

the **sensor** people

## Mounting systems for optical electronic sensors



## **Contents:**


Mounting systems - Overview and advantages


Features of the mounting systems


Mounting systems - Selection table


Mounting systems - Dimensioned drawings and specifications


# Mounting systems Overview and advantages


 Steel and stainless steel mounting brackets for fast and simple integration in the system

 Steel and stainless steel rod mounts for a variety of rod diameters

 High-precision, 3-point alignment system for laser sensors

 Laser-alignment aids for sensors with long operating ranges

 Sensor-specific, special mounting systems

 Mounting systems for reflectors





# Features of the mounting systems simple, fast, inventive

**Proven mounting solutions for  
varied automation tasks**



### **Mounting brackets**

- ✓ **Advantage 1:** Simple, economical mounting system for standard tasks
- ✓ **Advantage 2:** A variety of fastening and alignment options for vertical and horizontal mounting



### **Rod mounts**

- ✓ **Advantage 1:** Simple fastening to rods and cheeks
- ✓ **Advantage 2:** Universal alignment through use of patented ball-alignment joint
- ✓ **Advantage 3:** Single-screw fastening ensures fast mounting
- ✓ **Advantage 4:** Models in stainless steel, e.g. for food & beverage industry applications



### **Mounting devices with 3-point alignment**

- ✓ **Advantage 1:** High-precision alignment and fastening of laser sensors



### **Alignment aids**

- ✓ **Advantage 1:** Simple and fast alignment of long-range sensors
- ✓ **Advantage 2:** Very visible red light laser
- ✓ **Advantage 3:** Battery operation offers independence from mains supply

Part No.	Designation	Design							Material	
		Mounting bracket	Mounting device with 3-point alignment	Mounting system for rod mounting	Mounting system for top-hat rail (C-profile)	Mounting system for reflectors	Mounting adapter / reducing adapter	Alignment aid	Metal	Stainless steel
Mounting bracket										
500 60511	BT 3	•							•	
501 05585	BT 3.1	•							•	
501 05546	BT 3B	•							•	
500 36195	BT 8	•								•
500 40269	BT 25	•								•
501 05315	BT 46	•				•			•	
500 03374	BT 78	•							•	
500 03376	BT 85	•							•	
500 18415	BT 92	•							•	
500 20833	BT 95	•							•	
500 25570	BT 96	•							•	
500 80614	BT 96.1	•							•	
500 32319	BT 96.4	•							•	
500 33876	BT 318	•							•	
500 80776	BT 713	•							•	
345899	BT-K2	•							•	
560120	BT-S	•							•	
Rod mounts										
500 35017	BT 8-D10			•		•			•	
500 35018	BT 8-D12			•		•			•	
501 06204	BT 8 - D12.5			•		•				•
500 35019	BT 8-D14			•		•			•	
500 35020	UMS 8-D10			•					•	
500 35021	UMS 8-D12			•					•	
500 35022	UMS 8-D14			•					•	
500 35023	UMS 8.1-D10			•					•	
500 35024	UMS 8.1 - D12			•					•	
500 35025	UMS 8.1-D14			•					•	
500 35026	UMS 8.2-D10			•					•	
500 35027	UMS 8.2-D12			•					•	
500 35028	UMS 8.2-D14			•					•	
500 40270	UMS 25-D12			•		•			•	
500 30556	BT 46.1			•		•			•	
500 82104	BT 46.1.5			•		•				•
500 33785	BT 46.2			•		•			•	
500 82084	BT 450.1-96			•		•			•	
501 04897	BT 450.3-96			•		•			•	
500 80334	UMS 96-95			•					•	
500 26204	UMS 96			•					•	
500 22281	UMS 1-01			•					•	
500 22282	UMS 1-02			•					•	
500 22283	UMS 1-03			•					•	
500 27191	UMS 96-82			•		•			•	

Usable with series / sensor type / reflector type		Page
3 series	•	8
8 series	•	8
18 series	•	8
20 series	•	8
25 series	•	14
46 series	•	15
LS 64		16
LS 66		17
72 series		18
78 series	•	19
85 series	•	20
92 series	•	20
95 series	•	21
96 series	•	21
97 series	•	22
318 series	•	23
418 series	•	25
LRT 440	•	25
618 series	•	25
713 series	•	25
ROD 4		
KONTURflex	•	
MTKS 20x20	•	
TKS 20x40		
MTKS 20x40.1		
TKS 30x50	•	
MTKS 30x50.1	•	
TKS 30x60	•	
TKS 40x60	•	
MTKS 40x60.1	•	
TKS 50x50	•	
TKS 50x50.1	•	
MTKS 50x50	•	
TK 50x100		
TK 100x100		
TK 60		
TK 82.2	•	
TK 82.3		
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Part No.	Designation	Design							Material	
		Mounting bracket	Mounting device with 3-point alignment	Mounting system for rod mounting	Mounting system for top-hat rail (C-profile)	Mounting system for reflectors	Mounting adapter / reducing adapter	Alignment aid	Metal	Stainless steel
Mounts with 3-point alignment										
500 35030	BT 8-ARH		•						•	
500 06902	BT 16		•						•	
500 80152	BT 64		•						•	
500 16515	BT 66		•						•	
500 17436	BT 85.1		•						•	
500 83189	BT 318-ARH		•						•	
Other mounting devices										
500 36196	BT 8-0						•		•	
500 35016	BT 8-C15				•				•	
500 35015	BT 8-C35x7.5				•				•	
500 29067	BT 95-96						•		•	
500 38066	Mounting system ROD4-MS		•						•	
560300	BT-SSD	1)							•	
425720	Sliding block BT-NC						•		•	
500 09419	ET 045-01					•			•	
Alignment aids										
500 23547	ARH 2							•	•	
500 80537	ARH 10							•	•	
500 40739	ARH 46							•	•	
500 80502	ARH 96							•	•	
Alignment control (Sensorscope) for throughbeam photoelectric sensors										
501 09545	SAT 5							•	•	

1) single-axis, swivelling mounting set





**3 series / 8 series**

**Mounting systems**

**Part**

- BT 3** (Part No. 500 60511), = ①
- BT 3.1** (Part No. 501 05585), = ② + ③ 1)
- BT 3B** (Part No. 501 05546), = ① + ② + ③



Mounting bracket for 3 series



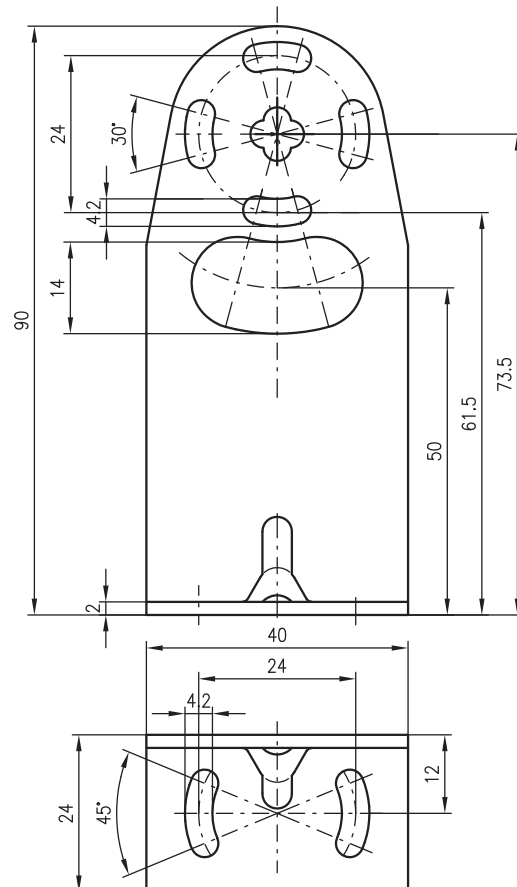
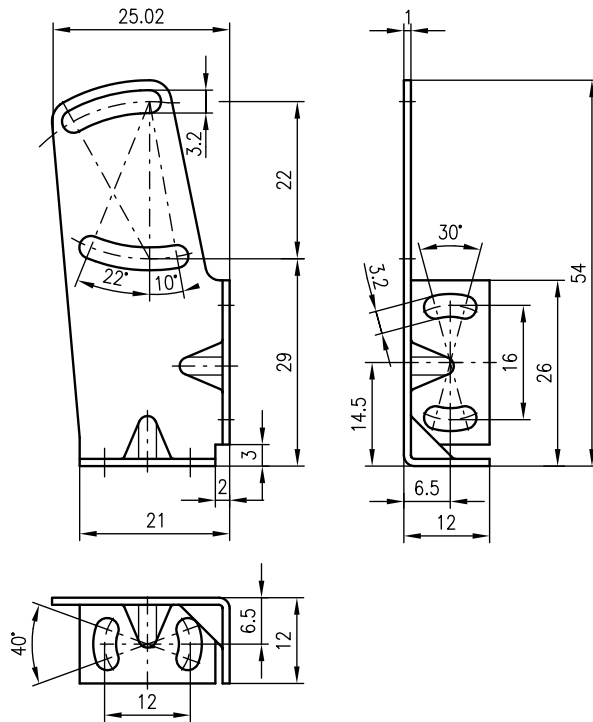
BT 3.1 and BT 3B are required for 3B series sensors only!

