



**SCHÜTZINGER**



## Electrical Connectors for test and measurement

**Ø 2mm Programme**

**2012-S-301B**



## Company profile

The company Gerhard Schützinger Labor-Schütz GmbH, Stuttgart was established in 1949 by Gerhard Schützinger (born in 1921).

Today, production comprises a wide range of standard and special products for measuring apparatus and fittings, covering practically every form of application in the field of electrical laboratory and testing equipment. Specific customer requirements are analysed by creative employees and efficiently realized. Our team of highly qualified experts helps our customers to secure advantages based on more than 50 years of experience

to solve their tasks. Continuity in the development of our products and in dealings with our customers guarantee a stable and reliable partnership.

In 1993 responsibility for the company was transferred to the managing partners Michael and Bernhard Schützinger, the company founder's sons. Both have many years of active experience in the company, Michael since 1976 and Bernhard since 1978.

Labor-Schütz products are manufactured with high precision, using materials of high quality. At the design stage, great value is set on functional suitability, ergonomics and excellent form. Consistent superior quality is attained as the result of modern production methods and continual controls. Furthermore, importance is always attached to the use of environment-friendly raw materials. Products relevant to safety are tested by the trade association and are officially approved of. A further field of activity is the production of special plug connectors for the low-voltage lighting sector.

Alongside the Labor-Schütz range of products, we have successfully operated as an independent commercial agency since 1950, representing reputable German companies of the electrical industry.

## Main characteristics and advantages

### Single-pole miniature plug connectors for the transmission of voltages, currents and electrical measurement data.

High-grade materials such as spring brass and silver-plated or nickel-plated surfaces guarantee excellent contact reliability, low contact resistance and prevent corrosion. These universal functional articles thus comply with the high standards required in laboratories and in the field of metrology.

### Compact assembly

Systems with ø 2 mm plug pins enable reliable plug connections within the smallest of areas and take up minimum space. This is of advantage particularly in the field of microelectronics. Crush-proof insulation sleeves mean that these plug connectors stand up to considerable loads.

### Universal

Compatibility with the ø 2.4 mm and ø 4 mm ranges is achieved by simple use of our adapters.

### Important note

This miniature laboratory range with insulated grasp is designed for functional handling combined with safe operation for the user.

In this respect we refer to the VDE regulations VDE 0100, VDE 0105 and the regulations for the prevention of accidents VBG 4 of the trade association for precision engineering and electro-technics.

The range is intended for use with extra-low voltages.

### Max. voltage for direct contact with bare parts:

**30 V<sub>AC</sub> / 60 V<sub>DC</sub>**

**If you have any queries regarding application possibilities, technical data or special designs we will gladly advise you.**



### General information

In the case of special applications, verification whether products listed in this catalogue comply with regulations other than those stated is the responsibility of the user.

### Reference to other laboratory plug connector series

Our ø 2.4 mm programme is to be found ..... page 9

Our ø 4 mm programme is to be found ..... page 17

### Touchproof types for 1000V, CAT III

Our ø 4 mm safety laboratory programme with rigid sleeve and sliding sleeve is to be found ..... page 45

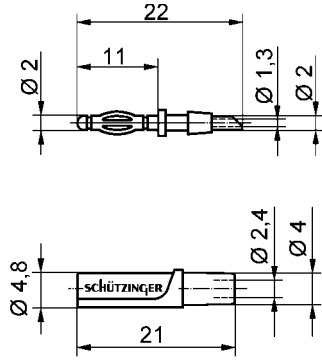
### Lamella-basket plug

- straight, with soldering cup for leads up to 0,5 mm<sup>2</sup>
- with sleeve, unassembled

**order no.** FK 02 L / ..(colour)

- contact part: **nickel-plated**
- sleeve PA 6.6 (Polyamid)

**colours:** see table



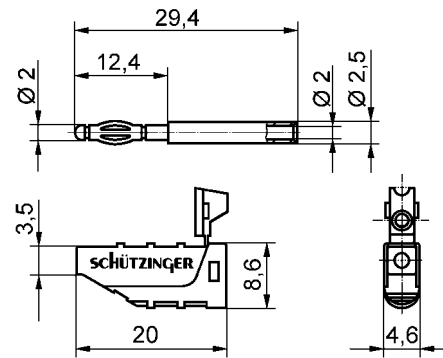
### Lamella-basket plug

- with line in socket , for leads up to 0.5 mm<sup>2</sup>
- with sleeve, unassembled

