

CLV620

Intelligence for Logistics and Automation



Every bar code scanner from SICK contains the experience of decades of continuous development, and thousands of successful applications throughout all sectors. This also applies for the CLV620 scanner. It combines a high reading performance with the SMART620 code reconstruction system, a reading algorithm that can accurately detect bar

codes despite their being damaged or partially covered. Which device matches your application? The CLV620 model is designed to be so flexible that almost any reading requirement can be met precisely – short-range, long-range and mid-range; frontal or lateral reading field, line or raster version, with or without Ethernet.

Your benefits:

- No supplementary Ethernet Gateway required – lower costs for Ethernet connection
- High reading rate for damaged, dirty and partially covered bar codes
- Data transmitted to controller in desired format
- The CLV620 scanner can be used as a multiplexer in any CAN-scanner network from SICK – no supplementary multiplexer necessary
- Code identification even at high transport speeds
- Simple mounting in constricted locations

The CLV620 at a glance:

- CAN and Ethernet TCP/IP on board
- SMART620 code reconstruction
- Data handling: even more flexible sort and filter functions
- Varied CAN bus functionalities
- Configuration with SOPAS
- High scanning frequency of up to 1,200 Hz
- Small housing

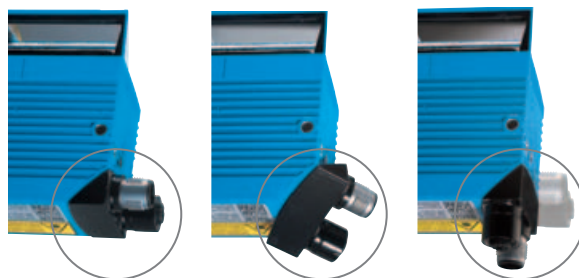
Technical data

Type	CLV620
Reading field	Line/raster scanner: frontal, line/raster scanner with angle attachment: lateral (light exit below 105°)
Laser diode (wavelength)	Red light ($\lambda = 650 \text{ nm}$)
MTBF of laser diode	20,000 h
Laser class of device	Class 2, acc. to EN 60825-1 (A2:2001-03) and IEC 60825-1: 2007-03, Ed. 2.0
Usable aperture	Straight light exit, max. 50°/lateral light exit, max. 51°
Scanning/decoder frequency	400 ... 1,200 Hz
Resolution	0.15 ... 1.0 mm (type-dependent)
Raster height	15 mm (8 lines) at 200 mm reading distance (frontal read field)
Bar code print contrast (PCS)	$\geq 60 \%$
Ambient light compatibility	2,000 lx (on bar code)
No. of bar codes per scan	1 ... 20 standard decoder, 1 ... 6 SMART620
No. of bar codes per reading gate	1 ... 50 bar codes (auto-discriminating)
Bar code types	Code 39, Code 128, Code 93, Codabar, EAN, EAN 128, UPC, 2/5 Interleaved, Pharmacode
Bar code length	50 symbols per code; max. 1,500 symbols over all bar codes per reading gate, 500 symbols for multiplexer function in CAN operation
Print ratio	2:1 ... 3:1
No. of multiple readings	1 ... 99
Optical indicators	6 LEDs: Ready, Result, Laser, Data, CAN, Ethernet
Acoustic indicators	Beeper, can be deactivated, potential function for results status indication
Reading cycling	Switching input "sensor 1"/free-running/serial interface/autocycle
"Host" data interface	RS-232 or RS-422/485, data output format adjustable
Data transfer rate	2,400 to 115 kBaud
Protocols	SICK Standard
Physical configurations	Stand alone
"CAN" data interface	CAN-sensor network
Data transfer rate	20 Kbit/s ... 1 Mbit/s
Ethernet data interface	10/100 Mbit/s
Aux data interface	RS-232, 57,600 Baud, fixed data output format
Digital switching inputs	Standard version: 2; Ethernet version: 1/2 additional external inputs via CMC600
Digital switching outputs	Standard version: 2, Ethernet version: 0/2 ("Result 1", "Result 2"), 2 additional external outputs via CMC600
Electrical connection	Standard version: 15-pin D-sub HD plug, cable length 0.9 m, Ethernet version: 2 x M12 plugs
Operating voltage/consumption	10 ... 30 DC V/4.5 W
Housing	Die-cast aluminium
Enclosure rating/Protection class	IP 65 (acc. to DIN 40 050)/Class 3 (acc. to VDE 0106/IEC 1010-1)
EMC test	Interference emission: EN 61000-6-4 2001-10 ¹⁾ , interference immunity: EN 61000-6-2 2005-08
Weight	205 g Ethernet version (without connection cable, frontal read window)/229 g with connection cable
Ambient/storage temperature	0 ... +40 °C/-20 ... +70 °C
Max. rel. humidity	90 %, non-condensing