**BT 8** (Part No. 500 36195)



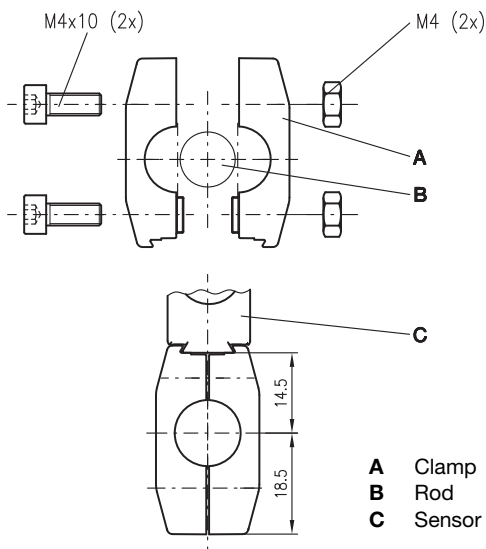
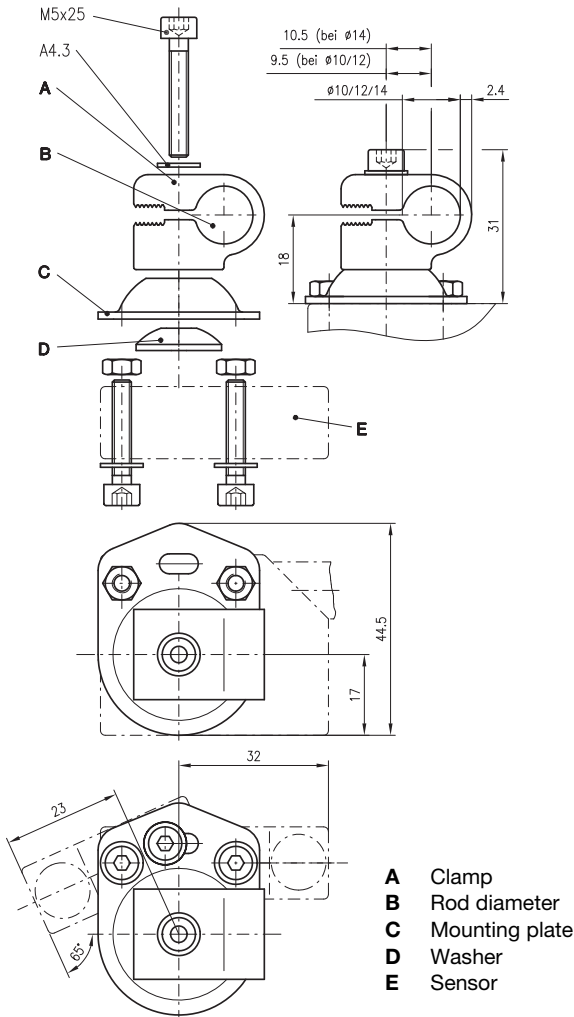
Mounting bracket for 8 series

**Dimensioned drawings**



1) Packaging unit: PU = 10 pcs.

**Dimensioned drawings**



**Part**

- BT 8-D10** (Ø10mm, Part No. 500 35017)
- BT 8-D12** (Ø12mm, Part No. 500 35018)
- BT 8-D12.5** (Ø12mm, stainl. steel, Part No. 501 06204)
- BT 8-D14** (Ø14mm, Part No. 500 35019)



Mounting systems for 8 series and reflectors MTKS 50x50, TKS 50x50.1

- Through-hole mount with rod D = 10mm, D = 12mm or D = 14mm
- Clamp-mounting on cheeks/sheet metal

- UMS 8-D10** (Ø10mm, Part No. 500 35020)
- UMS 8-D12** (Ø12mm, Part No. 500 35021)
- UMS 8-D14** (Ø14mm, Part No. 500 35022)



Mounting system for 8 series

- Dovetail with rod D = 10mm, D = 12mm or D = 14mm
- Unjointed

**Part**

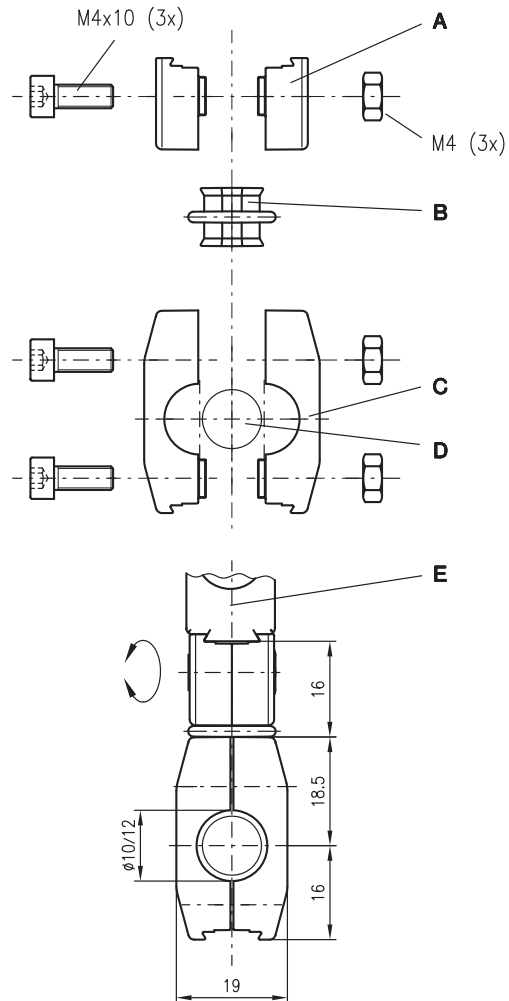
- UMS 8.1-D10** (Ø10mm, Part No. 500 35023)
- UMS 8.1-D12** (Ø12mm, Part No. 500 35024)
- UMS 8.1-D14** (Ø14mm, Part No. 500 35025)



Mounting system for 8 series

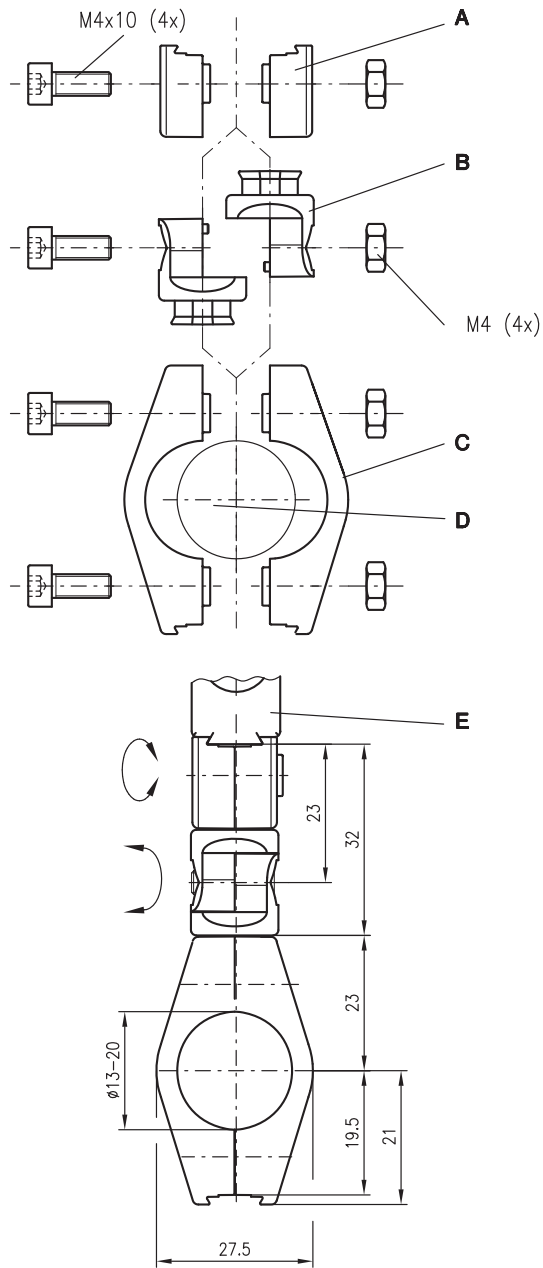
- Dovetail with rod D = 10mm, D = 12mm or D = 14mm
- Jointed

**Dimensioned drawings**



- A** Mount
- B** Joint
- C** Clamp
- D** Rod
- E** Sensor

**Dimensioned drawings**



- A** Mount
- B** Joint
- C** Clamp
- D** Rod
- E** Sensor

**Part**

- UMS 8.2-D10** (Ø10mm, Part No. 500 35026)
- UMS 8.2-D12** (Ø12mm, Part No. 500 35027)
- UMS 8.2-D14** (Ø14mm, Part No. 500 35028)



Mounting system for 8 series

- Dovetail with rod  $D = 10\text{mm}$ ,  $D = 12\text{mm}$  or  $D = 14\text{mm}$
- Double jointed

