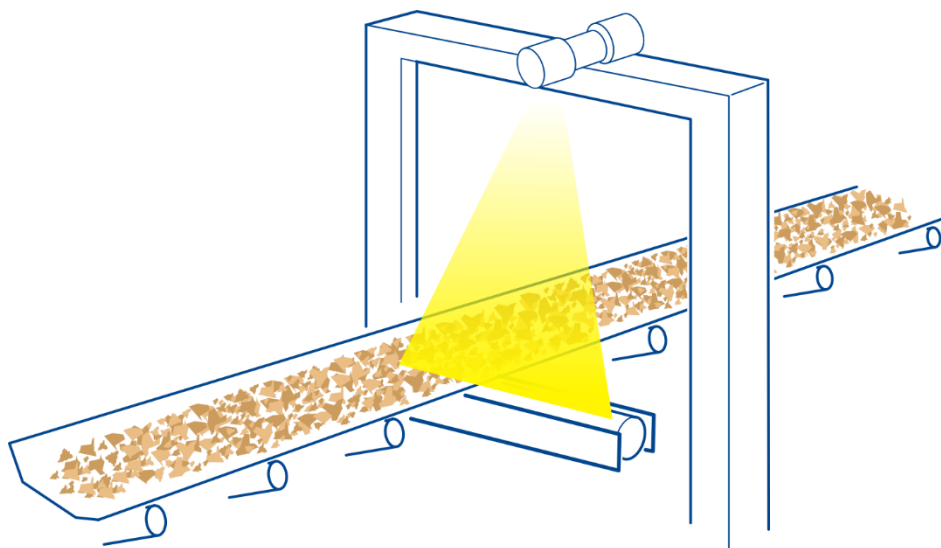




Bulk Flow *Fördermenge*

Technical Information *Technische Information*

56926TI1B
Rev. No.: 01, 01/2020

2 Wire Technology

The DuoSeries/DuoXPert measuring system consists of a scintillation detector – CrystalSENS point detector, UniSENS rod detector or SuperSENS detector – and a sophisticated evaluation unit (DuoXPert) for display and operation.

The evaluation unit is a state-of-the-art control unit with robust 3.5" TFT touch panel, powerful Dual Core CPU and diverse operator interfaces. Advanced self diagnostics and monitoring features ensure a safe function of the system. Furthermore the data logging functionality allows operators to analyze their processes in depth, e.g. develop trends, track process changes etc.

Sophisticated measuring system in 2 wire technology

- Unique: Radiometric system with intrinsically safe power supply (Full Ex-i)
- Real 2-wire technology, only 2 wires in the field
- Advanced self diagnostics and monitoring features
- Easy to use touch screen panel for local display and operation
- Integrated gas density compensation feature
- Direct replacement of predecessor model LB 440
- Interfaces with all 2-wire detectors LB 44xx, LB 54xx and LB 47xx

2-Leiter Technologie

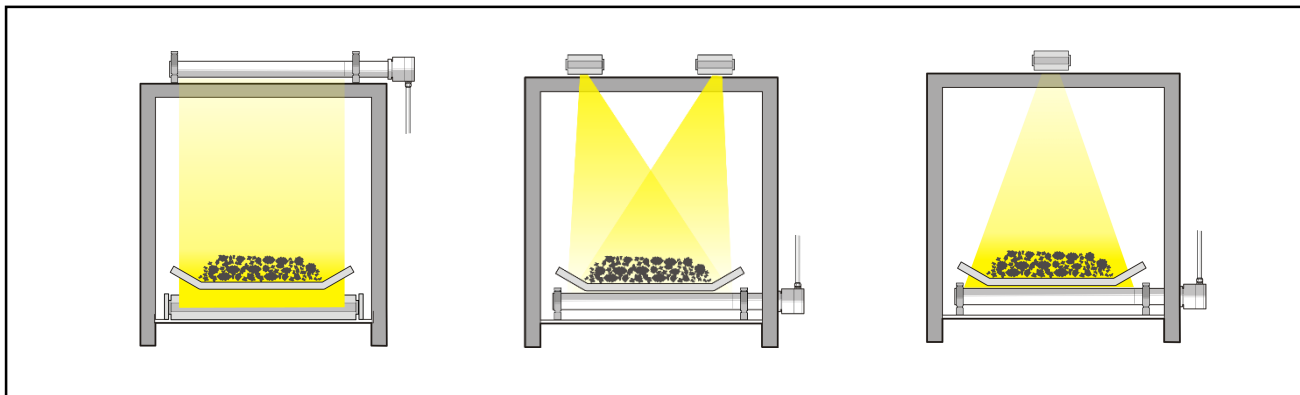
Das DuoSeries/DuoXpert Messsystem besteht aus einem Detektor mit Szintillator-Technologie – CrystalSENS Punktdetektor, UniSENS Stabdetektor oder SuperSENS Detektor – sowie einer separaten Auswerteeinheit zur Anzeige und Bedienung.

Die moderne Auswerteeinheit verfügt über ein 3,5" Touch Panel, eine starke Dual Core CPU und verschiedenen Bedien-Optionen. Erweiterte Funktionen zur Selbstdiagnose und Überwachung sorgen zudem für höchste funktionale Sicherheit der Messung im Betrieb. Darüber hinaus können die Betreiber die Daten-Log Funktionen für eine detaillierte Prozessanalyse nutzen und so zum Beispiel Trends entwickeln oder Prozessänderungen nachvollziehen.

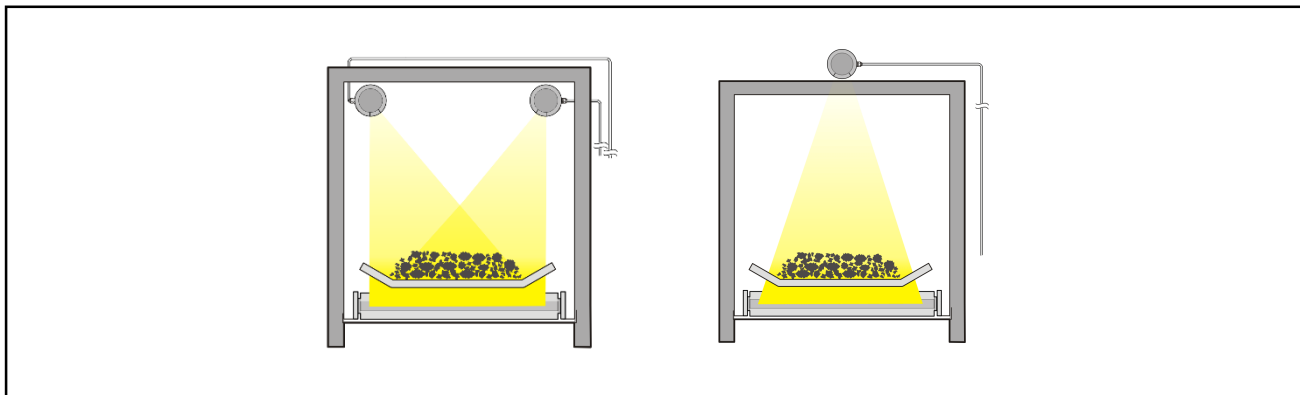
Hochentwickeltes Messsystem in 2-Leiter Technologie

- Einzigartig: Radiometrische Messung mit eigensicherer Spannungsversorgung (Voll Ex-i)
- Echte 2-Leiter Technik, nur 2 Adern im Feld
- Verbesserte Diagnosefunktionen und Selbstüberwachung
- Einfache, intuitive Bedienung über Touch-Screen
- Integriertes Feature zur Kompensation von Gas-Phasen Schwankungen
- Volle Kompatibilität zum Vorgängermodell LB 440
- Kompatibel zu alle 2-Leiter Detektoren LB 44xx, LB54xx und LB 47xx

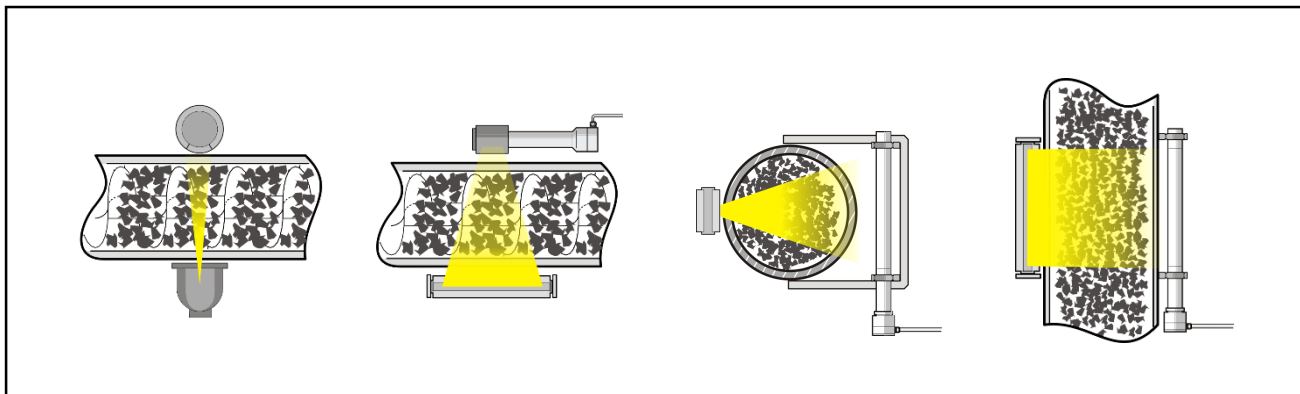
Measurement Arrangements Bulk Flow *Messanordnungen Fördermenge*