¹⁾ The bar code scanner is designed for use in industrial conditions



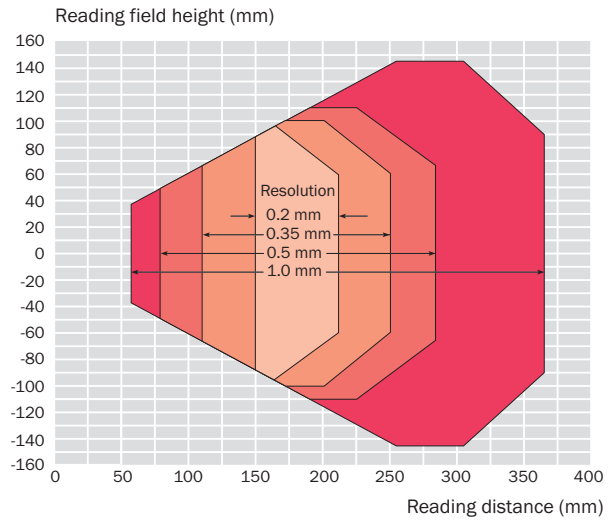
Pivoting Plug-in unit



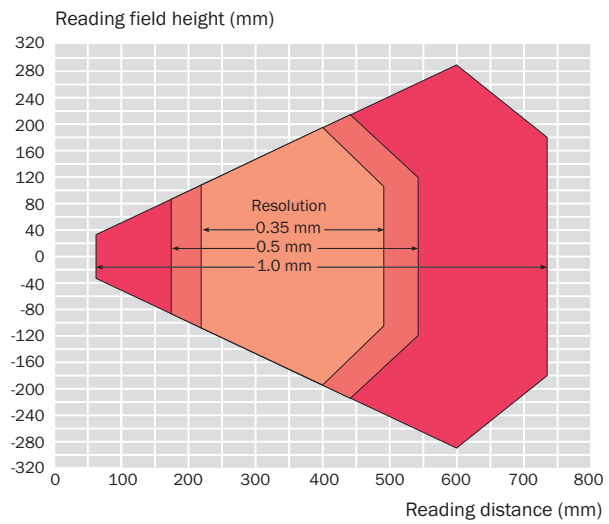
The practical pivoting plug-in unit allows the CLV6xx product family to be installed and connected even in apparently impossible locations. Result: more comfortable network construction, more rapid plug connection thanks to "SPEED Con", and flexible mounting.