**Part**

**BT 8-ARH** (Part No. 500 35030)



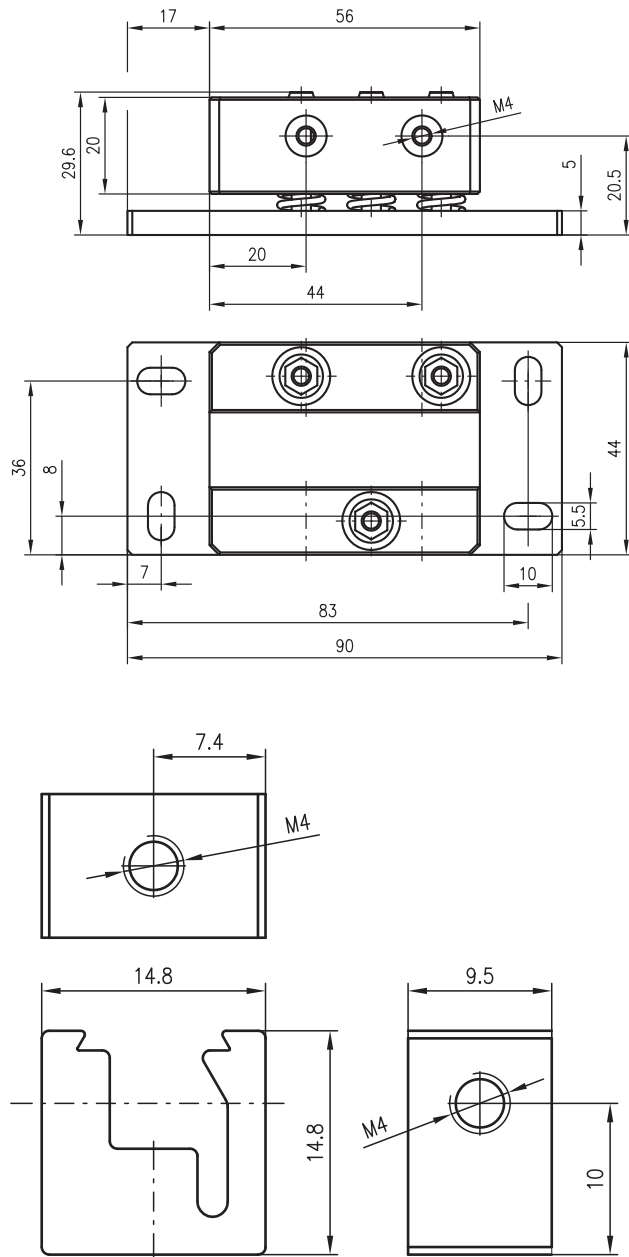
Fastening/alignment system with wobble plate for 8 series laser sensors

**BT 8-0** (Part No. 500 36196)

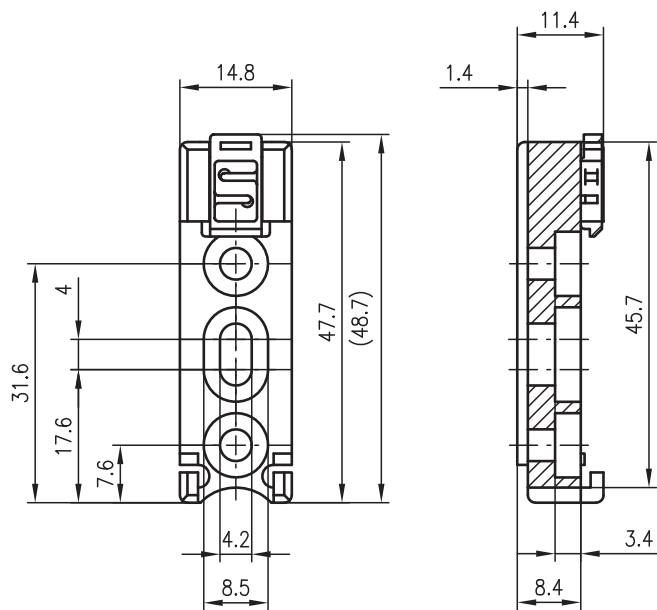
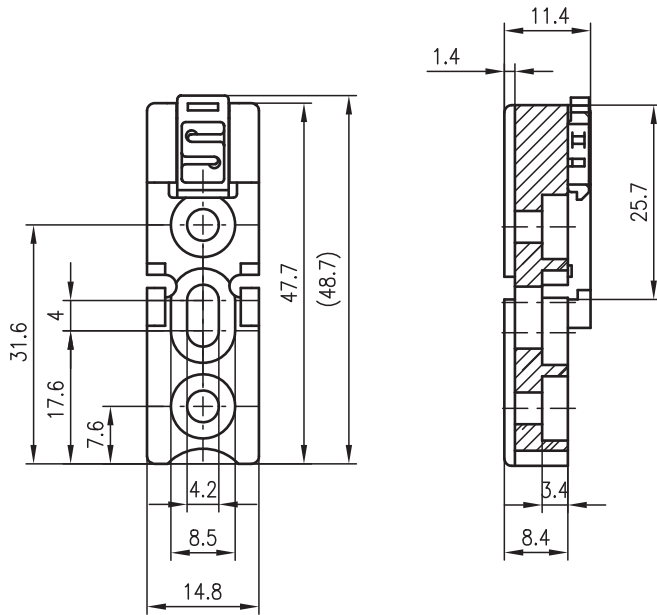


Mounting system for 8 series  
Mounting block with dovetail

**Dimensioned drawings**

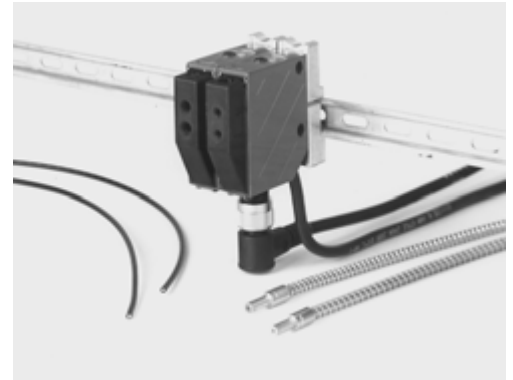


**Dimensioned drawings**



**Part**

**BT 8-C15** (Part No. 500 35016)



Mounting system for 8 series,  
Blind hole top-hat rail C15 (for C-profile  
15mm)

**BT 8-C35x7,5** (Part No. 500 35015)



Mounting system for 8 series,  
Blind hole top-hat rail C35 x 7.5  
(for C-profile 35mm)

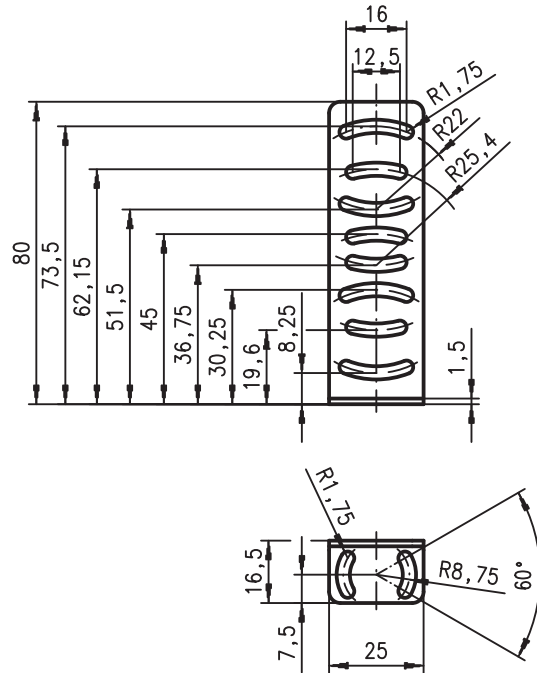
**Part**

**BT 25** (Part No. 500 40269)



Mounting bracket for 25 series

**Dimensioned drawings**

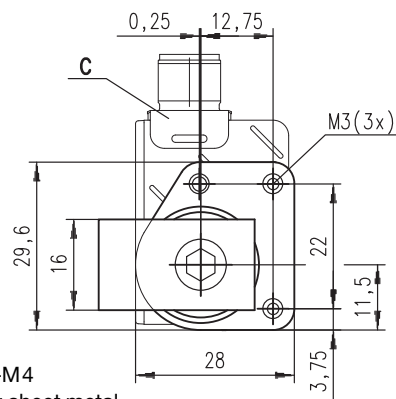
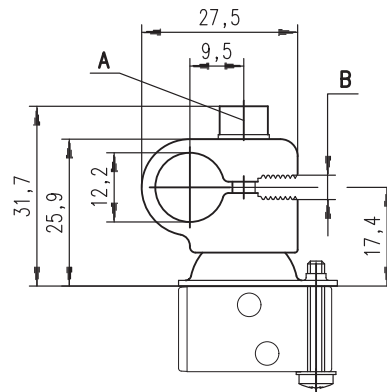