**order no.** FK 11 L / ..(colour)

- contact part: **nickel-plated**
- sleeve PA 6.6 (Polyamid)

**colours:** see table



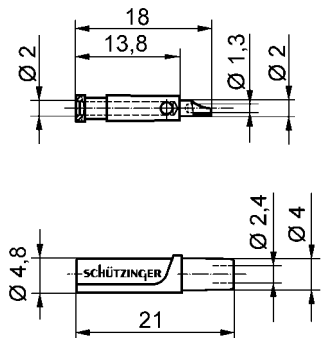
### Coupler

- with soldering cup for leads up to 0.5 mm<sup>2</sup>
- with sleeve, unassembled

**order no.** KU 02 L / ..(colour)

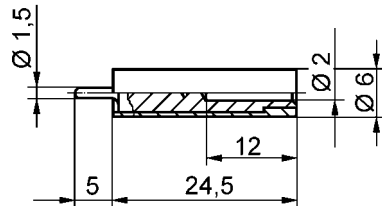
- contact part: **nickel-plated**
- sleeve PA 6.6 (Polyamid)

**colours:** see table



General information		Technical data				
order no.	colours	terminal	transition resistance	rated voltage	rated current	operating temperature
FK 02 L / ..(colour) contact part nickel-plated	black red					
FK 11 L / ..(colour) contact part nickel-plated	blue yellow green	soldering 0.5 mm <sup>2</sup>	3 mΩ	30 V <sub>AC</sub> 60 V <sub>DC</sub>	10 A	- 25 °C ... + 90 °C
KU 02 L / ..(colour) contact part nickel-plated						

other colours, platings and sleeves for other lead diameters on request

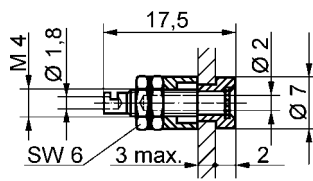


**Laboratory Socket**

- suitable to unstick a permanent measuring point with a socket. For that the pin is screwed under or soldered on a printed circuit board.

**order no.** LB 2-1,5 / 5 / ..(colour)  
- contact part: **nickel-plated**  
- insulation: PA 6 (Polyamid)

**colours:** see table

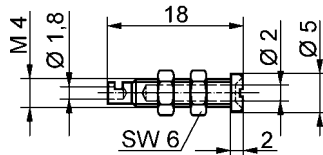


**Socket**

- with moulded insulation

**order no.** IBU 2011 / ..(colour)  
- contact part: **nickel-plated**  
- insulation: PA 6.6 (Polyamid)  
- soldering cup: up to 0.75 mm<sup>2</sup>  
- hole: ø 5 mm

**colours:** see table



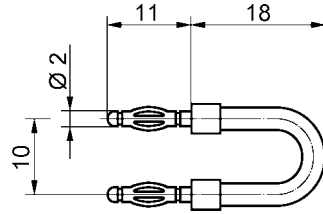
**Socket**

- without insulation

**order no.** BU 20  
- contact part: **silver-plated**  
- soldering cup: up to 0.75 mm<sup>2</sup>  
- hole: ø 4 mm

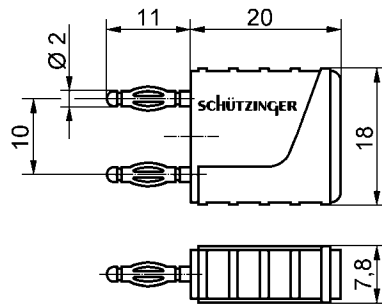
General information		Technical data				
order no.	colours	terminal	transition resistance	rated voltage	rated current	operating temperature
LB 2-1,5 / 5 / ..(colour) contact part nickel-plated	black red blue	soldering	3 mΩ	30 V <sub>AC</sub>	10 A	- 25 °C ... + 90 °C
IBU 2011 / ..(colour) contact part nickel-plated	yellow green	0.75 mm <sup>2</sup>		60 V <sub>DC</sub>		
BU 20 contact part silver-plated	—					

other colours and platings on request



**Connecting plug**  
- without insulation

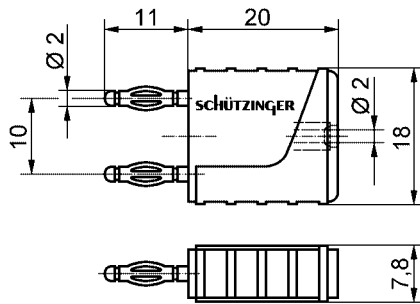
**order no. KURZ 10 - 2**  
- contact part: **nickel-plated**



