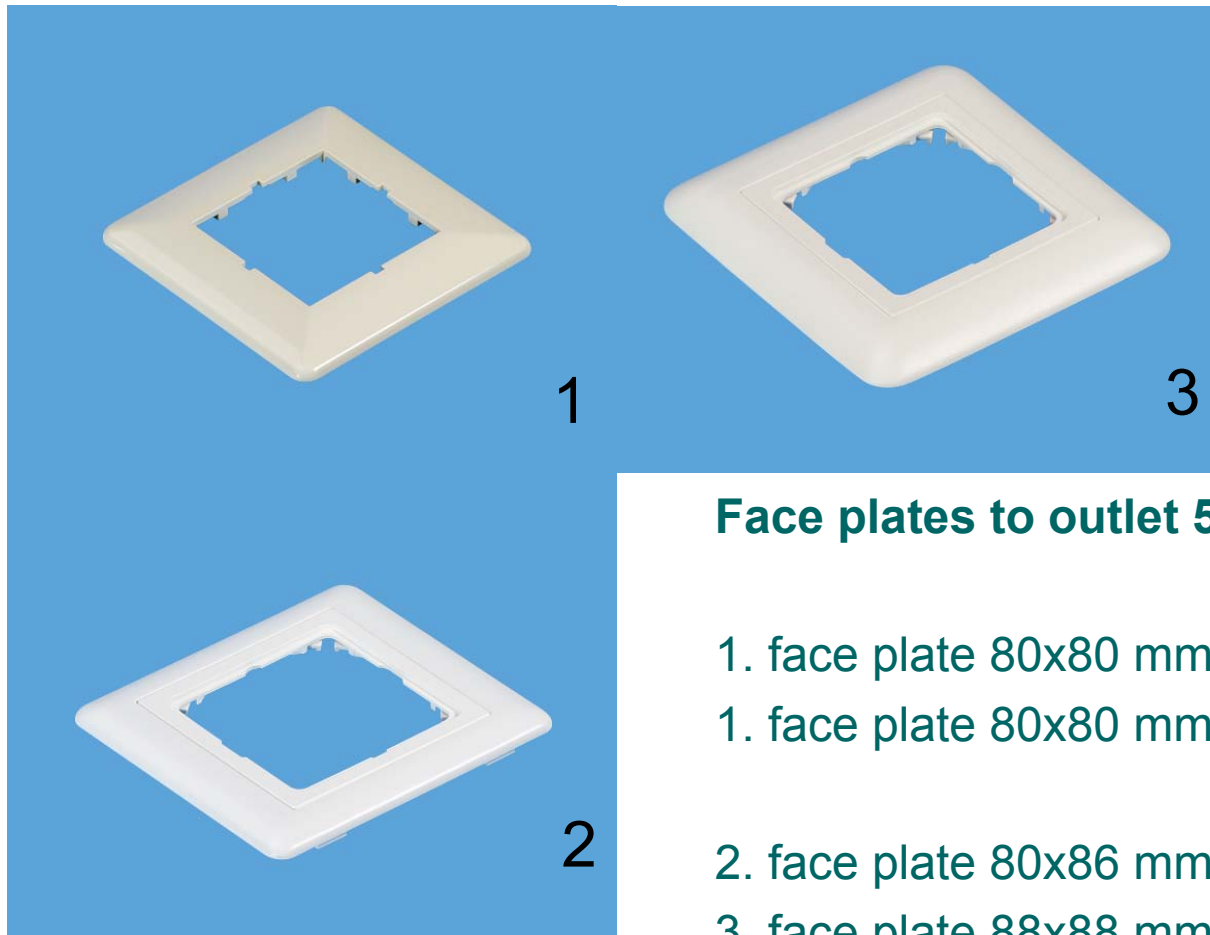
Kleinhuis; BST

Kleinhuis; BVS 90



Convincing cabling solutions

# Fiber Optic outlets



## Face plates to outlet 50x50 mm:

- 1. face plate 80x80 mm, RAL 1013, pearl white
- 1. face plate 80x80 mm, RAL 9010, pure white
- 2. face plate 80x86 mm, RAL 9010, pure white
- 3. face plate 88x88 mm, RAL 9010, pure white