**UMS 25-D12** (Part No. 500 40270)



Mounting system for 25 series, 713 series and Reflectors MTKS 50x50, TKS 50x50.1

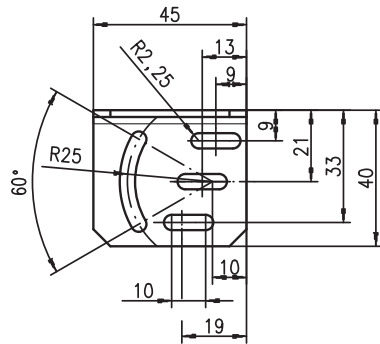
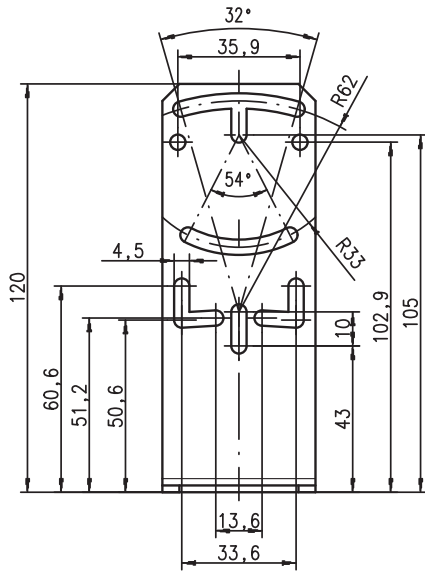
- Through-hole mount with rod D = 12 mm
- Clamp-mounting on cheeks/sheet metal



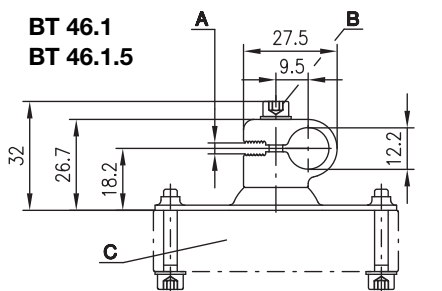
- A** Screw DIN 912-M4
- B** Slit for clamping sheet metal  
sheet metal thickness:  
1.5 to 3 mm
- C** Sensor



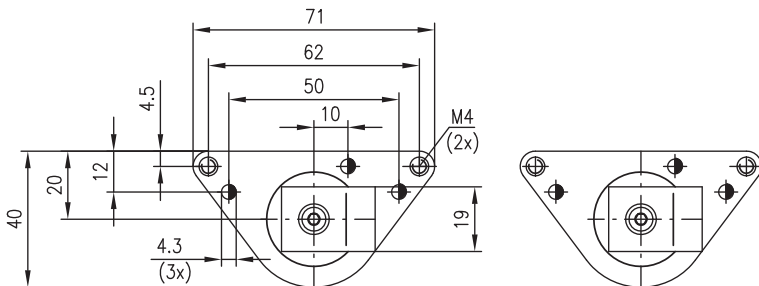
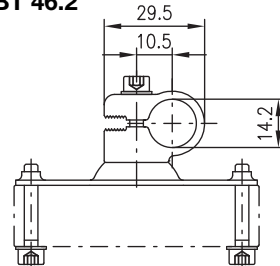
**Dimensioned drawings**



**BT 46.1**  
**BT 46.1.5**



**BT 46.2**



- A** Slit for clamping sheet metal; sheet metal thickness 1.5 to 3mm
- B** Screw DIN 912-M4
- C** Sensor

**Part**

**BT 46** (Part No. 501 05315)



Mounting bracket for 46 series, LRT 440 and Reflectors MTKS 20x20 (on base), TKS 30x50, MTKS 30x50.1, TKS 30x60, TKS 40x60, MTKS 40x60.1, (M)TKS 50x50, TKS 50x50.1, TKS 82.2

- BT 46.1** (Part No. 500 30556), steel/aluminium
- BT 46.1.5** (Part No. 500 82104), stainless steel
- BT 46.2** (Part No. 500 33785), steel/aluminium



Mounting system for 46 series, LRT 440 and Reflectors TKS 20x40, MTKS 20x40.1, TK 60

- Through-hole mount with rod D = 12mm or D = 14mm
- Clamp-mounting on cheeks/sheet metal

**Part**

**BT 78** (Part No. 500 03374)



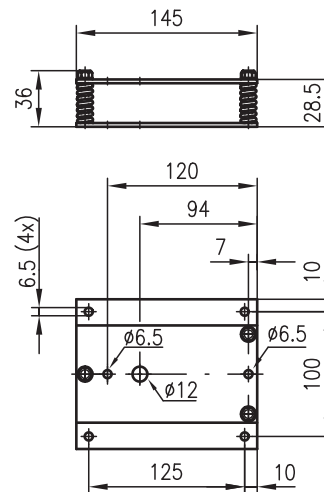
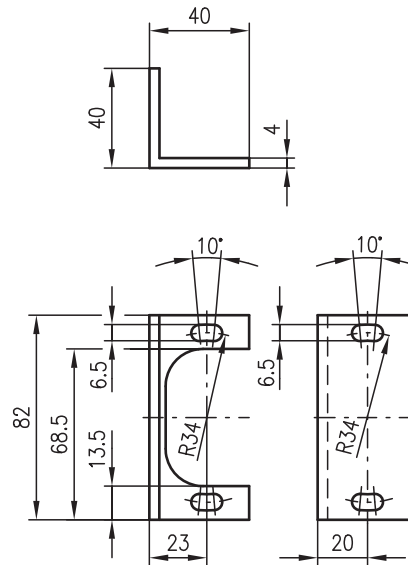
Mounting bracket for 78 series

**BT 16** (Part No. 500 06902)

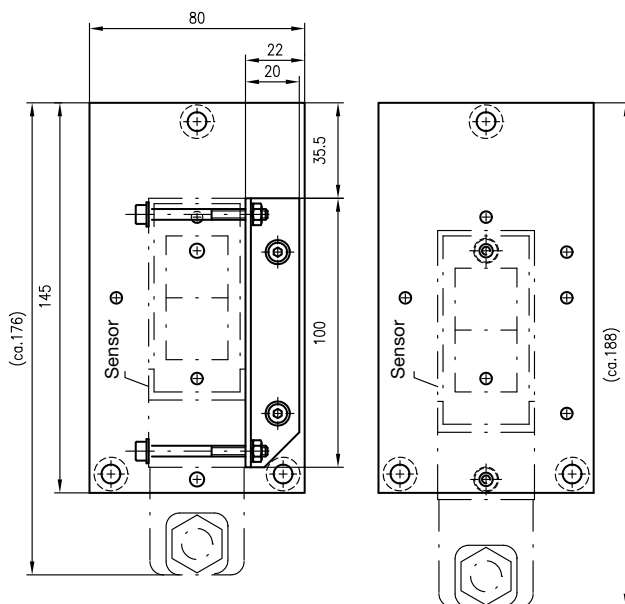
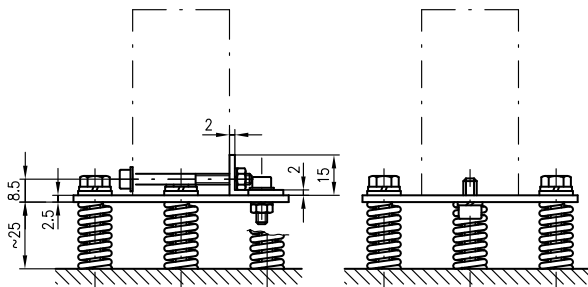
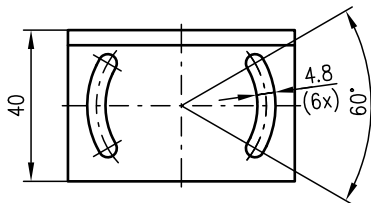
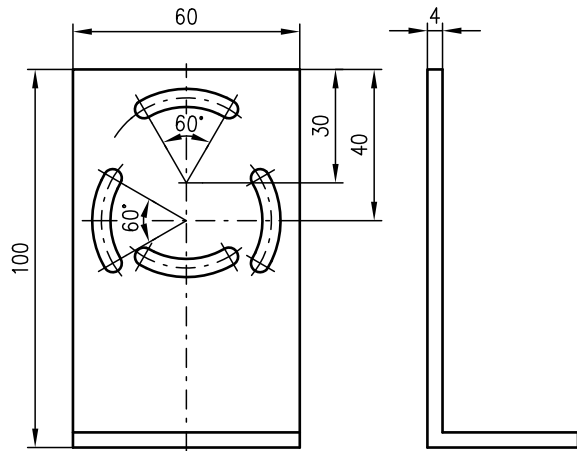