**Connecting plug**  
- moulded insulation

**order no. KURZ 10 - 2 IG / .. (colour)**  
- contact part: **nickel-plated**  
- insulation: **PA 6.6 (Polyamid)**

colours: see table



**Connecting plug**  
- moulded insulation  
- with rear socket ø 2 mm

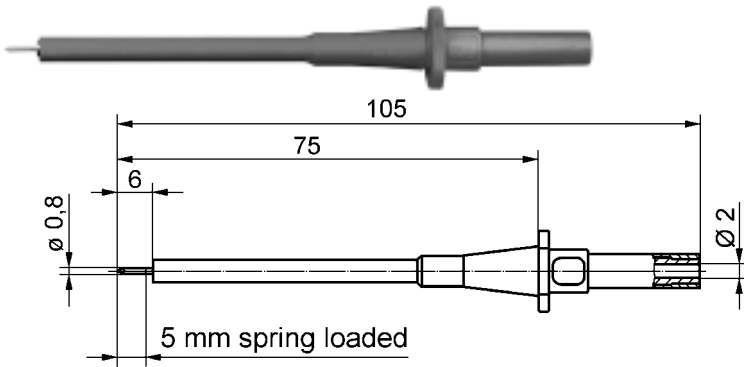
**order no. KURZ 10 - 2 IG MB / .. (colour)**  
- contact part: **nickel-plated**  
- insulation: **PA 6.6 (Polyamid)**

colours: see table

General information		Technical data				
order no.	colours	terminal	transition resistance	rated voltage	rated current	operating temperature
<b>KURZ 10-2</b> contact part nickel-plated	—	—	3 mΩ	30 V <sub>AC</sub> 60 V <sub>DC</sub>	10 A	- 25 °C ... + 90 °C
<b>KURZ 10-2 IG / ..(colour)</b> contact part nickel-plated	black	—	3 mΩ	30 V <sub>AC</sub> 60 V <sub>DC</sub>	10 A	- 25 °C ... + 90 °C
<b>KURZ 10-2 IG MB / ..(colour)</b> contact part nickel-plated	black	rear socket	3 mΩ	30 V <sub>AC</sub> 60 V <sub>DC</sub>	10 A	- 25 °C ... + 90 °C

other colours and platings on request





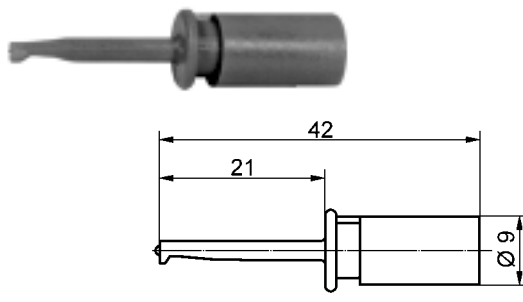
**Test probe**

- suitable for fine flex and wires
  - also suitable for wire-wrap posts up to 1 x 1 mm
- with solder connection for cross-section up to 0.5 mm<sup>2</sup>

**order no. PRÜF 3072 / ..(colour)**

- contact part **nickel-plated**
- insulation PA 6 (Polyamid)

colours: see table



**Test clip**

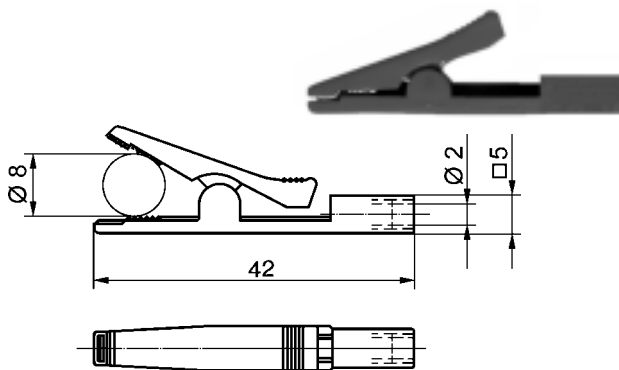
- suitable for fine flex and wires
  - also suitable for wire-wrap posts up to 1 x 1 mm
- with solder connection for cross-section up to 0.5 mm<sup>2</sup>