# Fiber Optic outlets



## FO duct outlet:

### Adapters:

- ST SM / MM
- SC-Duplex SM / MM
- LSH SM / MM
- MT-RJ Duplex
- SC-RJ Snap-In

### Advantages:

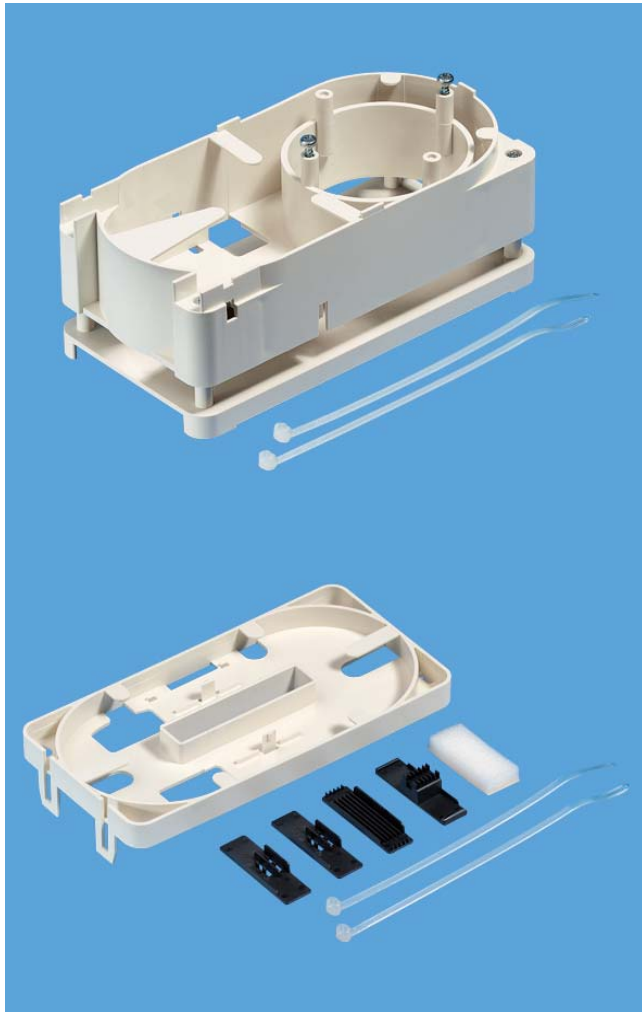
- compact outlet from 2 to 8 fibers
- suits into various duct types
- ideal for pre-assembled or field terminated cables
- various mounting holders for different duct suppliers
- in combination with the cable reservoir KR50/55 the outlet can be used as a small splice box



Convincing cabling solutions



# Fiber Optic outlets



## FO-cable reservoir:

### Cable reservoir:

- FO-KR55 cable reservoir
- FO-KR50 cable reservoir
- splice shelf to cable reservoir

### Advantages:

- useful completion to the FO duct outlet
- takes up cable over length of min. 4x1 m, by outer Ø3 mm)
- splice holder for 4-6 fusion- or mechanical splices incl. reserve
- guaranteed minimum bending radius according TIA/EIA568 A (>30 mm) at entry and exit side
- cable retention device at the entry point

### Usable for the following duct systems:

- Tehalit system BR with **FO-KR55 cable reservoir**
- Tehalit system FB with **FO-KR50 cable reservoir**
- Ackermann "te li ko" -installation ducts (WIK) or -pillars (ISS) and 110 mm face plate: with **LWL-KR55 cable reservoir**

# Fiber Optic outlets



## FO outlet U-GB (floor box module):

### Adapters:

- ST SM / MM
- SC-Duplex SM / MM
- LSH SM / MM
- MT-RJ Duplex
- SC-RJ Snap-In

### Advantage:

- compact outlet from 2 to 8 fibers
- suites to various floor box types
- ideal for pre-assembled or field terminated cables
- in combination with minibreakout cables up to 1 m reserve
- cable retention with cable ties