Measurement arrangements with rod detector
Messanordnungen mit Stabdetektor

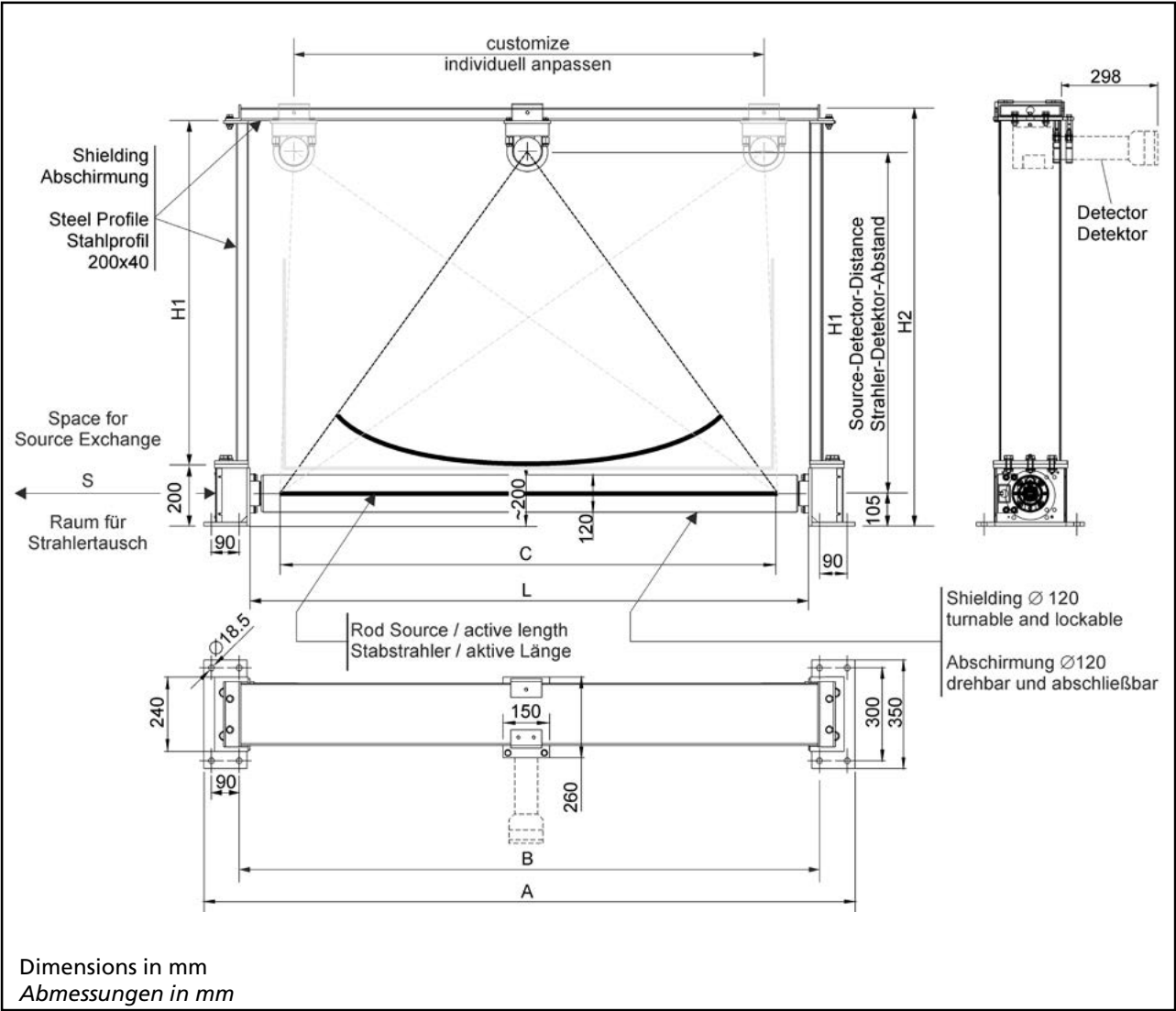


Measurement arrangements with point detector
Messanordnungen mit Punktdetektor



Measurement arrangements at pipes
Messanordnungen an Rohren

Measuring Frame Rod Source LB 4426 / LB 4427 (V2A)
Messbügel für Stabstrahler LB 4426 / LB 4427 (V2A)

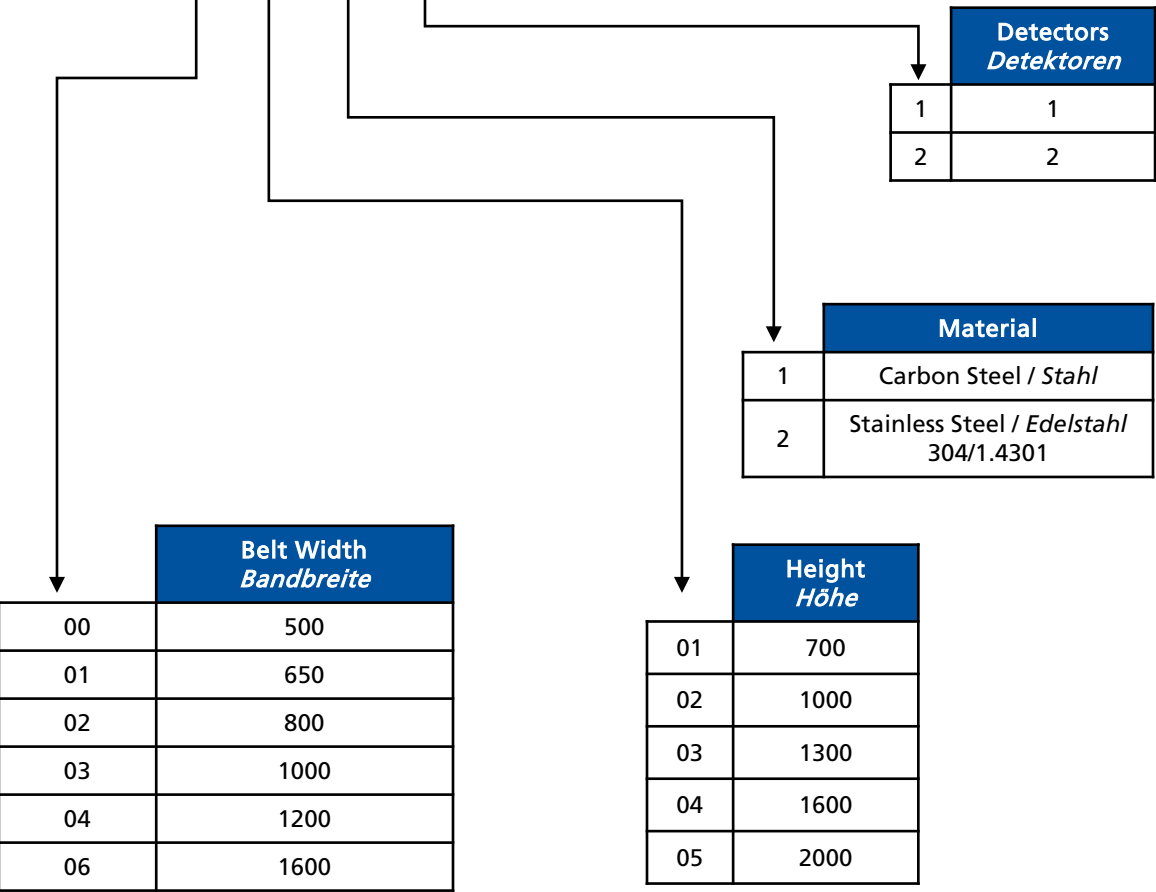


LB 4426 Part No. Id Nr.	C belt width Bandbreite	A	B	H1 sidepart length Seitenteil Länge	H2 total height Gesamt höhe	L inside width lichte Weite	Weight Gewicht (kg)	S
30846-0111	500	1006	776	700	955	706	309	1000
30846-1111	650	1156	926	700	955	856	341	1150
30846-2111	800	1306	1076	700	955	1006	373	1300
30846-3121	1000	1506	1276	1000	1255	1206	470	1500
30846-4121	1200	1706	1476	1000	1255	1406	514	1700
30846-6121	1600	2106	1876	1000	1255	1806	558	2100

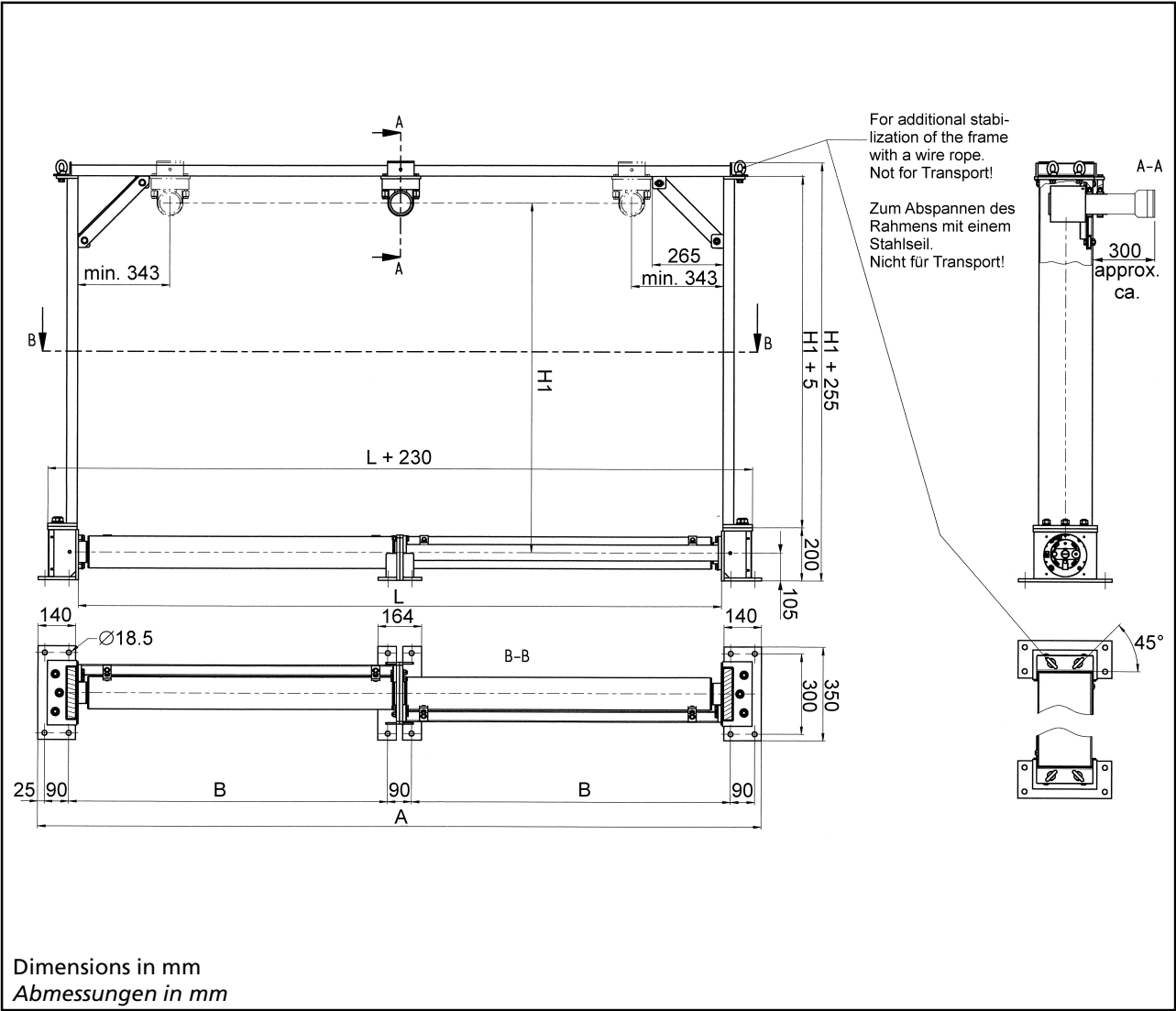
Nomenclature LB 4426 / LB 4427 (V2A)
Nomenklatur LB 4426 / LB 4427 (V2A)