Fastening/alignment system with wobble plate for 78 series

**Dimensioned drawings**



**Dimensioned drawings**



**Part**

**BT 85** (Part No. 500 03376)



Mounting bracket for 85 series

**BT 85.1** (Part No. 500 17436)

Fastening/alignment system with wobble plate for 85 series

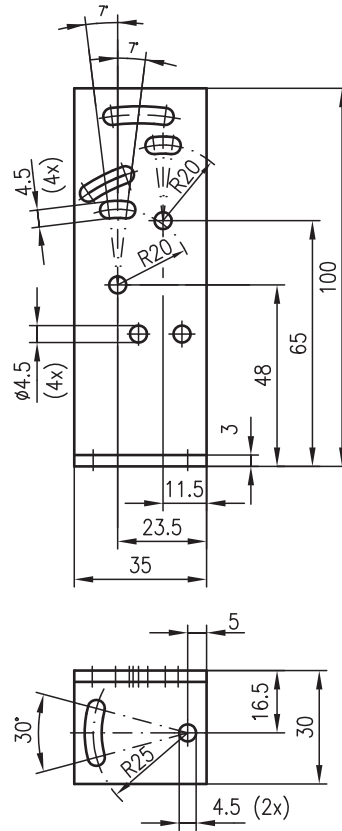
**Part**

**BT 92** (Part No. 500 18415)



Mounting bracket for 92 series and 97 series

**Dimensioned drawings**



**UMS 1** consisting of:

**UMS 1-01** (Part No. 500 22281), mount

**UMS 1-02** (Part No. 500 22282), clamp

**UMS 1-03** (Part No. 500 22283), base

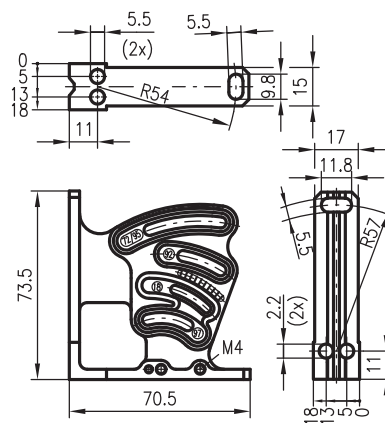


Mounting system for 18 series, 72 series, 92 series, 95 series and 97 series with rod D = 10mm ... 12mm

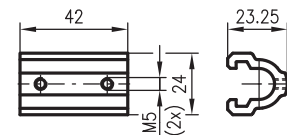


**Order single parts!**

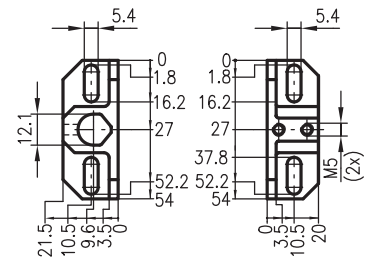
**UMS 1-01**



**UMS 1-02**



**UMS 1-03**





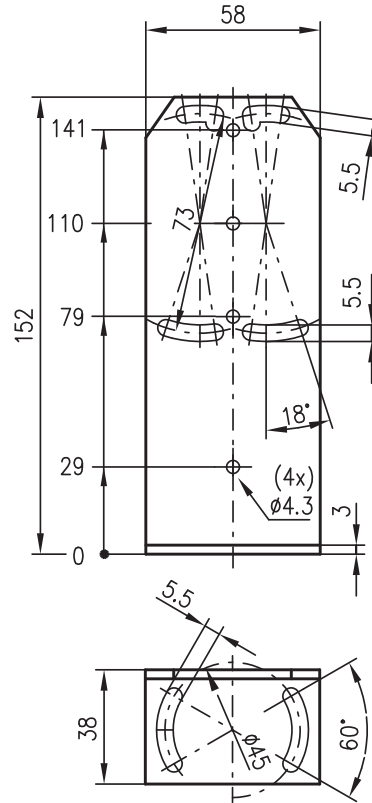
**Part**

**BT 96** (Part No. 500 25570)



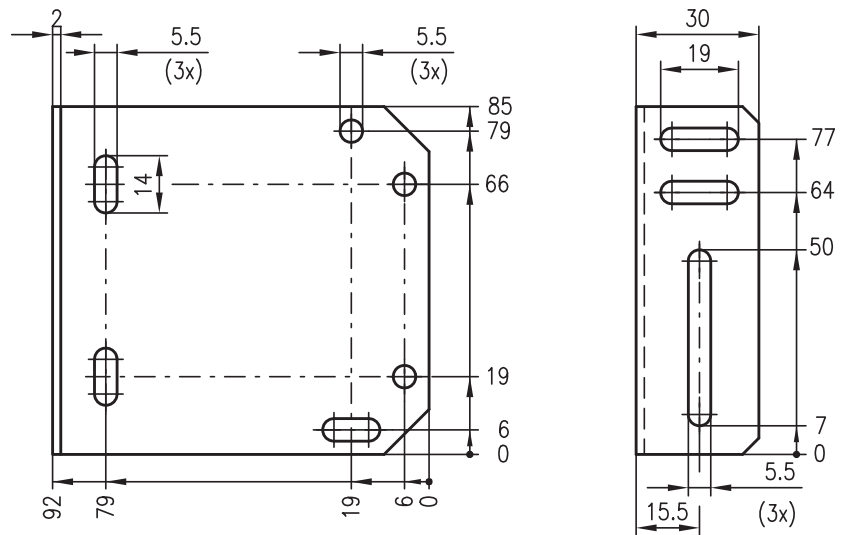
Mounting bracket for 96 series

**Dimensioned drawings**

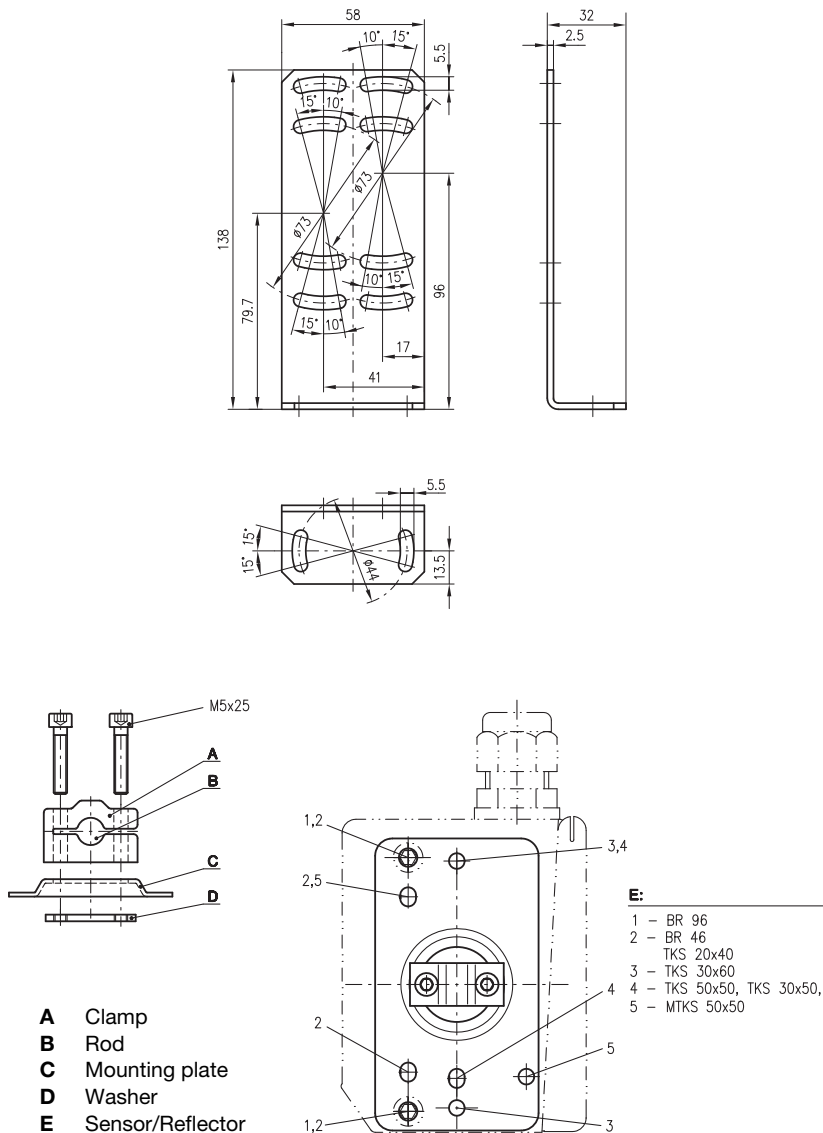


**BT 96.1** (Part No. 500 80614)

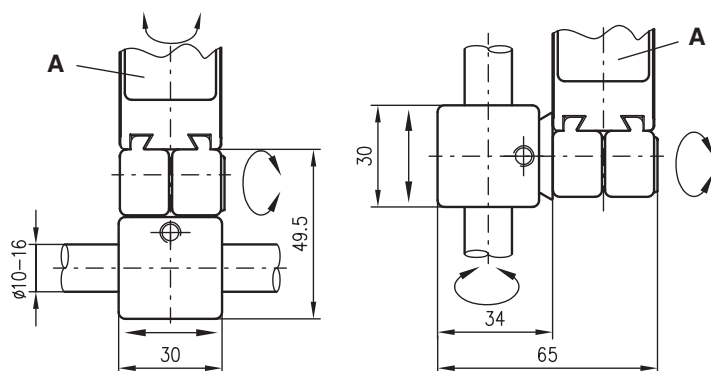
Mounting bracket for 96 series



**Dimensioned drawings**



- A** Clamp
- B** Rod
- C** Mounting plate
- D** Washer
- E** Sensor/Reflector



**A** Sensor

**Part**

**BT 96.4** (Part No. 500 32319)  
Mounting bracket for 96 series

**BT 450.1-96** (Part No. 500 82084), D = 10mm  
**BT 450.3-96** (Part No. 501 04897), D = 12mm



Mounting system for 96 series, 46 series and reflectors TKS 20x40, MTKS 20x40.1, TKS 30x50, MTKS 30x50.1, TKS 30x60, TKS 50x50, TKS 50x50.1, MTKS 50x50