# Fiber Optic outlets



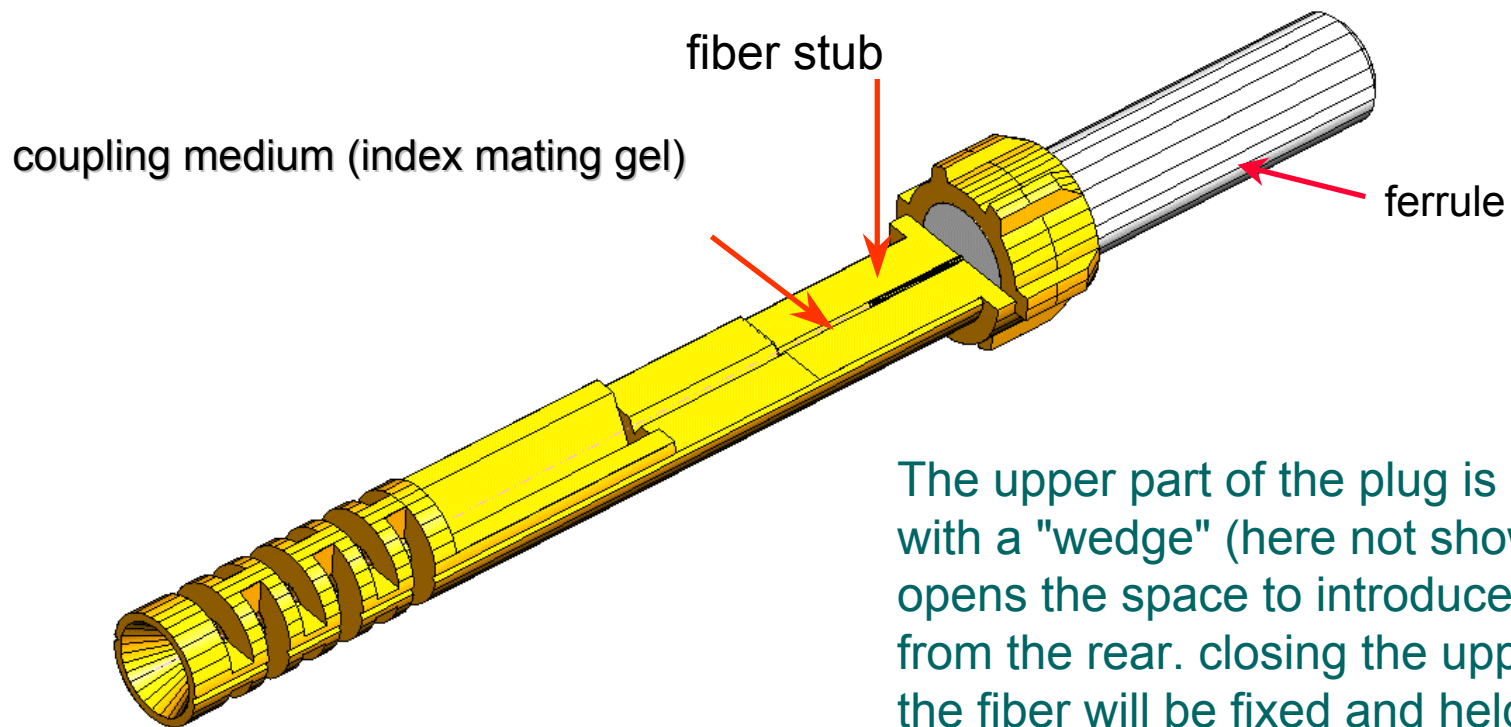
## FO outlet U-GB (floor box module):

suites to floor box modules of:

- Ackermann
- Niedax / Elektraplan
- OBO / Bettermann

# Connectors & adapters

## Principle "mechanical splice"

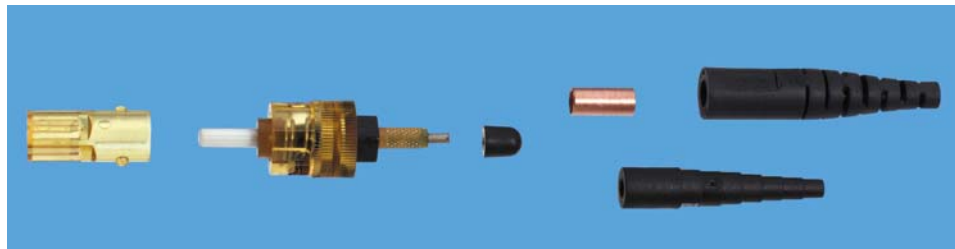
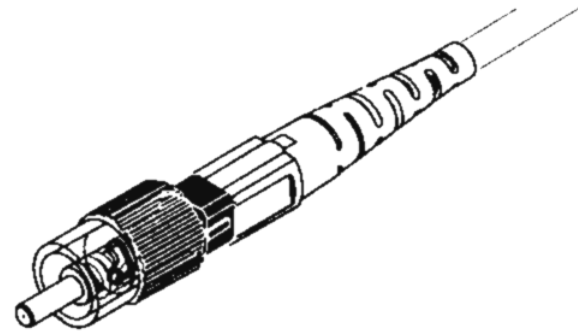


The upper part of the plug is opened with a "wedge" (here not shown). this opens the space to introduce a fiber from the rear. closing the upper part the fiber will be fixed and held.

# Connectors & adapters

## Polishless ST connector

- Less than 2 minutes installation time
- Limited training required
- Field installable without polishing
- Pre-polished fiber in the ceramic ferrule
- Suitable for 900  $\mu\text{m}$  and 3 mm cable
- Same toolkit as SC and MT-RJ
- Insertion Loss <0.5dB max.
- Multimode (50/125  $\mu\text{m}$  & 62.5/125  $\mu\text{m}$ ) and singlemode versions available
- Meets ISO/IEC11801, EN50173 & TIA/EIA 568A requirements



# Connectors & adapters

## Polishless SC connector

Less than 2 minutes installation time

Limited training required

Field installable without polishing

Pre-polished fiber in the ceramic ferrule

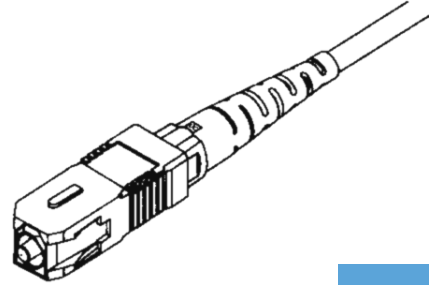
Suitable for 900  $\mu\text{m}$  and 3 mm cable

Same toolkit as ST and MT-RJ

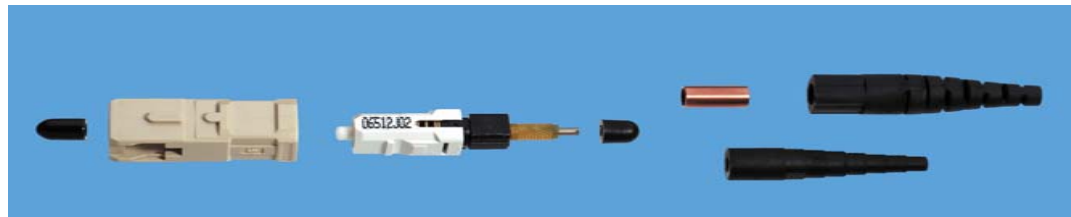
Insertion Loss <0.5dB max.

Multimode (50/125  $\mu\text{m}$  & 62.5/125  $\mu\text{m}$ ) and singlemode versions available

Meets ISO/IEC11801, EN50173 & TIA/EIA 568A requirements



SC-RJ  
compatible

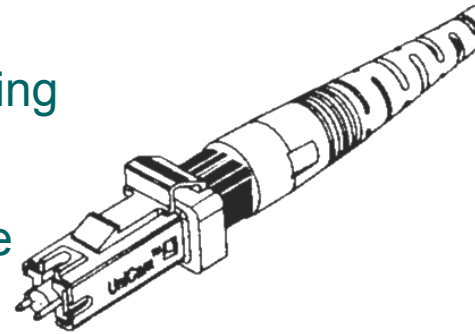


Convincing cabling solutions

# Connectors & adapters

## Polishless MTRJ connector

- Less than 2 minutes installation time
- Limited training required
- Eliminates the need for epoxy, curing and polishing
- Pre-assembled fiber in the ferrule
- Multimode 50/125  $\mu\text{m}$  and 62.5/125  $\mu\text{m}$  available
- Suitable for 2 x 900  $\mu\text{m}$  cable
- High precision pre-polished polymer ferrule
- Male connector only
- Same toolkit as ST and SC
- Insertion loss <0.5dB max.
- Meets ISO/IEC11801, EN50173 & TIA/EIA 568A requirements