Line/Raster scanners, straight light exit

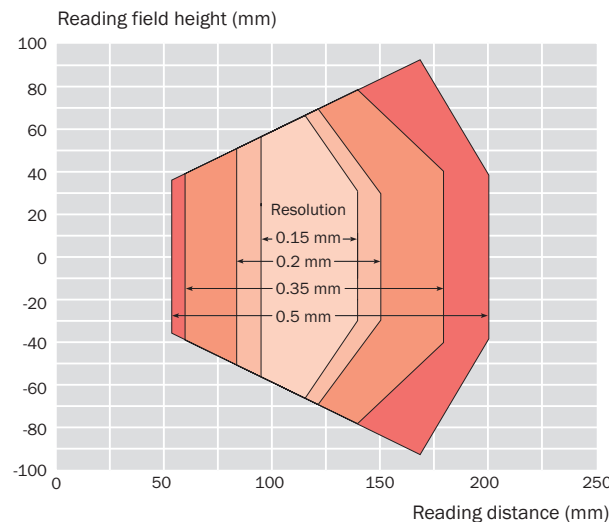
CLV620 Mid Range



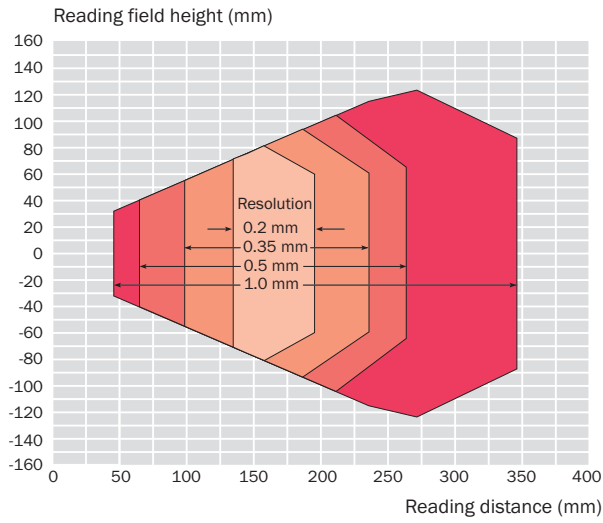
CLV621 Long Range



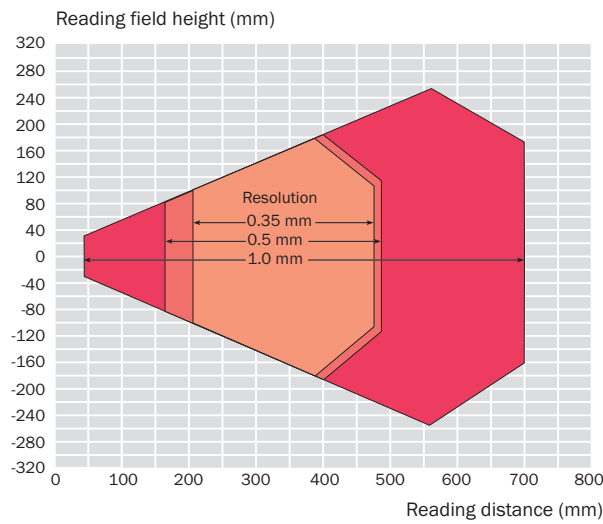
CLV622 Short Range



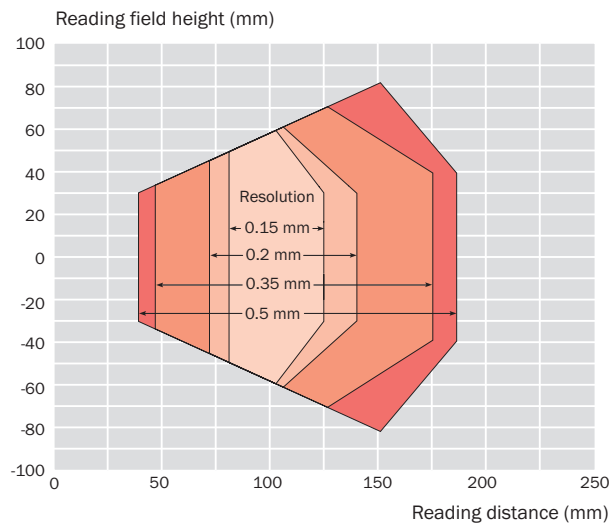
Line/Raster scanners, lateral light exit