- Through-hole mount with rod D = 10mm or D = 12mm

**UMS 96** (Part No. 500 26204)



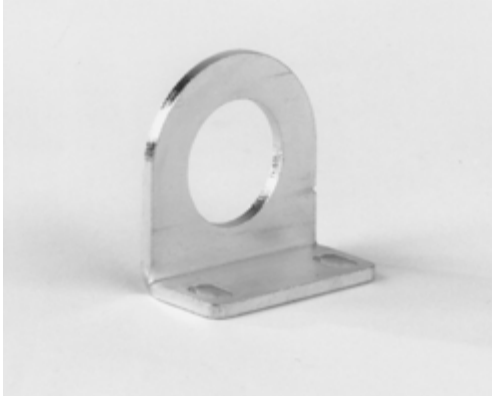
Mounting system for 96 series and 20 series contrast scanner with rod D = 10mm ... 16mm

**318 series**

**Mounting systems**

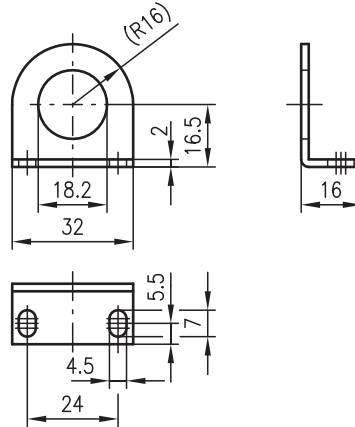
**Part**

**BT 318** (Part No. 500 33876)



Mounting bracket for M18 cylindrical sensors of the 318, 418 and 618 series

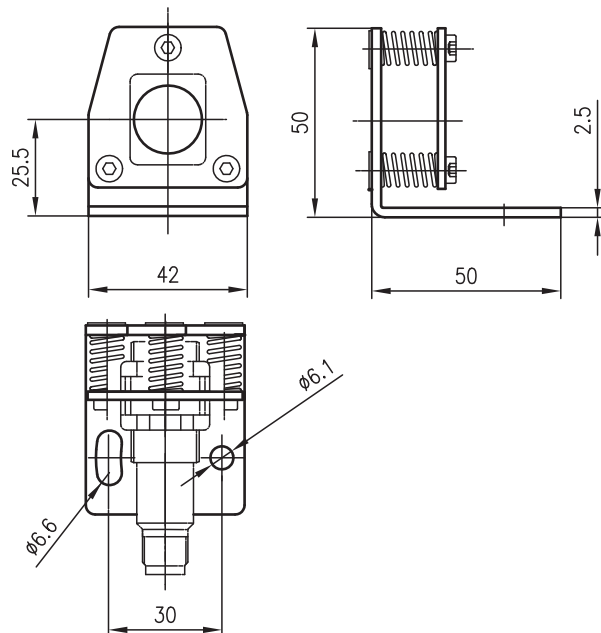
**Dimensioned drawings**



**BT 318-ARH** (Part No. 500 83189)

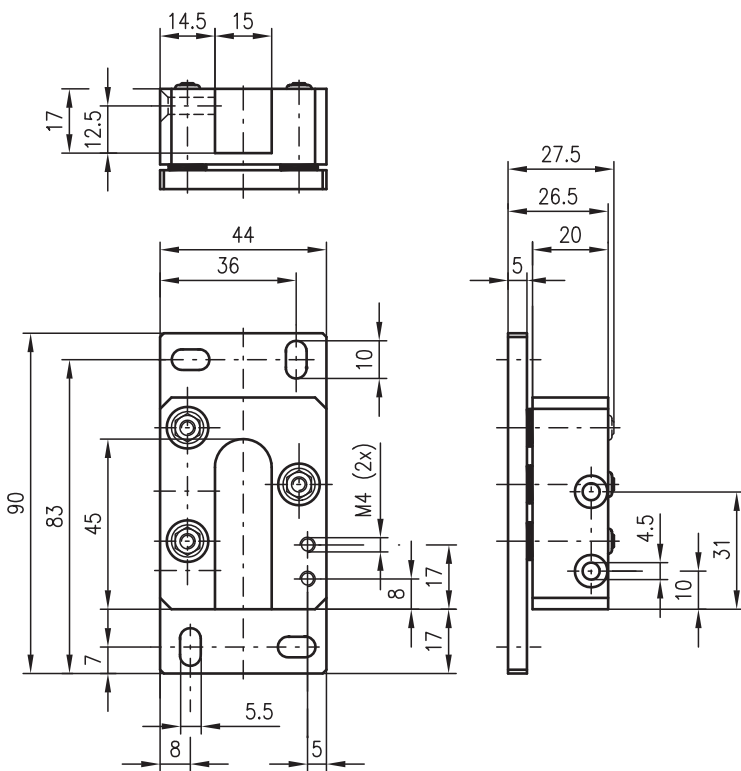
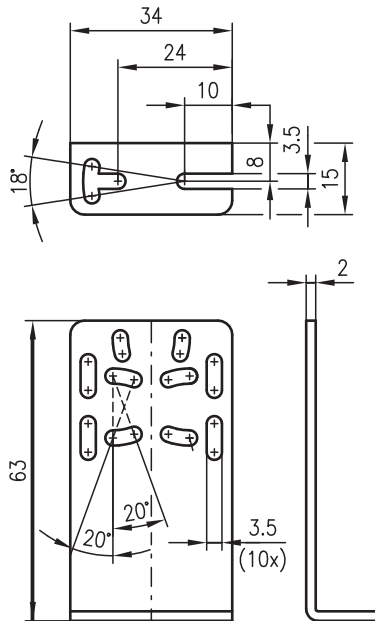


Fastening/alignment system with wobble plate for 318 series





**Dimensioned drawings**



**Part**

**BT 713** (Part No. 500 80776)



Mounting bracket for 713 series

**BT 66** (Part No. 500 16515)



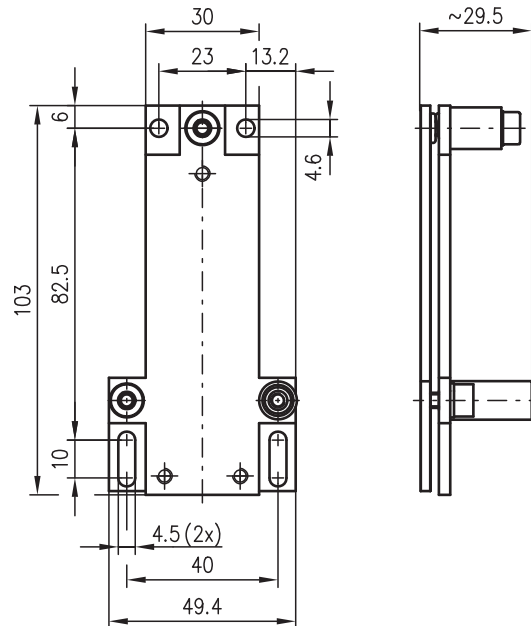
Fastening/alignment system with wobble plate for 713 series and LS 66

**Part**

**BT 64** (Part No. 500 80152)

Fastening/alignment system with wobble plate for LS 64

**Dimensioned drawings**

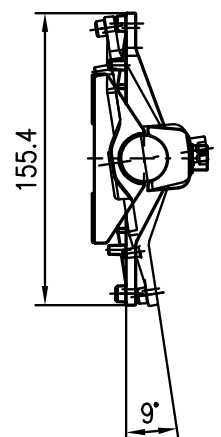
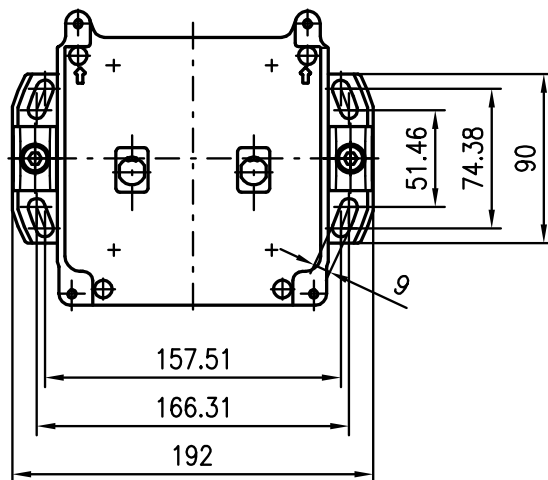
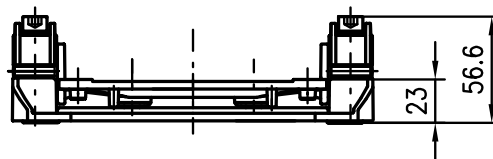