**order no. KLEPS 42 / ..(colour)**

- contact hook **gold-plated**
- insulation PA 6 (Polyamid)

colours: see table

other test clips on page 44 and page 70



**Crocodile clip**

- 2 mm socket

**order no. AK 2799 / ..(colour)**

- contact hook **nickel-plated**
- insulation Polypropylen

colours: see table

General information		Technical data				
order no.	colours	terminal	transition resistance	rated voltage	rated current	operating temperature
<b>PRUF 3072 / .. (colour)</b> contact part gold-plated	black red	rear socket	15 mΩ	30 V <sub>AC</sub> 60 V <sub>DC</sub>	10 A	- 25 °C ... + 100 °C
<b>KLEPS 42 / .. (colour)</b> contact part gold-plated	black red	soldering - 0.5 mm <sup>2</sup>	15 mΩ	30 V <sub>AC</sub> 60 V <sub>DC</sub>	10 A	- 25 °C ... + 90 °C
<b>AK 2799 / ..(color)</b> Kontaktteile vernickelt	black red	rear socket	15 mΩ	30 V <sub>AC</sub> 60 V <sub>DC</sub>	10 A	- 25 °C ... + 80 °C

ø 2



### Adapter

- for connecting ø 2 mm - system to ø 2.4 mm - system

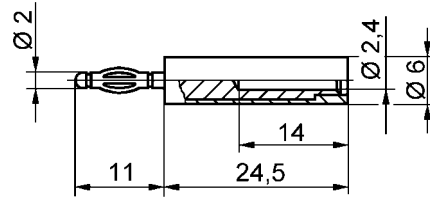
**order no.** A 20 - 24 / ..(colour)

- contact part  
- insulation

**nickel-plated**  
PA 6.6 (Polyamid)

colours:

see table



### Adapter

- for connecting ø 2 mm - system to ø 4 mm - system

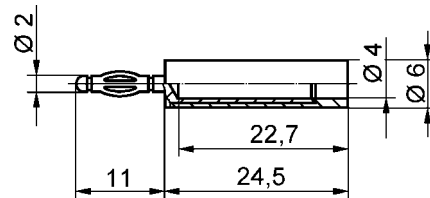
**order no.** A 20 - 40 S / ..(colour)

- contact part:  
- insulation

**nickel-plated**  
PA 6.6 (Polyamid)

colours:

see table



### Adapter

- for connecting ø 4 mm - system to ø 2 mm - system

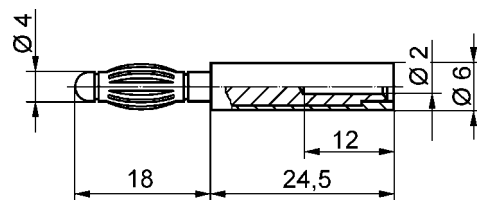
**order no.** A 40 - 20 / ..(colour)

- contact part:  
- insulation

**nickel-plated**  
PA 6.6 (Polyamid)

colours:

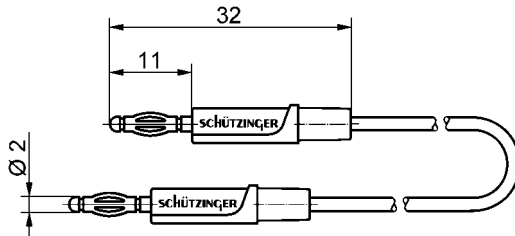
see table



General information		Technical data				
order no.	colours	terminal	transition resistance	rated voltage	rated current	operating temperature
A 20 - 24 / .. (colour) contact part nickel-plated	black red	socket	6 mΩ	30 V <sub>AC</sub> 60 V <sub>DC</sub>	10 A	- 25 °C ... + 90 °C
A 20 - 40 S / .. (colour) contact part nickel-plated	black red	socket	6 mΩ	30 V <sub>AC</sub> 60 V <sub>DC</sub>	10 A	- 25 °C ... + 90 °C
A 40 - 20 / .. (colour) contact part nickel-plated	black red	socket	6 mΩ	30 V <sub>AC</sub> 60 V <sub>DC</sub>	10 A	- 25 °C ... + 90 °C

other colours and platings on request



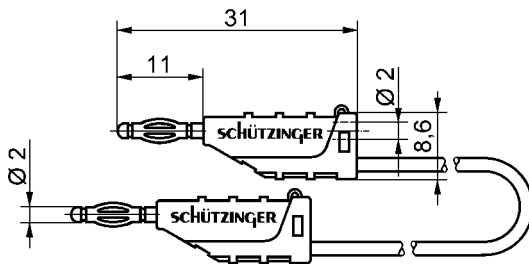
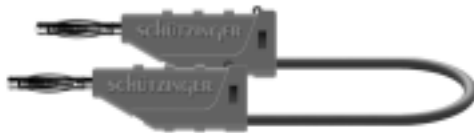