CLV620 Mid Range



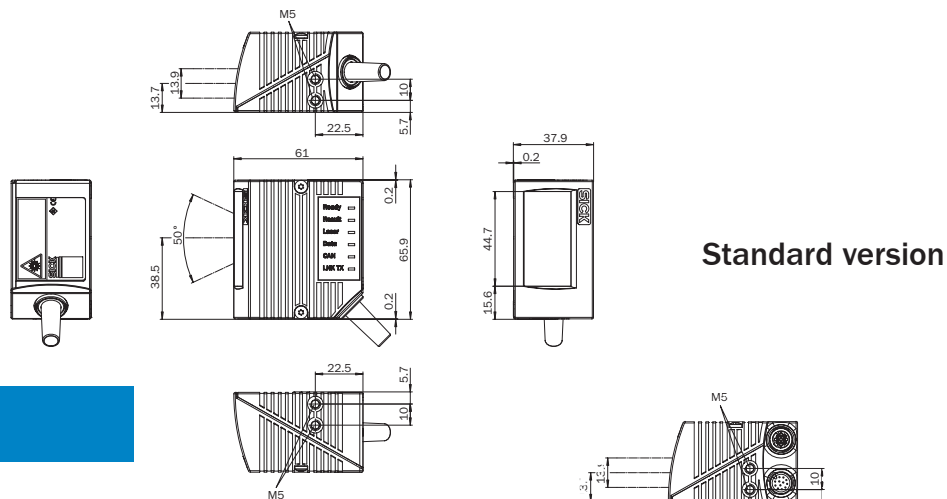
CLV621 Long Range



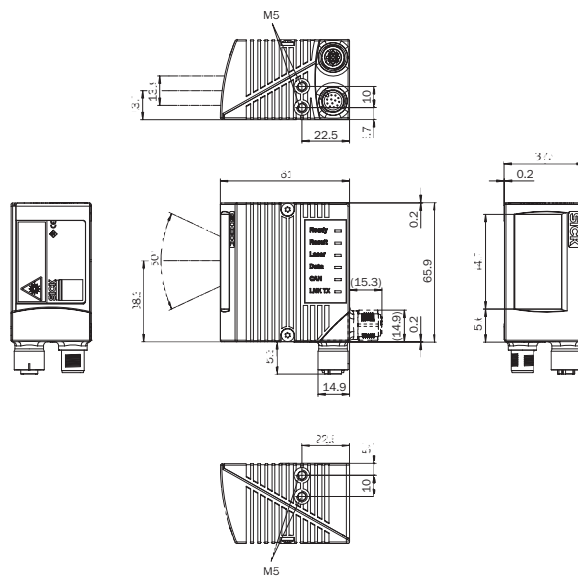
CLV622 Short Range

Dimensional drawings

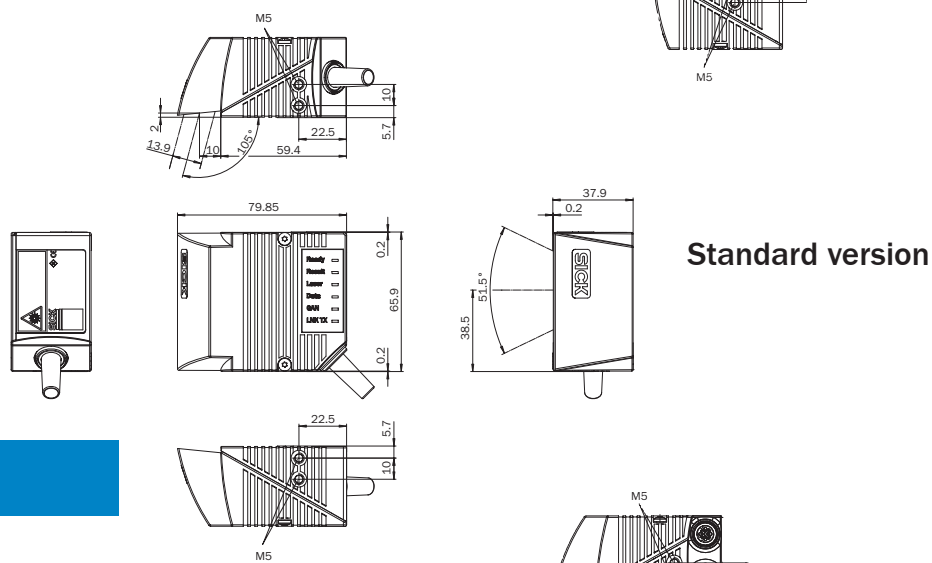
Straight light exit



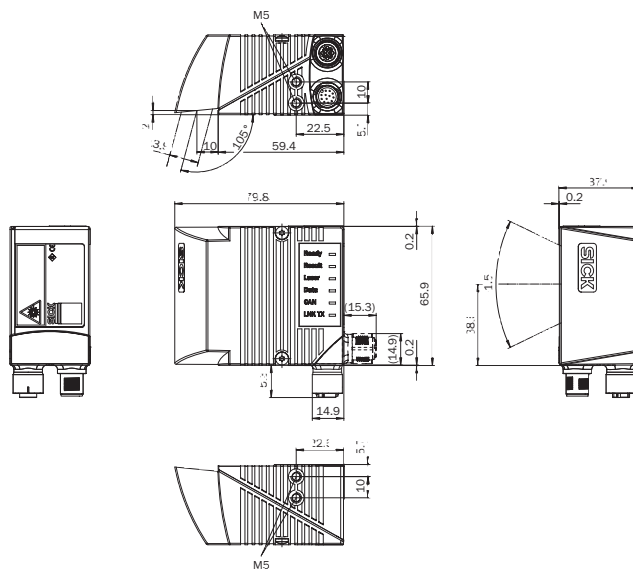
Ethernet version



Lateral light exit



Ethernet version



Order information

Mid Range, Standard version

Type	Description	Order no.
CLV620-0000	Line, straight light exit	1040288
CLV620-1000	Raster, straight light exit	1041548
CLV620-2000	Line, lateral light exit, angular hood 105°	1041550
CLV620-3000	Raster, lateral light exit, angular hood 105°	1041552

Mid Range, Ethernet version

Type	Description	Order no.
CLV620-0120	Line, straight light exit	1041547
CLV620-1120	Raster, straight light exit	1041549
CLV620-2120	Line, lateral light exit, angular hood 105°	1041551
CLV620-3120	Raster, lateral light exit, angular hood 105°	1041553

Long Range, Standard version

Type	Description	Order no.
CLV621-0000	Line, straight light exit	1041784
CLV621-1000	Raster, straight light exit	1041786
CLV621-2000	Line, lateral light exit, angular hood 105°	1041788
CLV621-3000	Raster, lateral light exit, angular hood 105°	1041790

Long Range, Ethernet version

Type	Description	Order no.
CLV621-0120	Line, straight light exit	1041785
CLV621-1120	Raster, straight light exit	1041787
CLV621-2120	Line, lateral light exit, angular hood 105°	1041789
CLV621-3120	Raster, lateral light exit, angular hood 105°	1041791

Short Range, Standard version

Type	Description	Order no.
CLV622-0000	Line, straight light exit	1041792
CLV622-1000	Raster, straight light exit	1041794
CLV622-2000	Line, lateral light exit, angular hood 105°	1041796
CLV622-3000	Raster, lateral light exit, angular hood 105°	1041798

Short Range, Ethernet version

Type	Description	Order no.
CLV622-0120	Line, straight light exit	1041793
CLV622-1120	Raster, straight light exit	1041795
CLV622-2120	Line, lateral light exit, angular hood 105°	1041797
CLV622-3120	Raster, lateral light exit, angular hood 105°	1041799