LB-Number Key
LB-Nummernschlüssel

30846 – x – x – x – x



Measuring Frame Rod Source LB 4452
Messbügel für Stabstrahler LB 4452

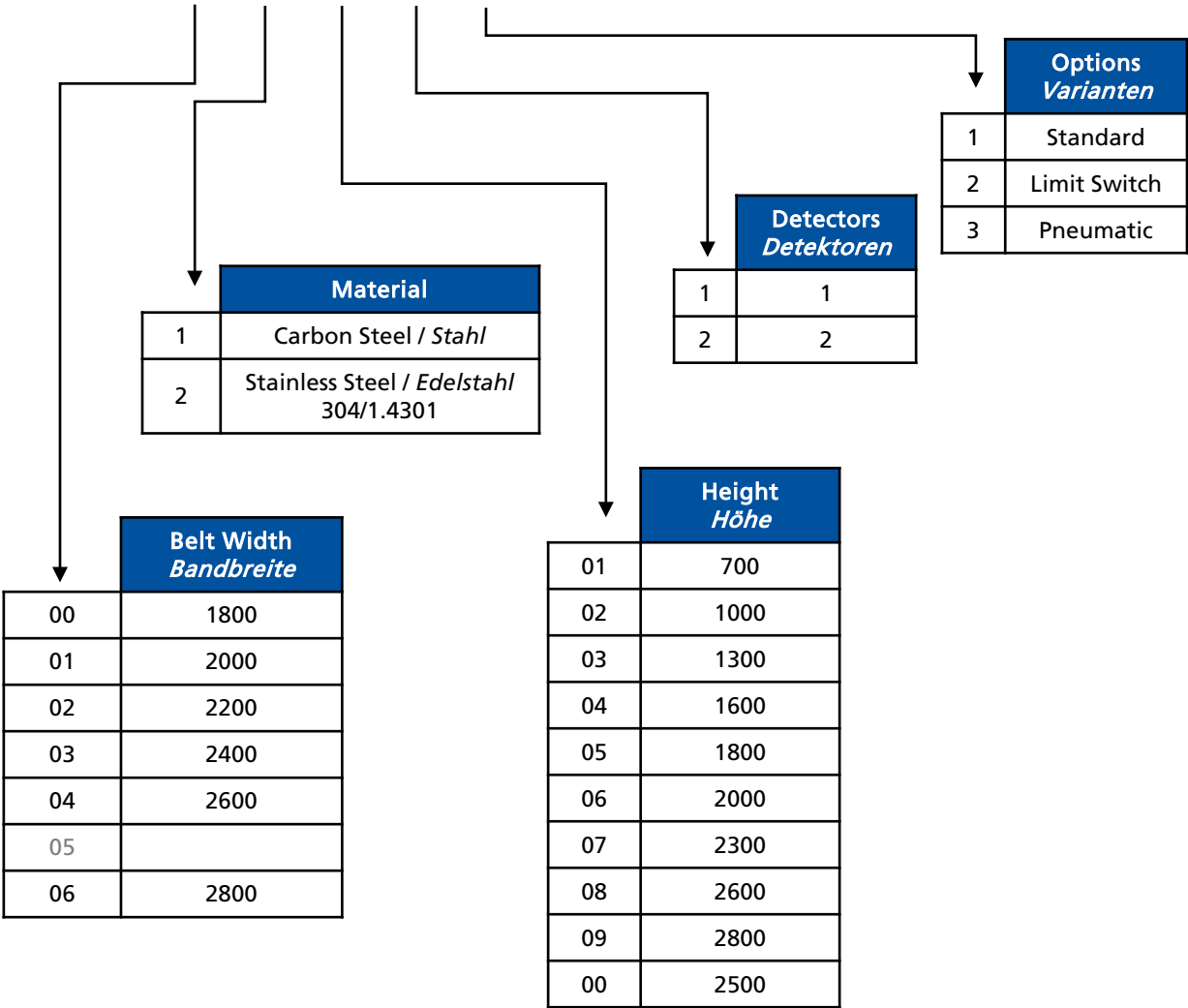


Belt Width Bandbreite	A	B	L
1800	2496	1088	2196
2000	2696	1188	2396
2200	2896	1288	2596
2400	3096	1388	2796
2800	3496	1588	3196

Nomenclature LB 4452
Nomenklatur LB 4452

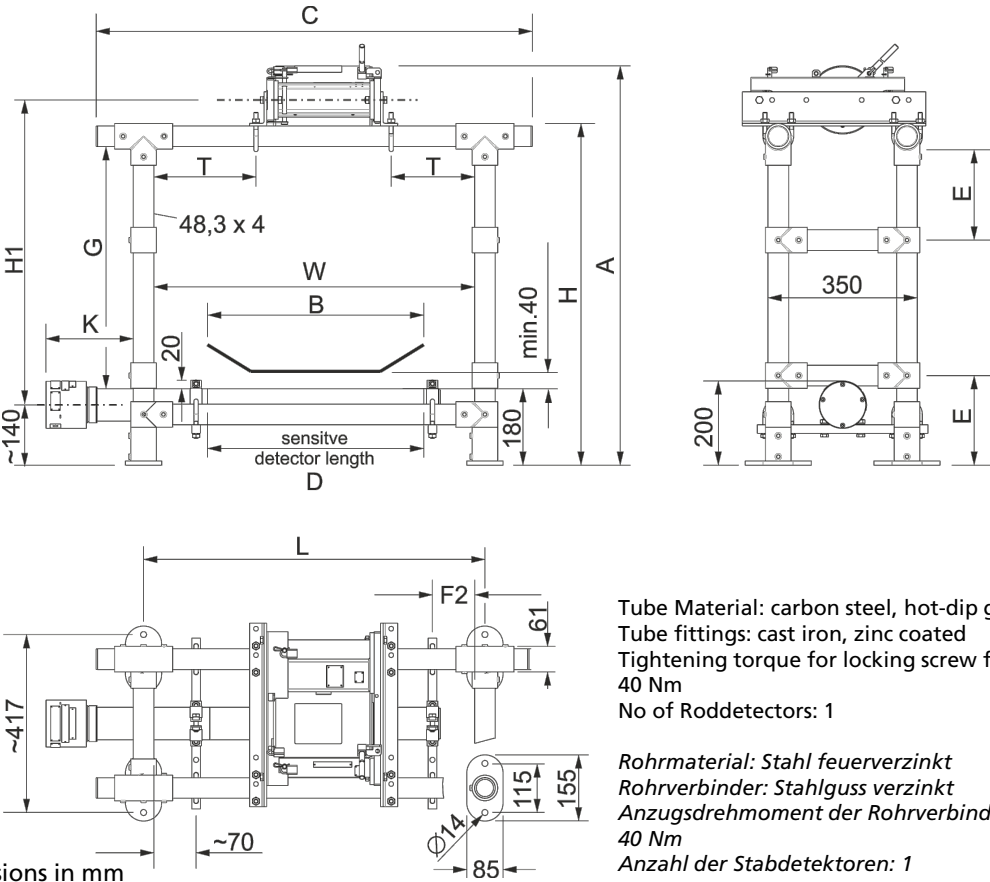
LB-Number Key
LB-Nummernschlüssel

45727 – x – x – x – x – x



Measuring Frame for Rod Detector (500 ... 2200 mm)

Messbügel für Stabdetektor (500 ... 2200 mm)



Tube Material: carbon steel, hot-dip galvanised
Tube fittings: cast iron, zinc coated
Tightening torque for locking screw for the tube fittings:
40 Nm
No of Roddetectors: 1

Rohrmaterial: Stahl feuerverzinkt
Rohrverbinder: Stahlguss verzinkt
Anzugsdrehmoment der Rohrverbinder-Stellschrauben:
40 Nm
Anzahl der Stabdetektoren: 1

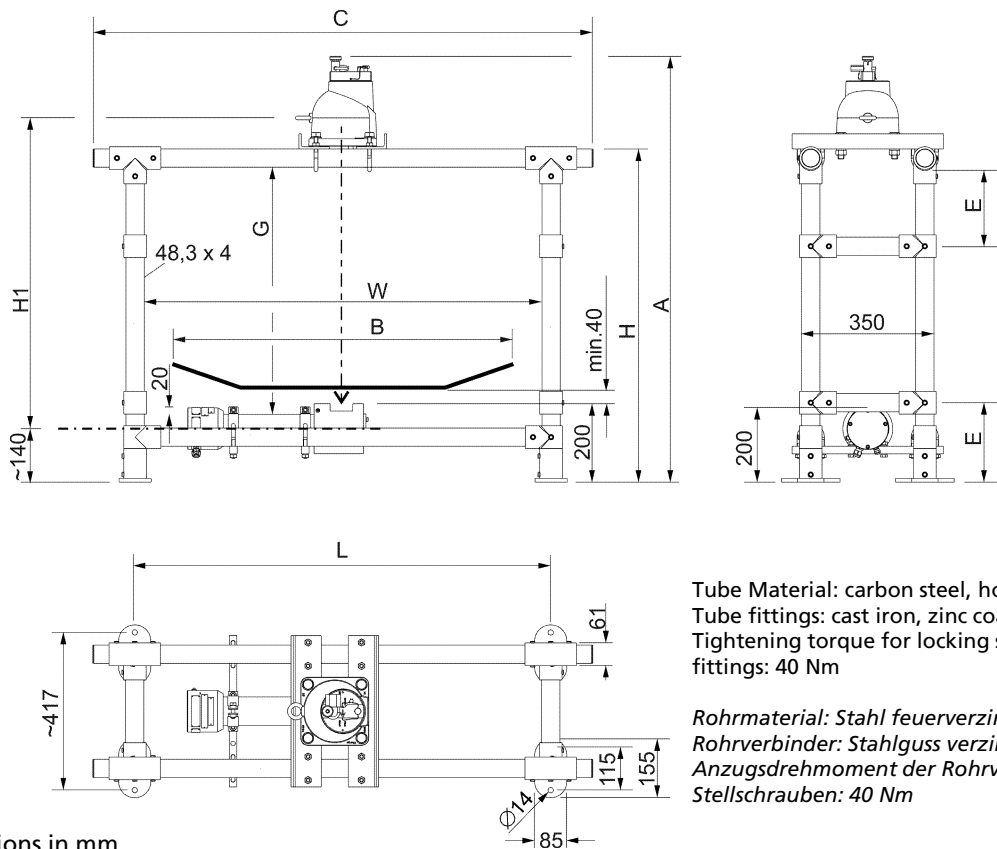
Dimensions in mm
Abmessungen in mm

Part No. Id. Nr	Width Dimensions Abmessungen Breite						
	B	W	D	C	F2	L	K
70179-05XX11	500	750	500	1020	100	800	250
70179-08XX11	800	1050	750	1320	125	1100	230
70179-10XX11	1000	1250	1000	1520	100	1300	250
70179-12XX11	1200	1450	1250	1720	75	1500	280
70179-16XX11	1600	1850	1500	2120	150	1900	200
70179-20XX11	2000	2250	2000	2520	100	2300	250