# Connectors & adapters

## ST/ST adapters

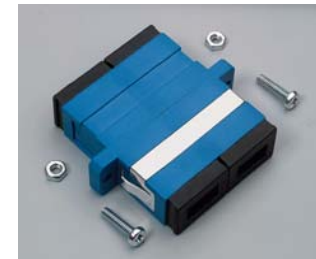
- Metal body
- PhBr alignment sleeve for multimode version
- Ceramic (Zr) alignment sleeve for singlemode version
- Insure repetitive values

## Duplex SC adapters

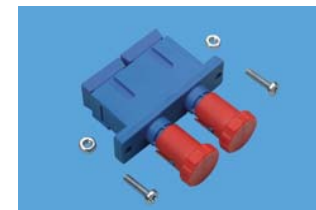
- Polymer body
- PhBr alignment sleeve for multimode version
- Ceramic (Zr) alignment sleeve for singlemode version
- Color coding according to standards
  - **Multimode** ⇒ **Beige**
  - **Singlemode** ⇒ **Blue**
- Duplex SC/Duplex SC and Duplex SC/ST available



**ST/ST multimode**



**Duplex SC/SC singlemode**



**Hybrid SC Duplex / ST**



# Connectors & adapters

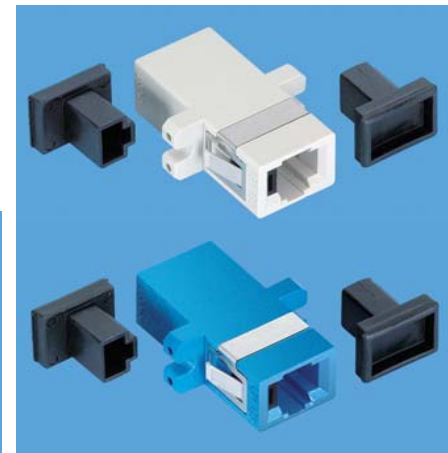
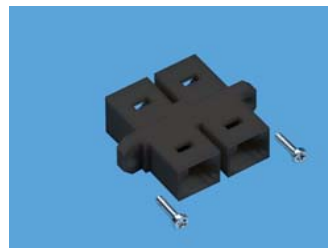
## SC-RJ adapters

- Duplex connector on SC basis fits into RJ45 cut outs
- Ceramic alignment sleeve for multimode and singlemode applications
- Accepts SC-RJ and simplex SC connectors
- Also supplied with standard carrier (see picture)
- RJ45 foot print

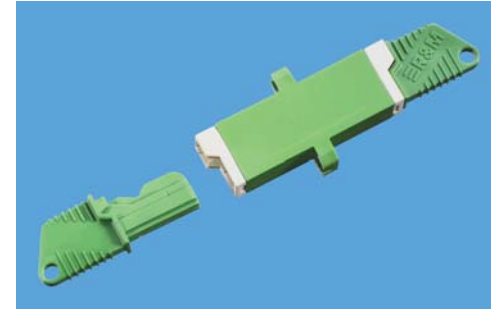
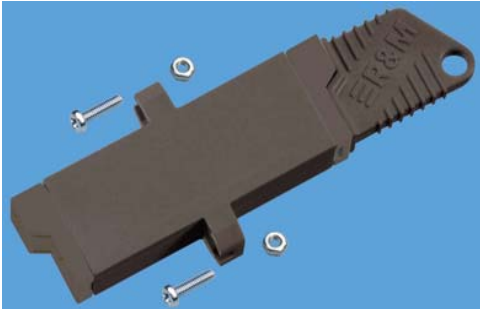