Accessories

Accessories can be found on Page 218

CLV Accessories

	CLV405	CLV410	CLV420	CLV430	CLV440	CLV450	CLV480/CLV490/ CLX490	CLV480/CLV490/ CLX490 with Heating	CLV6xx Standard Version	CLV6xx Ethernet Version	
Cable											
6010075	■	■	■	■	■	■					Extension for connection cable, 2 m, 15-wired, shielded, with 15-pin, D-Sub-HD plug/receptacle
6010137	■	■	■	■	■	■					As 6010075, but with 15-pin D-Sub-HD plug/open end
2014054	■	■	■	■	■	■	■		■	■	Data connection cable (RS-232) for CLV/ICR/CDB/CDM to PC, 3 m, with 2 x 9-pin D-Sub receptacle
6010088	■	■	■	■	■	■					Data cable for extension up to 3 m, Ø 6.6 mm, 15 x 0.09 mm ² , shielded, available per meter
6010019	■	■	■	■	■	■			■	■	D-Sub female connector, 15-pin HD (receptacle), hand soldered terminal
6010020	■	■	■	■	■	■			■	■	D-Sub female connector, 15-pin HD (plug), hand soldered terminal
6009438	■	■	■	■	■	■			■	■	D-Sub plug housing (metal) for 9-pin/15-pin HD inputs
6020092		■	■	■	■	■					Extension cable 3 m, 15-wired, shielded, with 15-pin D-Sub-HD plug/receptacle
4038847		■	■	■	■	■			■	■	IP 65 sealing ring for extension cable 6010075 and 6020092
2020307							■				Plug housing (IP 65) for CLV/X490, with EEPROM parameter store for the connection to CDM490, with 2 cables, each 3 m, each 15-wired shielded, with 15-pin Sub-HD plug/receptacle
2021806							■				As 2020307, but with a length of 1 m
2020981							■				Plug housing (IP 65) for CLV/X490, with EEPROM parameter store, with 2 cables Ø 8 mm, each 3 m, each 15 x 0.14 mm ² , shielded, open end
6034414										■	Cable, M12 4-pin, Ethernet to Host RJ45, 2 m (plug/plug)
6029630										■	Cable, M12 4-pin, Ethernet to Host RJ45, 3 m (plug/plug)
6034415										■	Cable, M12 4-pin, Ethernet to Host RJ45, 5 m (plug/plug)
6030928										■	Cable, M12 4-pin, Ethernet to Host RJ45, 10 m (plug/plug)
6034420										■	Cable, M12 4-pin, Ethernet to Host M12, 2 m (plug/plug)
6034421										■	Cable, M12 4-pin, Ethernet to Host M12, 3 m (plug/plug)
6034422										■	Cable, M12 4-pin, Ethernet to Host M12, 5 m (plug/plug)
2042916										■	Cable, M12 12-pin, to CDB620/CDM400/CDF600 15-pin D-Sub, 0.9 m (socket/plug)
2041834										■	Cable, M12 12-pin, to CDB620/CDM400/CDF600 15-pin D-Sub, 2.0 m (socket/plug)
2042914										■	Cable, M12 12-pin, to CDB620/CDM400/CDF600 15-pin D-Sub, 3.0 m (socket/plug)
2042915										■	Cable, M12 12-pin, to CDB620/CDM400/CDF600 15-pin D-Sub, 5.0 m (socket/plug)