Part No. <i>Id. Nr.</i>	Height Dimensions <i>Abmessungen Höhe</i>					
	H	H1	E	A		G
				Typ 100	Typ 150	
70179-XX 08 11	800	720	190	910	940	570
70179-XX 10 11	1000	920	240	1110	1140	770
70179-XX 12 11	1200	1120	290	1310	1340	970
70179-XX 14 11	1400	1320	340	1510	1540	1170
70179-XX 16 11	1600	1520	390	1710	1740	1370
70179-XX 18 11	1800	1720	440	1910	1940	1570
70179-XX 20 11	2000	1920	490	2110	2140	1770
70179-XX 22 11	2200	2120	540	2310	2340	1970
70179-XX 24 11	2400	2320	580	2510	2540	2170
70179-XX 26 11	2600	2520	570	2710	2740	2370
70179-XX 28 11	2800	2720	680	2910	2940	2570

Measuring Frame for Point Detector + LB 7440 (500 ... 2200 mm)

Messbügel für Punktdetektor + LB 7440 (500 ... 2200 mm)

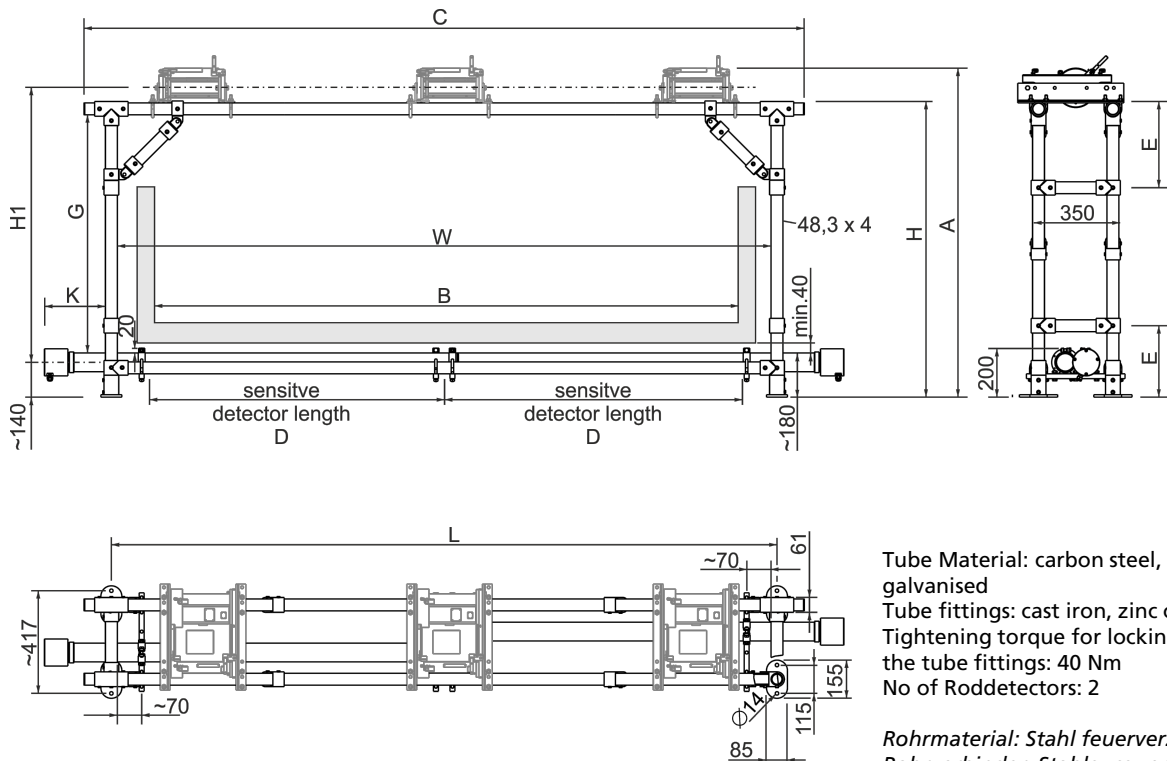


Dimensions in mm
Abmessungen in mm

Part No. Id. Nr	Width Dimensions Abmessungen Breite			
	B	W	C	L
70179-05XX11	500	750	1020	800
70179-08XX11	800	1050	1320	1100
70179-10XX11	1000	1250	1520	1300
70179-12XX11	1200	1450	1720	1500
70179-16XX11	1600	1850	2120	1900
70179-20XX11	2000	2250	2520	2300

Part No. Id. Nr.	Height Dimensions Abmessungen Höhe				
	H	H1	E	A	G
70179-XX0811	800	840	190	1010	570
70179-XX1011	1000	940	240	1210	770
70179-XX1211	1200	1140	290	1410	970
70179-XX1411	1400	1340	340	1610	1170
70179-XX1611	1600	1540	390	1810	1370
70179-XX1811	1800	1740	440	2010	1570
70179-XX2011	2000	1940	490	2210	1770
70179-XX2211	2200	2140	540	2410	1970
70179-XX2411	2400	2340	580	2610	2170
70179-XX2611	2600	2540	570	2810	2370
70179-XX2811	2800	2740	680	3010	2570

Messbügel für Stabdetektor (2400 ... 3200 mm)



Dimensions in mm
Abmessungen in mm

Tube Material: carbon steel, hot-dip galvanised
 Tube fittings: cast iron, zinc coated
 Tightening torque for locking screw for the tube fittings: 40 Nm
 No of Roddetectors: 2

Rohrmaterial: Stahl feuerverzinkt
Rohrverbinder: Stahlguss verzinkt
Anzugsdrehmoment der Rohrverbinder-
Stellschrauben:
40 Nm Anzahl der Stabdetektoren: 2

Part No. <i>Id. Nr</i>	Width Dimensions <i>Abmessungen Breite</i>					
	B	W	D	C	L	K
70179- 24 XX12	2400	2650	1250	2920	2700	250
70179- 28 XX12	2800	3050	1500	3320	3100	300
70179- 30 XX12	3000	3250	1500	3520	3300	200

ATTENTION:

If the measuring frame cannot be built rigid enough due to its size and/or local conditions, it is recommended to fix the upper measuring frame corners, either upwards or downwards. Stainless steel cables can be used for fixing, which are attached directly to the upper corners by means of loops

HINWEIS:

Können die Messbügel, aufgrund ihrer Größe und / oder den örtlichen Gegebenheiten, nicht steif genug aufgebaut werden, dann wird empfohlen, die oberen Messbügel-Ecken, nach oben oder unten, abzuspannen. Zum Abspannen können Edelstahlseile verwendet werden, die mit Hilfe von Schlaufen direkt an den oberen Ecken befestigt werden.

Part No. <i>Id. Nr.</i>	Height Dimensions <i>Abmessungen Höhe</i>					
	H	H1	E	A		G
				Typ 100	Typ 150	
70179-XX 12 12	1200	1120	290	1310	1340	970
70179-XX 14 12	1400	1320	340	1510	1540	1170
70179-XX 16 12	1600	1520	390	1710	1740	1370
70179-XX 18 12	1800	1720	440	1910	1940	1570
70179-XX 20 12	2000	1920	490	2110	2140	1770
70179-XX 22 12	2200	2120	540	2310	2340	1970
70179-XX 24 12	2400	2320	580	2510	2540	2170
70179-XX 26 12	2600	2520	620	2710	2740	2370
70179-XX 28 12	2800	2720	680	2910	2940	2570

Measuring Frame for Rod Detector

Messbügel für Stabdetektor

LB-Number Key
LB-Nummernschlüssel

70179 - 0 5 0 8 1 1

Detectors Detektoren	
1	1
2	2

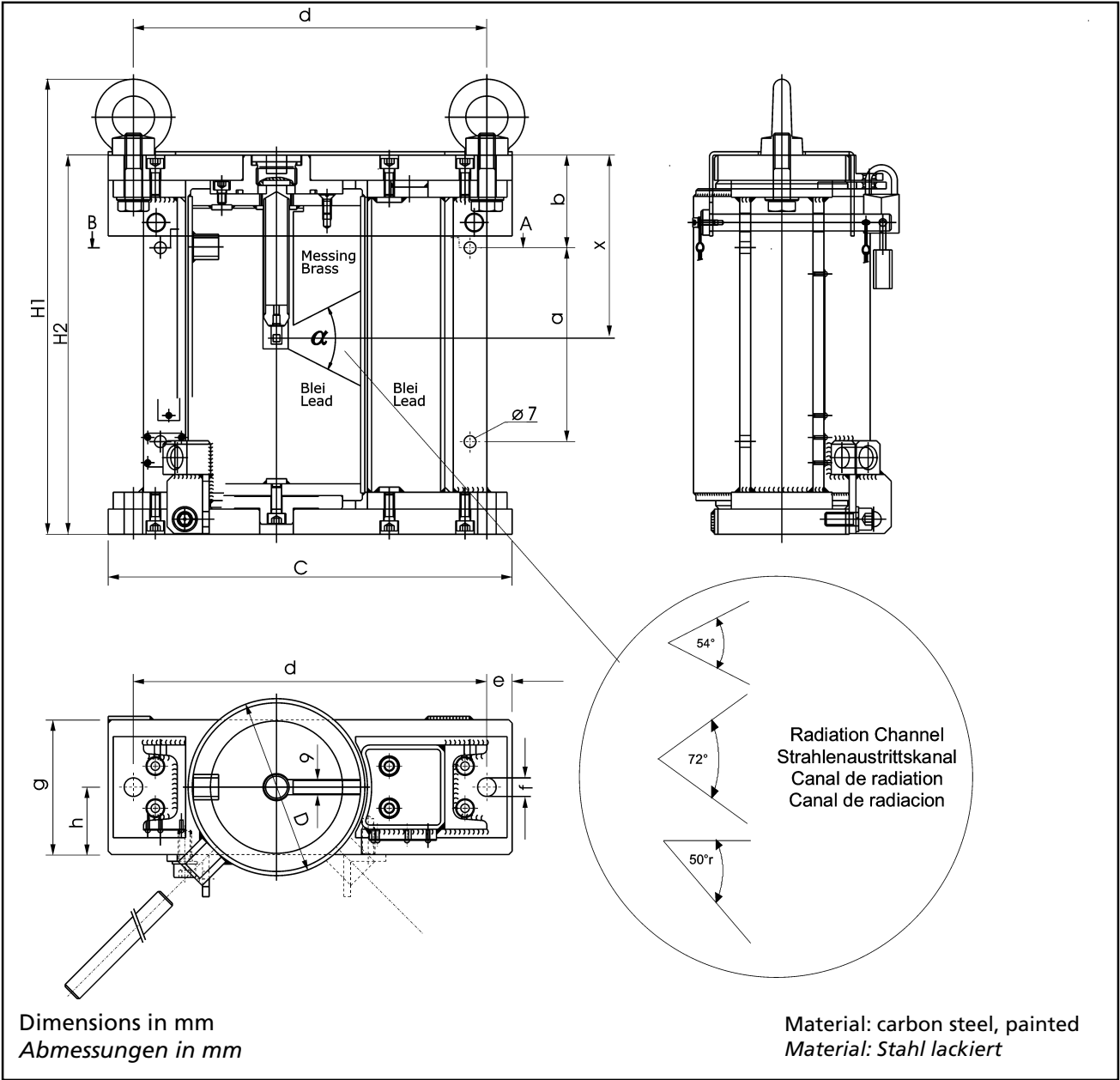
Material	
1	Steel zinc coated

	Belt Width Bandbreite	Usable Scintillator Length Nutzbare Szintillatorlänge
05	500	500
08	800	750
10	1000	1000 (750)
12	1200	1250 (1000)
14	1400	1250
16	1600	1500
18	1800	1500
20	2000	2000
22	2200	2000
24	2400	1250 + 1250
28	2800	1250 + 1250
32	3200	1500 + 1500