**Measuring lead**

- with 2 lamella-basket plugs FK 02 L / .. (colour)  
and highly flexible leads

**order no. MFK 02 / 0,5 / ..(length) / ..(colour)**  
- lead 0.5 mm<sup>2</sup>  
PVC-insulation  
- contact parts **nickel-plated**  
- sleeves PA 6.6 (Polyamid)

colours: see table



**Measuring lead**

- with 2 lamella-basket plugs FK 11 L / .. (colour)  
and highly flexible leads

**order no. MFK 11 / 0,5 / ..(length) / ..(colour)**  
- lead 0.5 mm<sup>2</sup>  
PVC-insulation  
- contact parts **nickel-plated**  
- sleeves PA 6.6 (Polyamid)

colours: see table

General information			Technical data				
order no.	length	colours	leads	transition resistance	rated voltage	rated current	operating temperature
							sleeve -30 °C ... + 110 °C PVC-insulated lead -10 °C ... + 80 °C
<b>MFK 02 / 0,5 / ..(length) / ..(colour)</b> contact part nickel-plated	10 cm	black red blue yellow green	PVC-isol.	3 mΩ	30 V <sub>AC</sub>	10 A	- 10 °C ... + 80 °C
	25 cm		0.5 mm <sup>2</sup>	5 mΩ	60 V <sub>DC</sub>		
	50 cm			9 mΩ			
	100 cm			17 mΩ			
<b>MFK 11 / 0,5 / ..(length) / ..(colour)</b> contact part nickel-plated	10 cm	black red blue yellow green	PVC-isol.	3 mΩ	30 V <sub>AC</sub>	10 A	- 10 °C ... + 80 °C
	25 cm		0.5 mm <sup>2</sup>	5 mΩ	60 V <sub>DC</sub>		
	50 cm			9 mΩ			
	100 cm			17 mΩ			

other colours, lengths and platings on request

# SCHÜTZINGER – to be sure!

## Adapter lead

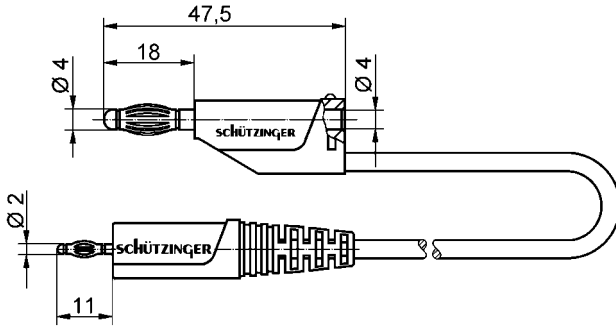
- with 1 lamella-basket plug FK 2162 L / .. (colour) and  
1 lamella-basket plug FK 15 L / 1 / .. (colour)  
with highly flexible lead

**order no.** AL 2177 / 1 / ..(length) / ..(colour)

- lead 1 mm<sup>2</sup>  
PVC-double  
insulation

- contact parts **nickel plated**

**colours:** see table



## Adapter lead

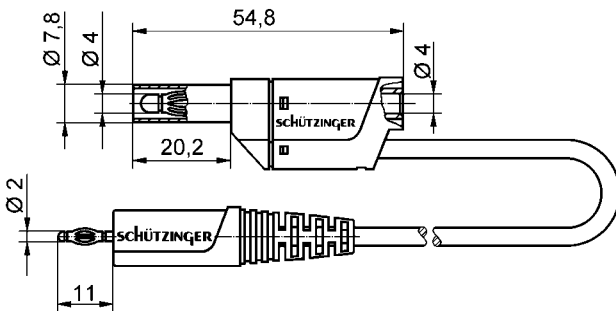
- with 1 lamella-basket plug FK 2162 L / .. (colour) and  
1 lamella-basket plug SFK 40 L / 1 / .. (colour)  
with highly flexible lead