CLV Accessories

	CLV405	CLV410	CLV420	CLV430	CLV440	CLV450	CLV480/CLV490/ CLX490	CLV480/CLV490/ CLX490 with Heating	CLV6xx Standard Version	CLV6xx Ethernet Version	
6034605										■	Cable, M12 12-pin, to open end, 5.0 m
6035701									■	■	Extension cable up to 3 m, 16 x 0.14 mm ² (AWG26), shielded, as per meter
6034417									■	■	Extension cable, 2 m, 15-wired, shielded, with 15-pin D-SUB-HD (plug/socket) AWG26
6034418									■	■	Extension cable, 3 m, 15-wired, shielded, with 15 pin D-SUB-HD (plug/socket) AWG26
2043413									■	■	Extension cable, 2 m, 15-wired, shielded, with 15-pin D-SUB-HD (socket/open end) AWG26
2020302							■				Connection cable (3 m), Ø 8 mm, shielded, with 15-pin D-Sub-HD receptacle and 15-pin D-Sub-HD plug
2020264							■				Connection cable for CLV/X490 ("I/O"), Ø 8 mm, 3 m, 15-wired, shielded, with 15-pin D-Sub-HD plug/open end
2020303							■				Connection cable for CLV/X490 ("Host/Term"), Ø 8 mm, 3 m, 15-wired, shielded, with 15-pin D-Sub-HD plug/open end
2027046							■				Connection cable for CLV480, CLV/X490 to CDB420, 3 m, without EEPROM parameter store
2030023							■				Connection cable for CLV480, CLV/X490 to CDB420, 3 m, with EEPROM parameter store
2033325							■				Connection cable for CLV480, CLV/X490 to CDB420, 1 m, with EEPROM parameter store
6007508							■				Data cable for RS-485 network, Ø 8.5 mm, 2 x 2 x 0.23 mm ² , twisted pair, shielded, available per meter
2022714							■	■			Incremental encoder mit wheel resolution 10 mm/pulse max. 100 KHz, power supply DC 18 ... 28 V, with mounting bracket and mounting material (2 x inner hex screw M5 x 30, 2 x nut M5 - A2, 4 x washer A5,3 - A2) (minimal operation temperature: 0° C)
2030065								■			Cold cable (3 m), with plug housing and parameter store (EEPROM), IP 65
2031034								■			Cold cable (10 m), with plug housing and parameter store (EEPROM), IP 65

CLV Accessories

CLV405	CLV410	CLV420	CLV430	CLV440	CLV450	CLV480/CLV490/ CLX490	CLV480/CLV490/ CLX490 with Heating	CLV6xx Standard Version	CLV6xx Ethernet Version
--------	--------	--------	--------	--------	--------	--------------------------	---------------------------------------	----------------------------	----------------------------

Holder/Mounting bracket										
2020077		■	■							Mounting bracket, small, with mounting material (2 screws M4 x 8, 2 x washer A 4,3, 2 x spring ring B4)
2020078		■	■							Mounting bracket, large, with mounting material (2 screws M4 x 8, 2 x washer A 4,3, 2 x spring ring B4)
2032868		■	■							Holder for bars, with mounting angles, with mounting material (3 screws M4 x 8, 2 plates A4,3 2 x spring ring B4, grub screw M8 x 16)
2022564				■	■	■				Mounting bracket, U-shaped, with mounting material (3 self-locking screws M 5 x 8, 3 x washer A 5, 2 x screws M 5 x 12, 2 x washer A 5,3)
2021342						■				Mounting bracket, U-shaped, with shock absorber and mounting material (3 self-locking screws M5 x 8, 3 x washer A5, 2 x screw M5 x 16, 2 x washer A5,3)
2023691				■	■	■				Clamp bracket for tubes with 12 ... 20 mm outer diameter, with mounting bracket, U-shapes, with mounting material (1 x grub screw M8 x 16, 3 x self locking screw M5 x 8, 3 x washer A5)
2042802								■	■	Universal holder
2042902								■	■	Bracket with adapter board
2020410				■	■	■		■	■	Mounting set
2025526				■	■	■		■	■	Quick clamp
2016110							■	■		Quick-change clamping device with mounting material (2 screws M6 x 12, 2 screws M6 x 16, 2 x washer A 6,4)
2013824							■	■		Angle bracket, single, with 2 x self-locking screw M6 x 10
2018435							■	■		Joint angle (angle bracket 2013824 double), with 2 screws M6 x 10 mm
2022996							■			Mounting angle, with 2 x screws M6 x 12, self-locking
2032070							■			Mirror shield (for the reduction of the needed mounting area)
8008085				■	■	■				Profile bar codes DIN A5