	Height Höhe
06	600
08	800
10	1000
12	1200
14	1400
16	1600
18	1800
20	2000
24	2400
26	2600
28	2800

Shield for Rod Detector Frame

Abschirmung für Stabdetektormessbügel



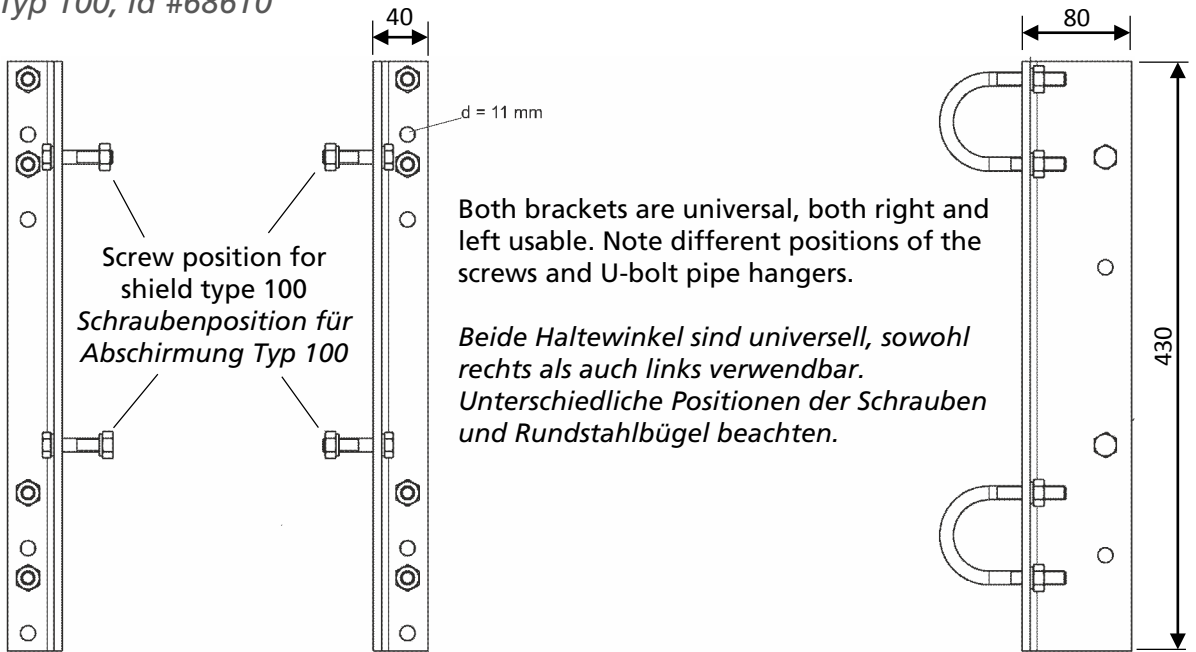
Part # Id. #	Type Typ	α	a	b	C	d	H1	H2	x	f	e	g	h	D	kg
36857-01	100	72°	115	55	240	210	270	225	109	11	15	80	40	150	32
36857-21		54°													
36857-31		50°r													
37280-01	150	72°	135	65	360	320	327	265	114	18	20	90	45	159	70
37280-21		54°													
37280-31		50°r													

Shield Holder for Rod Detector Frame

Abschirmungshalter für Stabdetektormessbügel

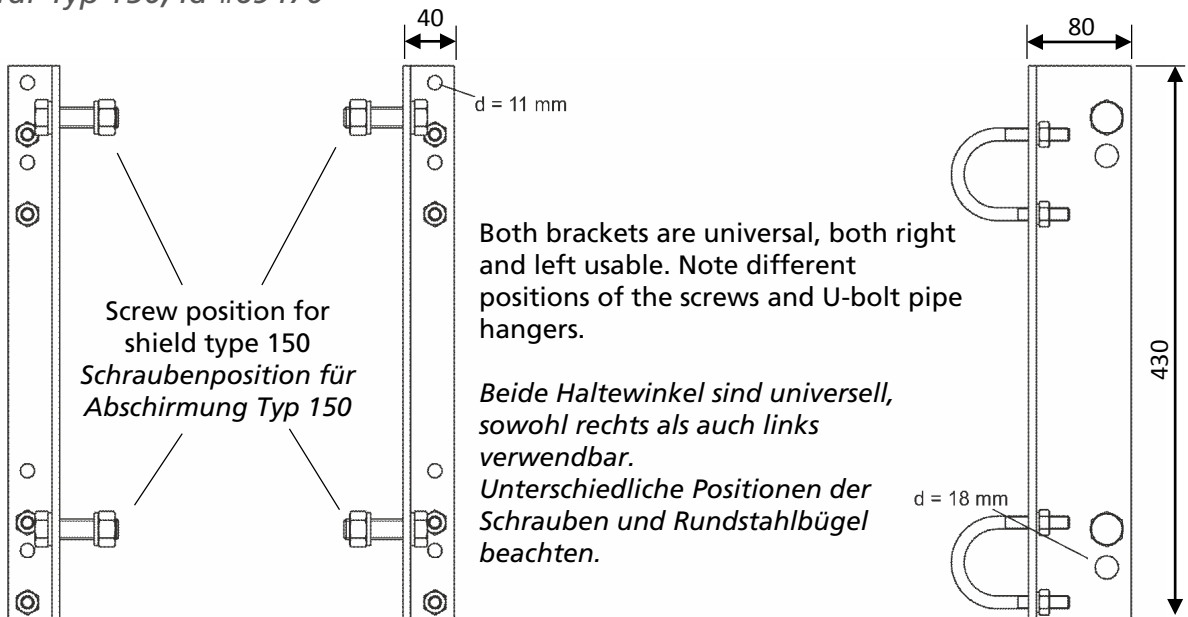
for Type 100, Part #68610

für Typ 100, Id #68610



for Type 150, Part #69470

für Typ 150, Id #69470



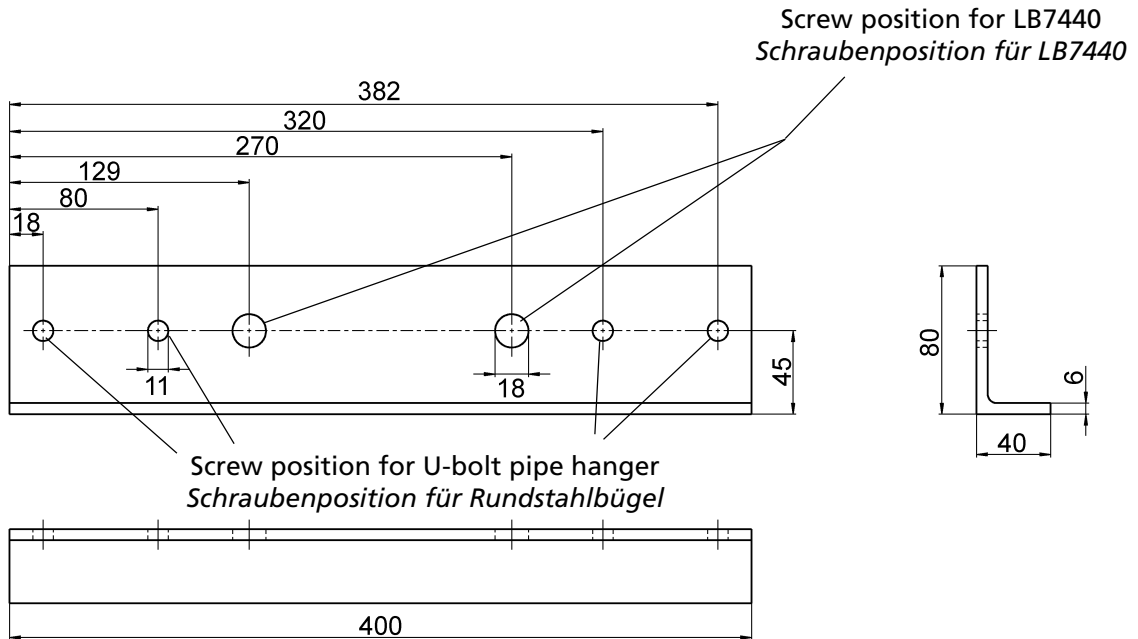
Dimensions in mm
 Abmessungen in mm

Material: carbon steel hot-dip galvanised
 Material: Stahl feuerverzinkt

Shield Holder for Point Source *Abschirmungshalter für Punktstrahler*

for LB 7440, Part #69472

für LB 7440, Id #69472



Both brackets are universal, both right and left usable.

Beide Haltewinkel sind universell, sowohl rechts als auch links verwendbar.