**Mounting system ROD4-MS**

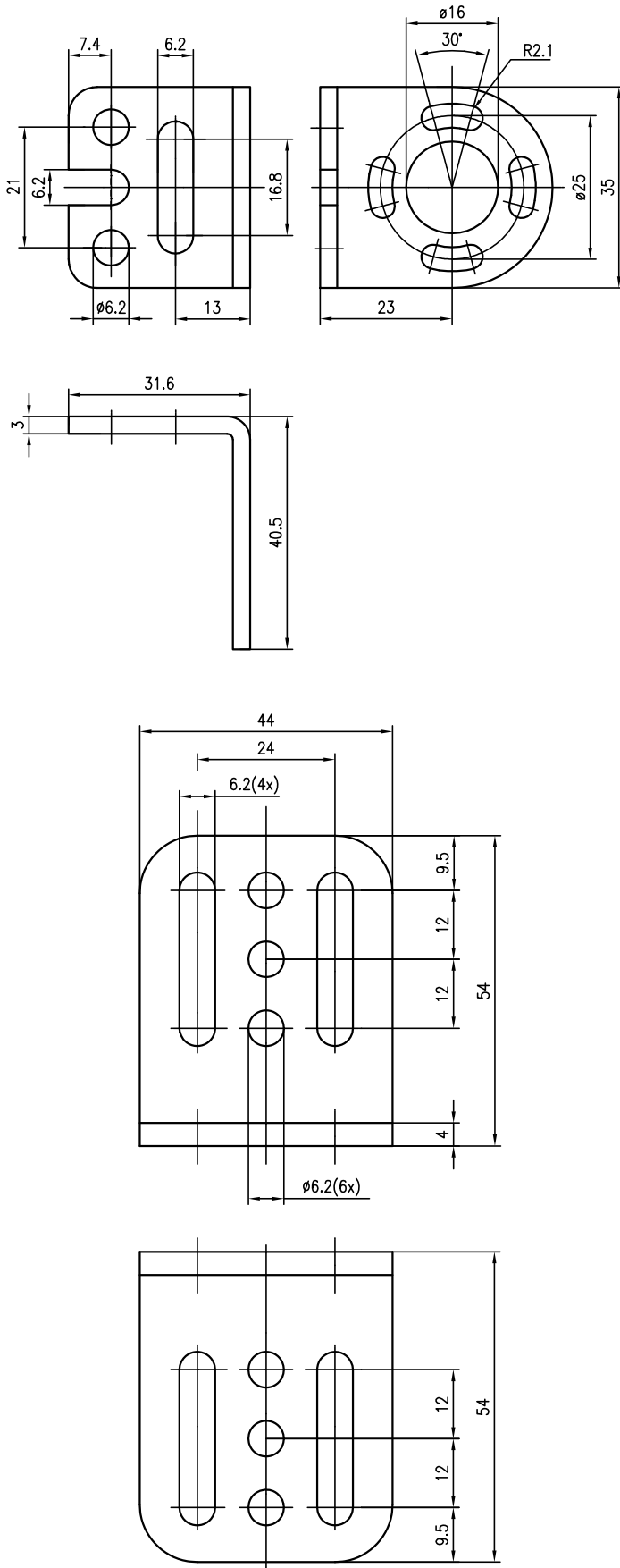
(Part No. 500 38066)



Mounting system/mounting plate for ROD 4



**Dimensioned drawings**



**Part**

**BT-K2 (Part No. 345899)**

Mounting set for KONTURflex light curtain (head mounting), consisting of 2 mounting brackets and screws

**BT-S (Part No. 560120)**

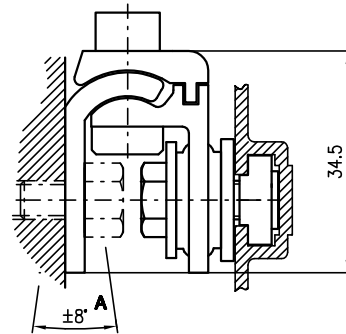
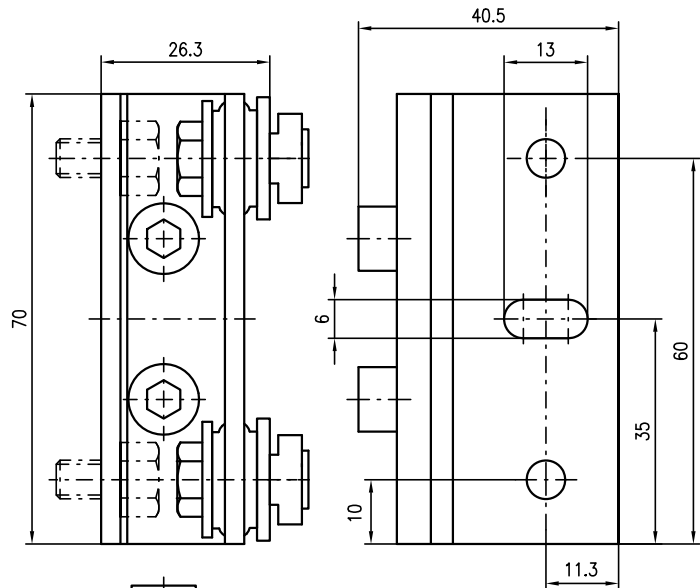
Mounting set for KONTURflex light curtain (side mounting), consisting of 2 mounting brackets and screws

**Part**

**BT-SSD (Part No. 560300)**

Mounting set for KONTURflex light curtain (side mounting), swivelling, incl. 2 sliding blocks and screws

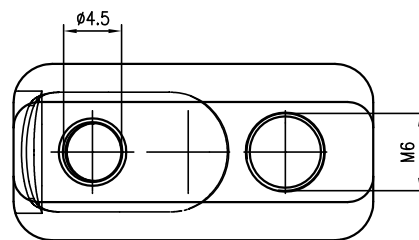
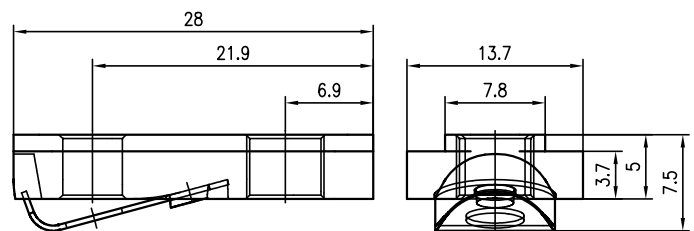
**Dimensioned drawings**