**order no.** AL 2178 / 1 / ..(length) / ..(colour)

- lead 1 mm<sup>2</sup>  
PVC-double  
insulation

- contact parts **nickel-plated**

**colours:** see table



General information			Technical data				
order no.	length	colours	leads	transition resistance	rated voltage	rated current	sleeve -30 °C ... + 110 °C PVC-insulated lead -10 °C ... + 80 °C
							operating temperature
AL 2177 / 1 / ..(length) / ..(colour) contact part nickel-plated	100 cm	black red	PVC 1 mm <sup>2</sup>	17 mΩ	30 V <sub>AC</sub> 60 V <sub>DC</sub>	10 A	- 10 °C ... + 80 °C
AL 2178 / 1 / ..(length) / ..(colour) contact part nickel-plated	100 cm	black red	PVC 1 mm <sup>2</sup>	17 mΩ	30 V <sub>AC</sub> 60 V <sub>DC</sub>	10 A	- 10 °C ... + 80 °C

other colours, lengths and platings on request

# Order



# SCHÜTZINGER

Labor - Schütz GmbH

Please fax this orderform to:



## SCHÜTZINGER

Labor - Schütz GmbH

Eichwiesenring 6

**70567 Stuttgart**  
**Germany**

**Fax-No.: +711/7 15 46 40**

Company: | \_\_\_\_\_  
 \_\_\_\_\_

Street: | \_\_\_\_\_

City: | \_\_\_\_\_

Country: | \_\_\_\_\_

Telefon: (        ) \_\_\_\_\_

Telefax: (        ) \_\_\_\_\_

**Deliver to:**                       see above  
                                           as follows:

Company: | \_\_\_\_\_

Street: | \_\_\_\_\_

City: | \_\_\_\_\_

**Purchase-No.:** \_\_\_\_\_

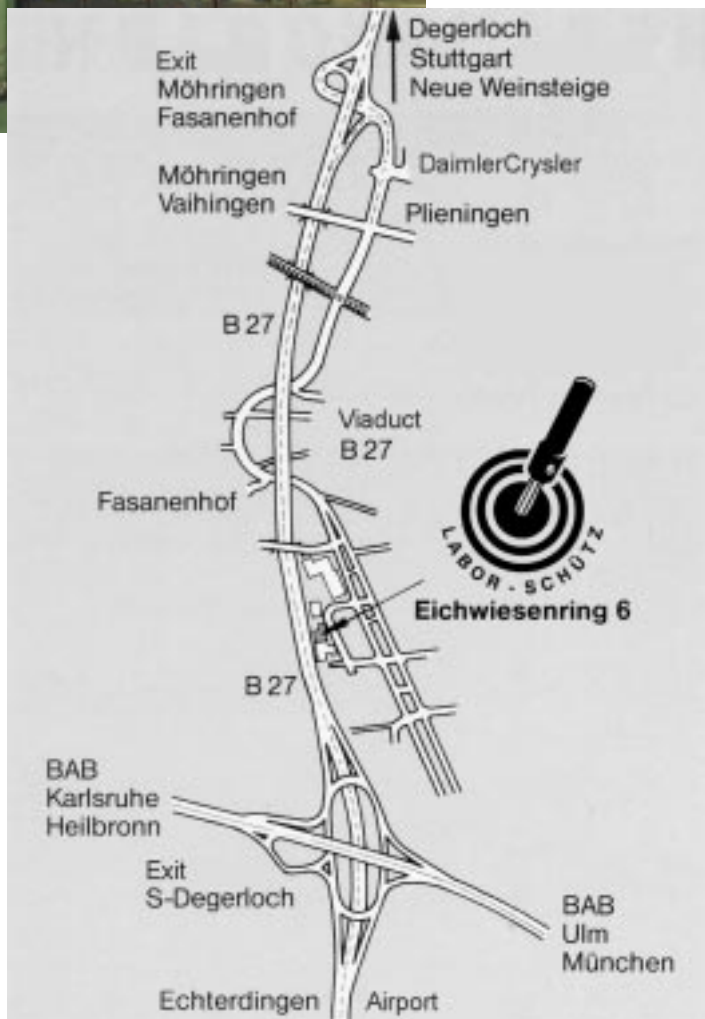
**Date:** \_\_\_\_\_

**Signature** \_\_\_\_\_

Qty.	Description	Order-No.	Price

Deliver in:                      Week: \_\_\_\_\_

Part shipment:                allowed   
                                          not allowed



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