Accessories (Installation Kit):

- 4 U-bolt pipe hanger with nuts and spring washer
- 4 screws with nuts for LB 7440

Zubehör (Montagesatz):

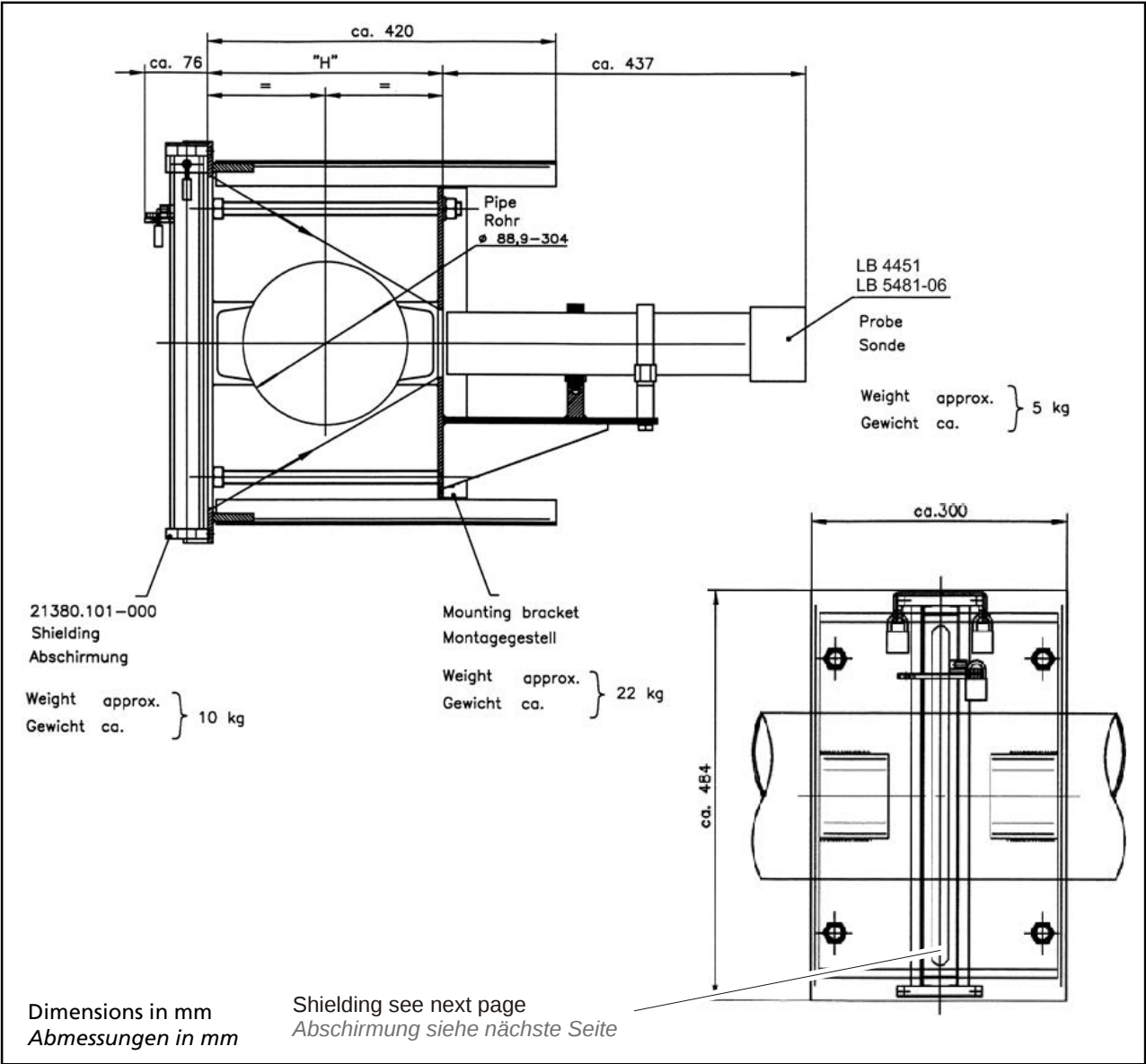
- 4 Rundstahlbügel mit Muttern und Federscheiben
- 4 Schrauben mit Muttern für LB 7440

Dimensions in mm
Abmessungen in mm

Material: carbon steel hot-dip galvanised
Material: Stahl feuerverzinkt

Device for Am-241 Shield

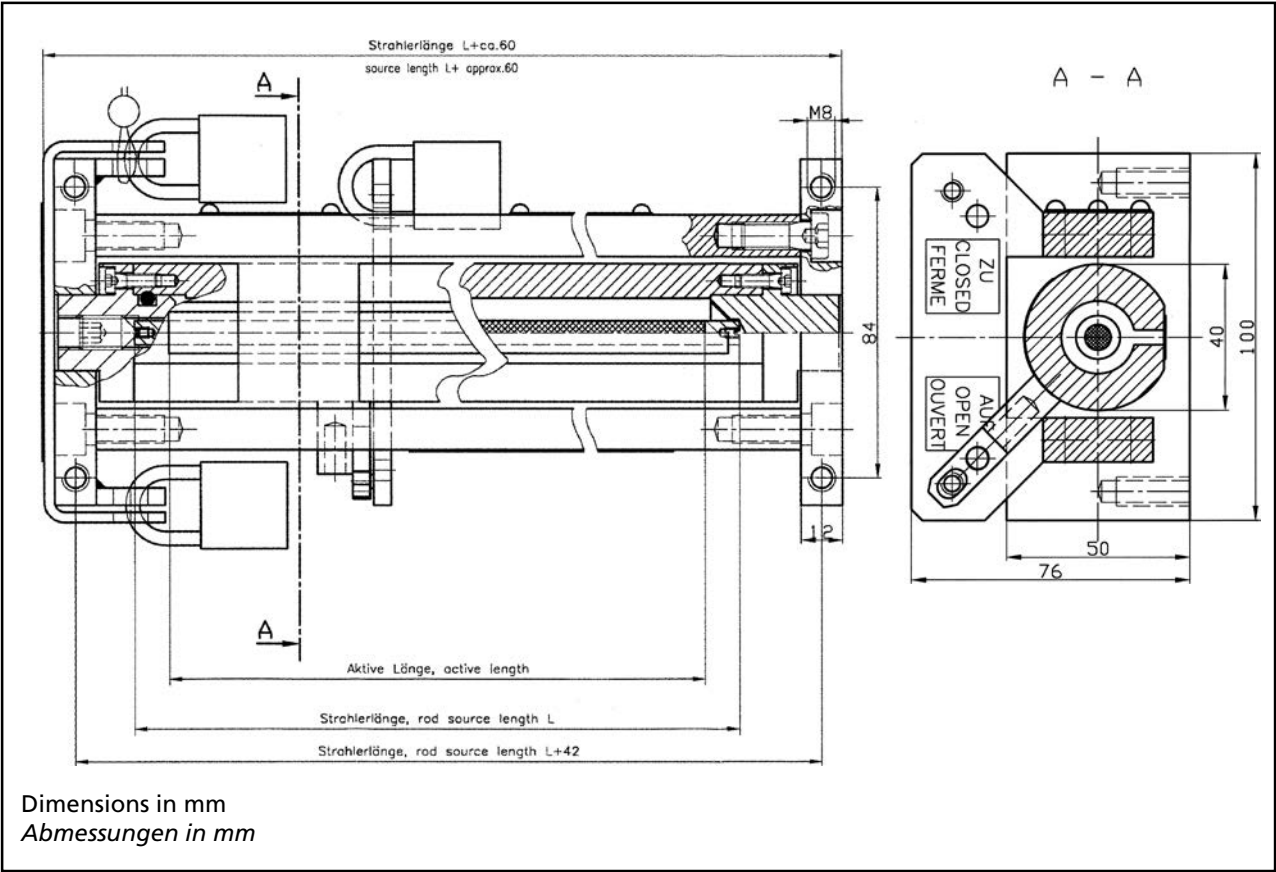
Montagevorrichtung für Am-241 Abschirmung



Pipe Ø Rohr Ø		H
88.9	3 °	120
101.6	3.5 °	156
114.3	4 °	180
141.3	5 °	218
168.3	6 °	250
219.1	8 °	310
273	10 °	368
304		402

Shield for Am-241 Rod Source

Abschirmung für Am-241 Stabstrahler



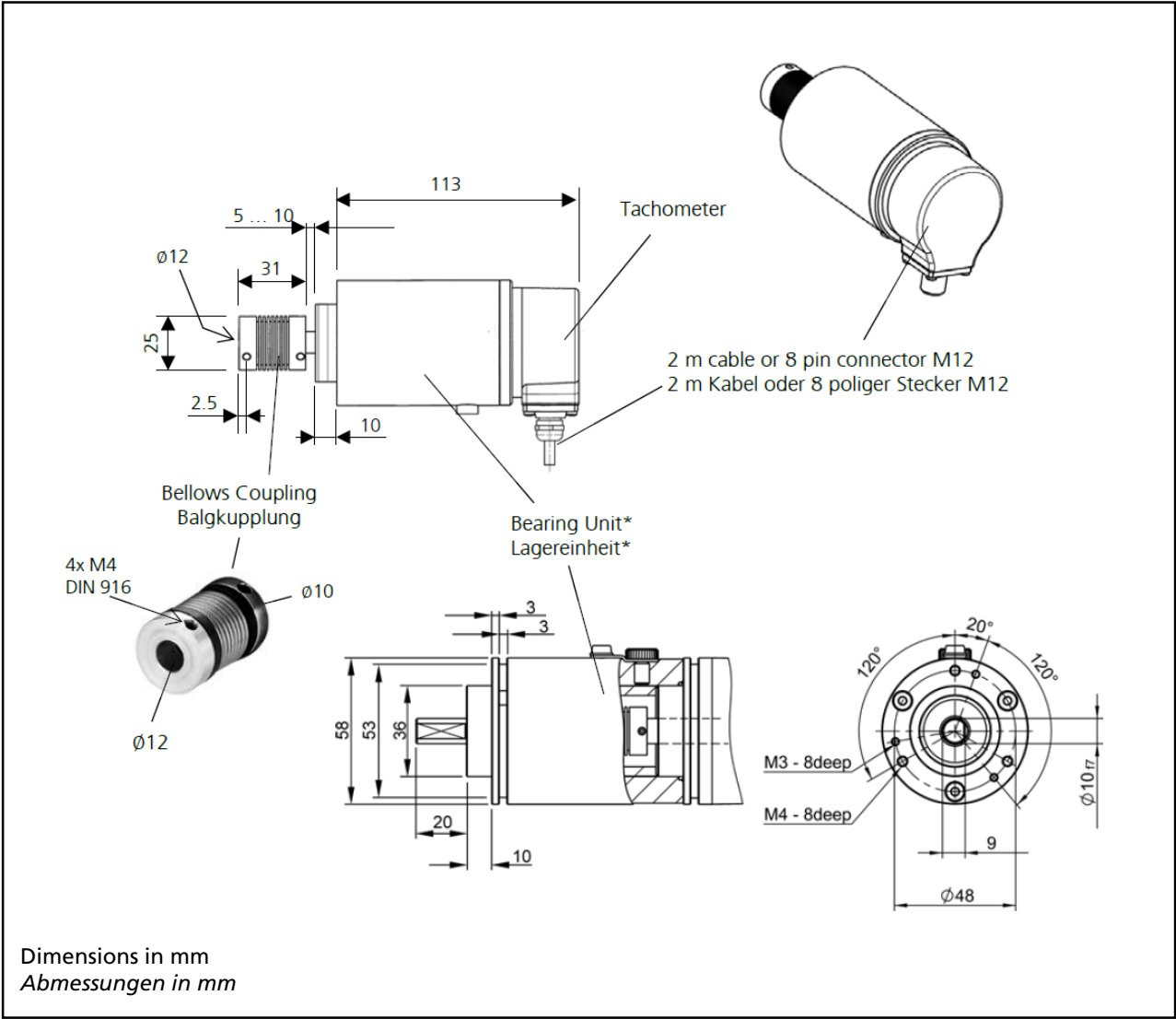
Source Length Strahlerlänge	H
420	ca./approx. 480
820	ca./approx. 880
1220	ca./approx. 1280