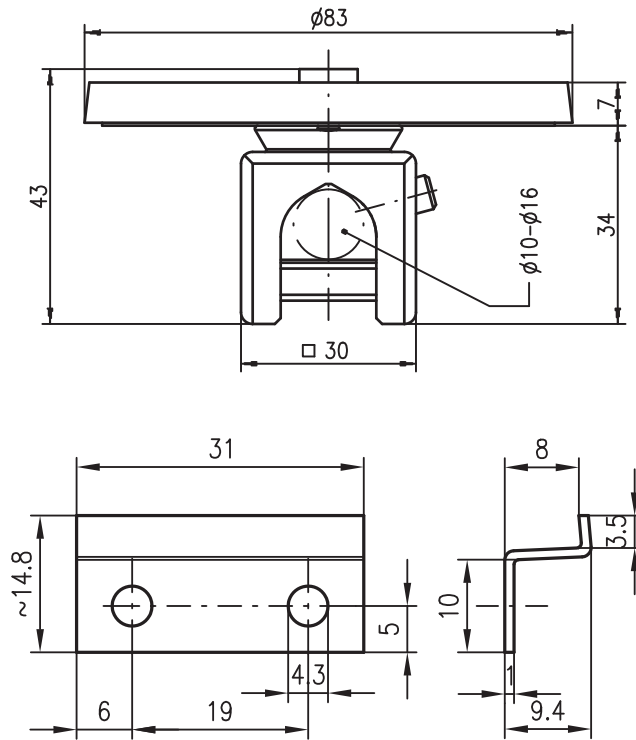
**A** Swivel range

**BT-NC (Part No. 425720)**

Sliding block M6 with rivet groove for KONTURflex light curtain



**Dimensioned drawings**



**Part**

**UMS 96-82** (Part No. 500 27191)



Rod mount with reflector TK 82 for rod  
D = 10mm ... 16mm

**ET 045-01** (Part No. 500 09419)

Mounting system for reflectors,  
clamping bracket for TK 50x100, TK 100x100

**ARH**

**Alignment aids**

**Part**

**ARH 10** (Part No. 500 80537)



Universal laser alignment aid



**Laser class 2 acc. to EN 60825-1**

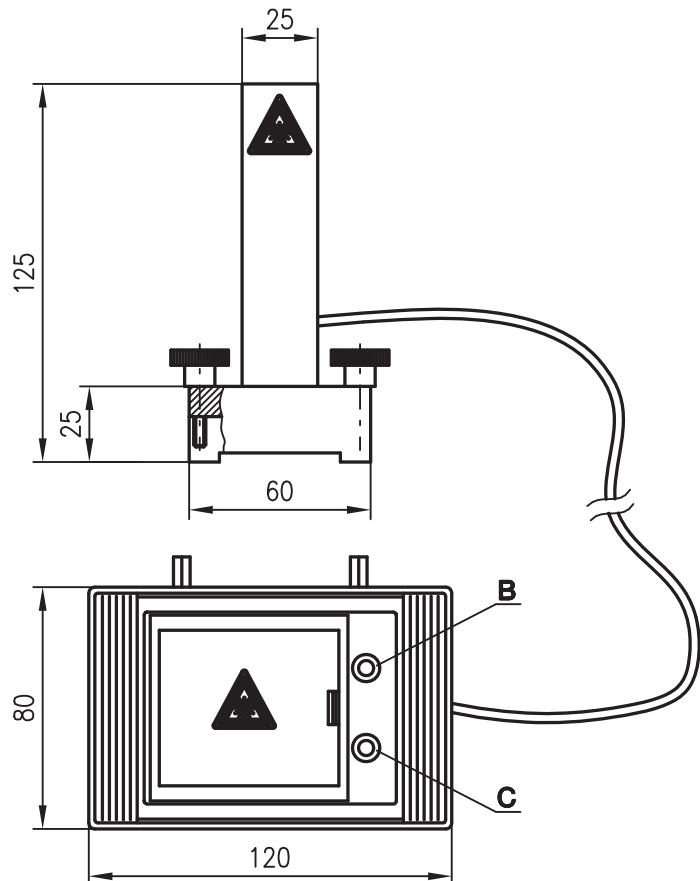
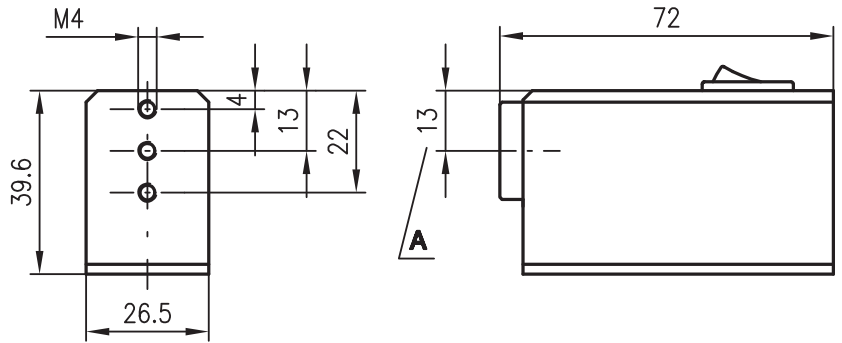
**ARH 2** (Part No. 500 23547)

Laser box, alignment aid with battery operation, for 78 and 85 series

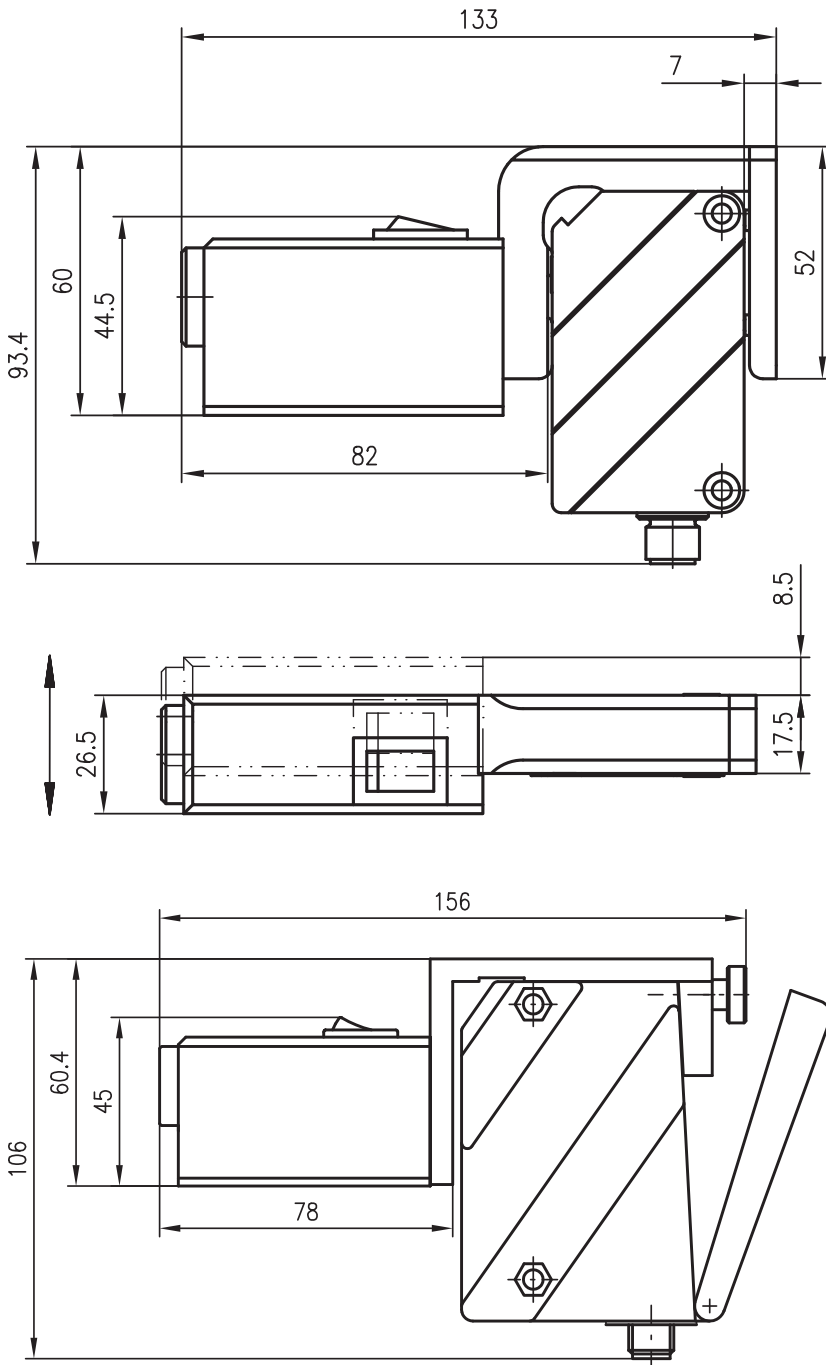


**Laser class 2 acc. to EN 60825-1**

**Dimensioned drawings**



**Dimensioned drawings**



**Part**

**ARH 46** (Part No. 500 40739)  
Laser alignment aid for 46 series



**Laser class 2 acc. to EN 60825-1**

**ARH 96** (Part No. 500 80502)



Laser alignment aid for 96 series



**Laser class 2 acc. to EN 60825-1**

**SAT**

**Alignment control for throughbeam photoelectric sensors**

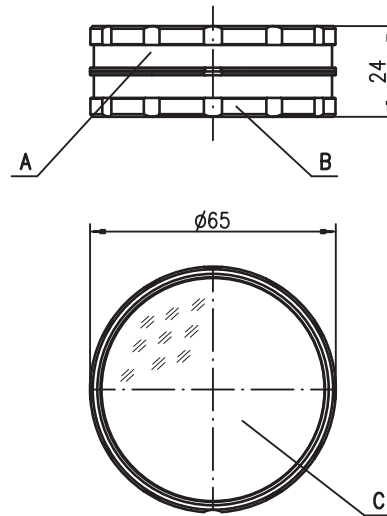
**Part**

**SAT 5** (Part No. 501 09545)



Sensorscope - universal alignment control for throughbeam photoelectric sensors and safety throughbeam photoelectric sensors

**Dimensioned drawings**



- A** Turnable 360°, capture range / deflection steplessly adjustable in mm/m
- B** Info on alignment direction
- C** Double prism





## **Optoelectronic Sensors**

Cubic Series  
Cylindrical Sensors, Mini Sensors, Fibre Optic Amplifiers  
Measuring Sensors  
Special Sensors  
Light Curtains  
Forked Sensors  
Double Sheet Monitoring, Splice Detection  
Accessories

## **Identification Systems**

### **Data Transmission Systems**

### **Distance Measurement**

Barcode Readers  
RF-IDent-Systems  
Modular Interfacing Units  
Industrial Image Processing Systems  
Optical Data Transmission Systems  
Optical Distance Measurement/Positioning  
Hand-Held Readers

## **Safety Sensors**

### **Safety Systems**

### **Safety Services**

Safety Laser Scanners  
Safety Light Curtains  
Transceivers and Multiple Light Beam Safety Devices  
Single Light Beam Safety Devices  
AS-i-Safety Product Range  
Safety Sensor Technology for PROFIBUSDP  
Safety Switches and Safety Locking Devices  
Safety Relays and Safety Interfaces  
Sensor Accessories and Signal Devices  
Safety Engineering Software  
Machine Safety Services

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