## MT-RJ adapters

- Available for MM (beige) and SM (blue)
- Available for one or two MT-RJ connectors
- Flange mountable
- Snap mountable versions
- Fits into front plate SC and LSH



# Connectors & adapters



## LSH adapters

- Interchangeable color coded frames
- Automatically closing spring-loaded shutters
- Unlatching mechanism for connector body
- Safe guiding of plug and ferrule
- Split ceramic alignment sleeve
- Same cut-out as SC and MT-RJ

# Patch cords

## Fiber patch cords

- All patchcords are individually tested
- Insertion loss < 0.35dB (<0.5 for MT-RJ)
- Test report with each patch cords
- Simplex, duplex patch cords and pigtails available
- Multimode 50/125  $\mu\text{m}$  & 62.5/125  $\mu\text{m}$
- Singlemode 9/125  $\mu\text{m}$
- LSZH outer sheath
- Ceramic ferrule connectors
- Available in standard length:  
(1,2,3,4 &5 meters)
- Other length and different connector combination also available on demand

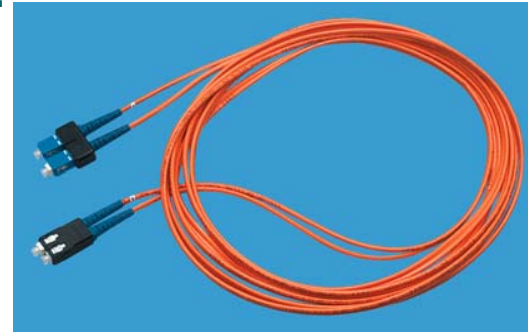


# Patch cords

## Multimode 50/125 $\mu\text{m}$ and 62.5/125 $\mu\text{m}$ patch cords

### Standard "Duplex" connector combinations:

- ST / ST
- SC Duplex / ST
- SC Duplex / SC Duplex
- MT-RJ / MT-RJ
- MT-RJ / ST
- MT-RJ / SC Duplex
- SC-RJ / SC-RJ
- SC-RJ / ST
- SC-RJ / SC Duplex
- SC-RJ / MT-RJ
- LSH / ST
- LSH / SC Duplex
- LSH / SC-RJ
- LSH / MT-RJ
- LSH / LSH

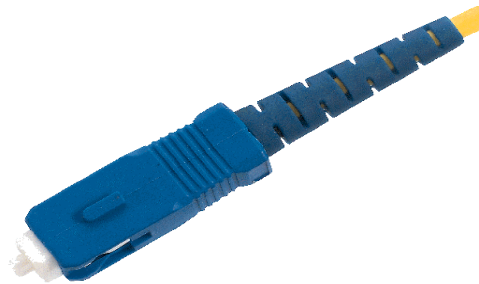


# Patch cords

## Multimode 50/125 $\mu\text{m}$ and 62.5/125 $\mu\text{m}$ Patch cords

### Standard "Simplex" connector combinations:

- ST / ST
- SC / ST
- SC / SC
- LSH / LSH



# Accessories



## Fiber loss tester MLP4-2

- Noyes name on the tester
- measures insertion loss at 850 nm + 1300 nm
- small, handy and operates with standard batteries
- maintenance and technical support will be done by Noyes.



## Fiber loss turbo tester T400

- Pass/Fail tester with R&M name and values entered in the software. Similar features to a copper tester.
- measures loss and length at 850 nm + 1300 nm (LED)
- stores up to 1,000 test results
- transfer data to a PC and generate certification reports using supplied Windows 95, 98 and NT 4.0 compatible software
- maintenance and technical support will be done by Noyes.



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[www.noyes-fiber.com](http://www.noyes-fiber.com)

# Toolkit for field connectors

## Toolkit for ST, SC & MT-RJ

- quick setup, easy handling
- no power required
- 3 tools in one
- no special skills required
- Limited training
- **Contents:**
  - Assembly tool
  - Cleaving tool
  - Stripping tool (1 for 900  $\mu\text{m}$  and 1 for 250  $\mu\text{m}$ )
  - Jacket stripper
  - Kevlar scissors
  - Crimp tool (for 3 mm cable only)
  - Cleaning tissues
  - Accessories
  - MT-RJ verification tool



**Any questions?**