Tachometer

Tachometer

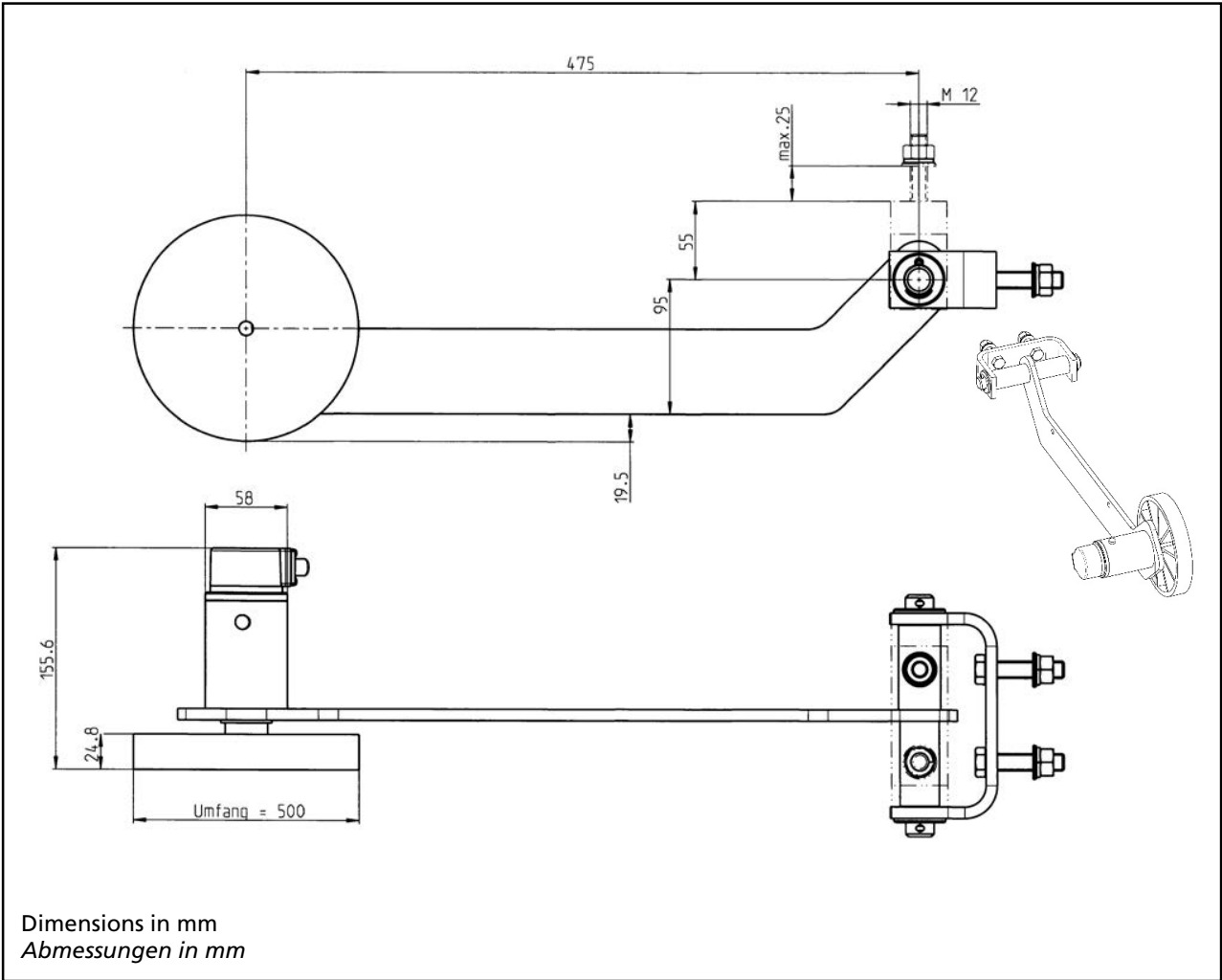
with Bellows Coupling

mit Kupplung



Tacho part no Tacho Id-Nr.	pulse / revolution Imp. / U	Stainless Steel Edelstahl	2 m cable radial with open ends 2 m Kabel radial mit offenen Enden	8 pin connector M12 radial, additional with 2 m tailored cable 8-poliger Stecker M12 radial, zusätzlich mit 2 m vorkonfektioniertem Kabel
58659	500		X	
58660	5000		X	
58661	500	X		X
58662	5000	X		X

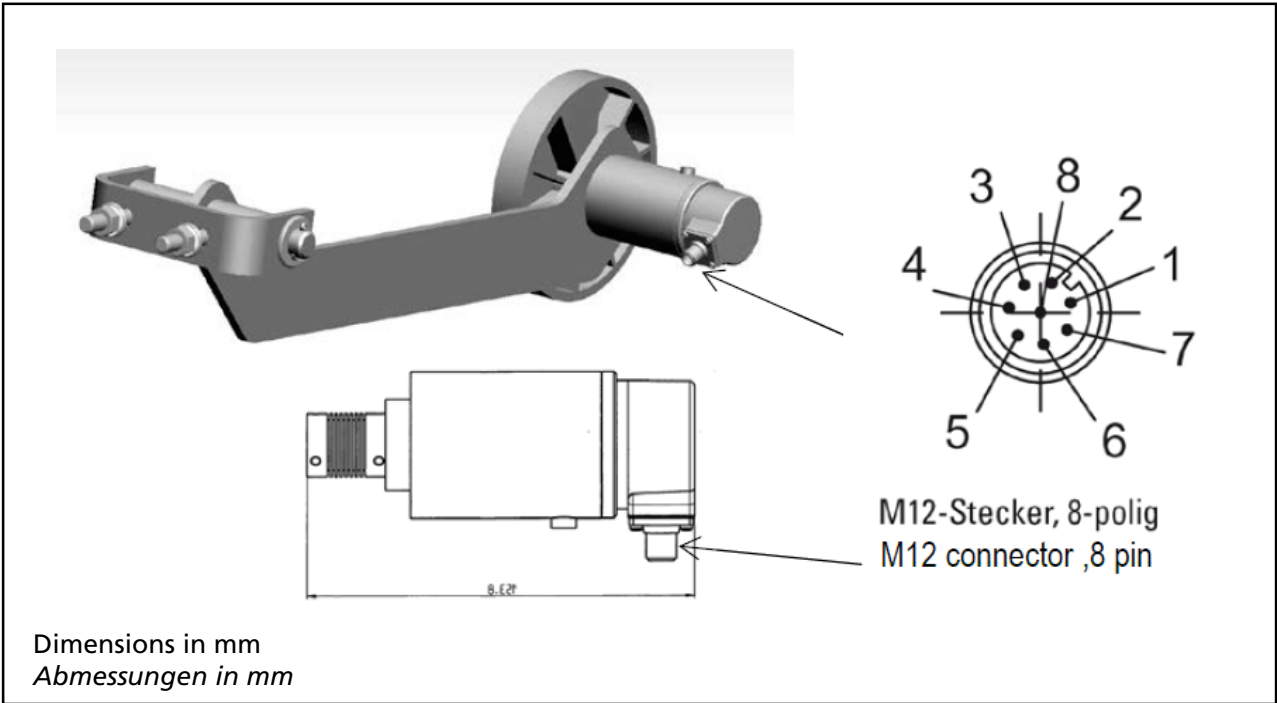
with Frictional Weel
mit Schwinge



Tacho part no Tacho Id-Nr.	pulse / revolution Imp. / U	Stainless Steel Edelstahl	2 m cable radial with open ends 2 m Kabel radial mit offenen Enden	8 pin connector M12 radial, additional with 2 m tailored cable (see next pages) 8-poliger Stecker M12 radial, zusätzlich mit 2 m vorkonfektioniertem Kabel (siehe nächste Seiten)
58539	500		X	
58656	5000		X	
58657	500	X		X
58658	5000	X		X

Electrical Connection at Tachometer

Elektrischer Anschluss am Tachometer



Tacho part no <i>Tacho Id-Nr.</i>	Signal Connection <i>Signalanschluss</i>	0V GND	10 ... 30V +U _s	Signal	Screen <i>Schirm</i>
58539 58656 58659 58660 60904 60906	with cable <i>mit Kabelabgang</i>	white <i>weiß</i>	brown <i>braun</i>	green <i>grün</i>	Screen <i>Schirm</i>
58657 58658 58661 58662 60907 60908	8 Pin connector 8-poliger Stecker	1	2	3	PH ¹
	LB 472 ² Connecting Terminals <i>Anschlussklemmen</i>	Current IN - Digital IN GND (both terminals must be bridged) <i>(beide Anschlüsse müssen überbrückt werden)</i>	+ 24V	Current IN +	PE

Contacts 4 ... 8 are unused
Kontakte 4 ... 8 unbenutzt

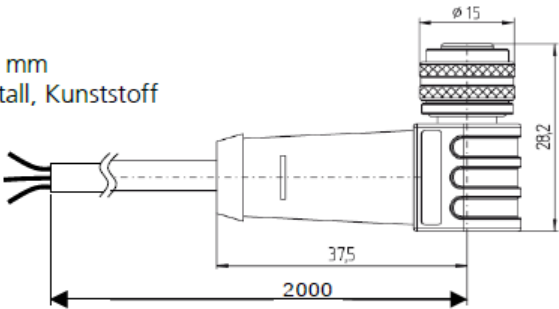
PH = Screen is connected to the connector housing.
PH = Schirm liegt am Steckergehäuse an.
see connection diagram respectively terminal block
siehe Anschlussplan bzw. Klemmenblock

Tailored Cable with Connector M12 for Tachometer with 8 Pin Connector

*Vorkonfektioniertes Kabel mit Stecker M12 für Tachometer
mit 8-poligem Stecker*



IP 67
Cable/Kabel: PVC, 8 x 0,25 mm², Ø 6 mm
Housing/Gehäuse: metal, plastic / Metall, Kunststoff



Dimensions in mm
Abmessungen in mm

cable is used in following Tachometer:
Kabel ist in folgenden Tachometer enthalten:

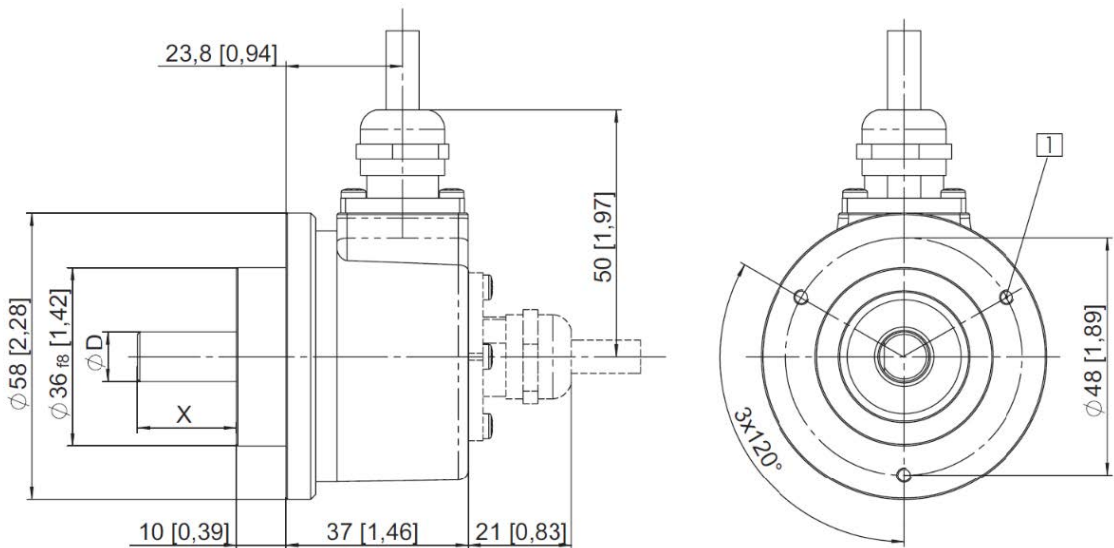
- 58657
- 58658
- 58661
- 58662
- 60907
- 60908

	0V GND	10 ... 30V +U _B	Signal	Screen <i>Schirm</i>
Pin:	1	2	3	PH
Lead <i>Ader:</i>	white <i>weiß</i>	brown <i>braun</i>	green <i>grün</i>	Screen <i>Schirm</i>

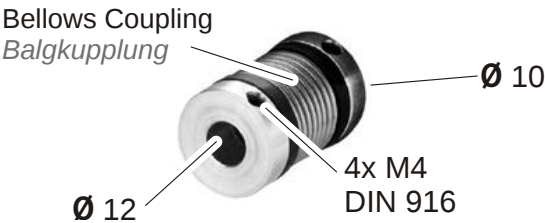
Tachometer Ex Zone 2/22

with Bellows Coupling

mit Kupplung



1 M3, 6 [0,24] tief

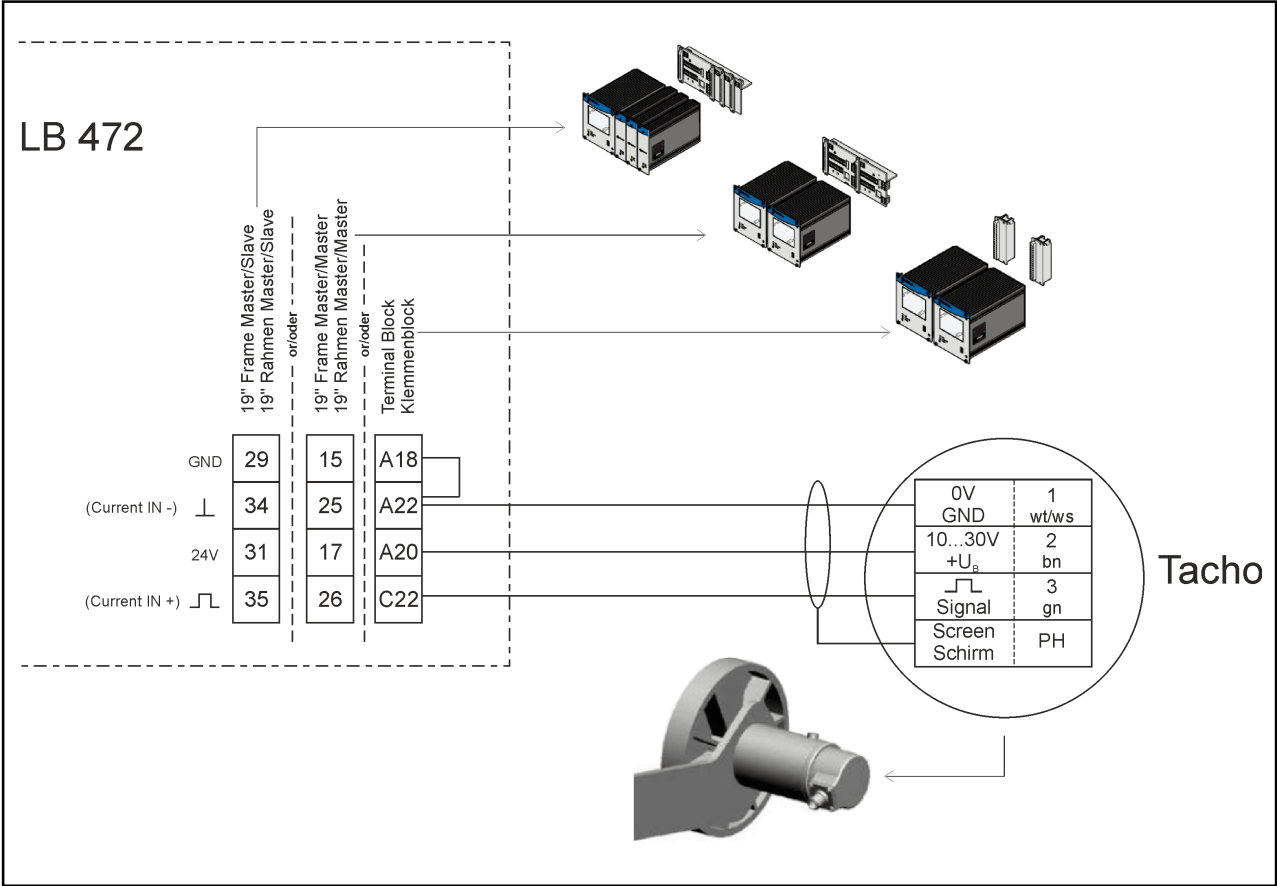


Dimensions in mm
Abmessungen in mm

part no Tacho Id-Nr.	pulse / revolution Imp. / U	Stainless Steel Edelstahl	2 m cable radial with open ends 2 m Kabel radial mit offenen Enden	8 pin connector M12 radial, additional with 2 m tailored cable 8-poliger Stecker M12 radial, zusätzlich mit 2 m vorkonfektioniertem Kabel
60904	500		x	
60906	5000		x	
60907	500	x		x
60908	5000	x		x

Connection

Anschlussplan





Evaluation Unit

Auswerteeinheit

Evaluation unit

The modules can be installed either in wall housings or 19" subracks. It can be equipped differently, depending on requirements. The rear clamp blocks or terminal panels are used for the electrical connection. The connection between the master EVU and slave modules (level measurement only) is made with a 4-pin master/slave plug.

Auswerteinheit

Die Module können entweder in Wandgehäusen oder 19"-Baugruppenträgern eingebaut und kann je nach Bedarf unterschiedlich bestückt werden. Zum elektrischen Anschluss werden die rückwärtigen Klemmenblöcke oder Anschlussplatinen verwendet. Die Verbindung zwischen Master-AWE und Slave-Modulen erfolgt mit einem 4-poligen Master/Slave-Stecker.

NOTICE / HINWEIS



Detector of the type LB44xx and LB54xx can capture measurement data only with master EVU.

Messdaten der Detektoren vom Typ LB44xx und LB54xx können nur mit einem Master-Modul erfasst werden.

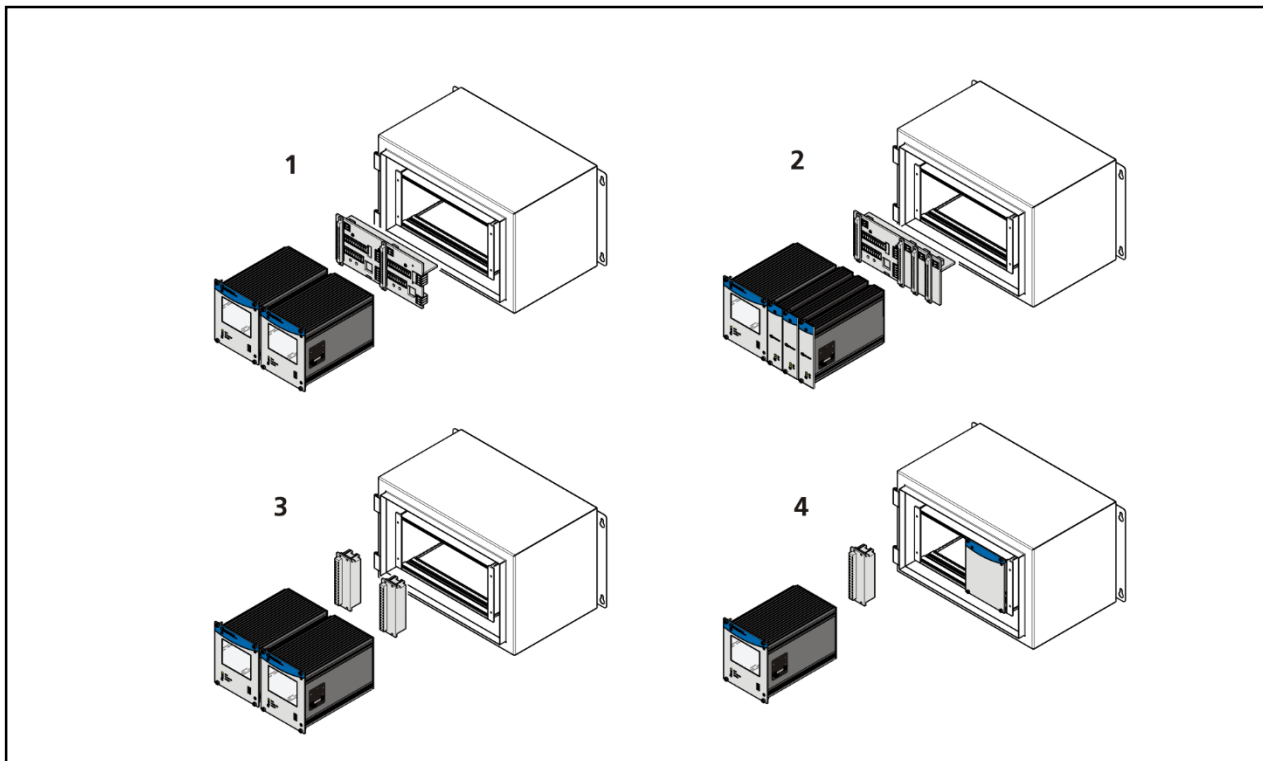
NOTICE / HINWEIS



The Evaluation unit is not explosion protected and is not designed for hazardous environments.

Diese Auswerteinheit ist nicht ex-geschützt ausgeführt und darf nicht in explosionsgefährdete Bereiche verwendet werden.

Installation variants wall housing *Einbauvarianten Wandgehäuse*

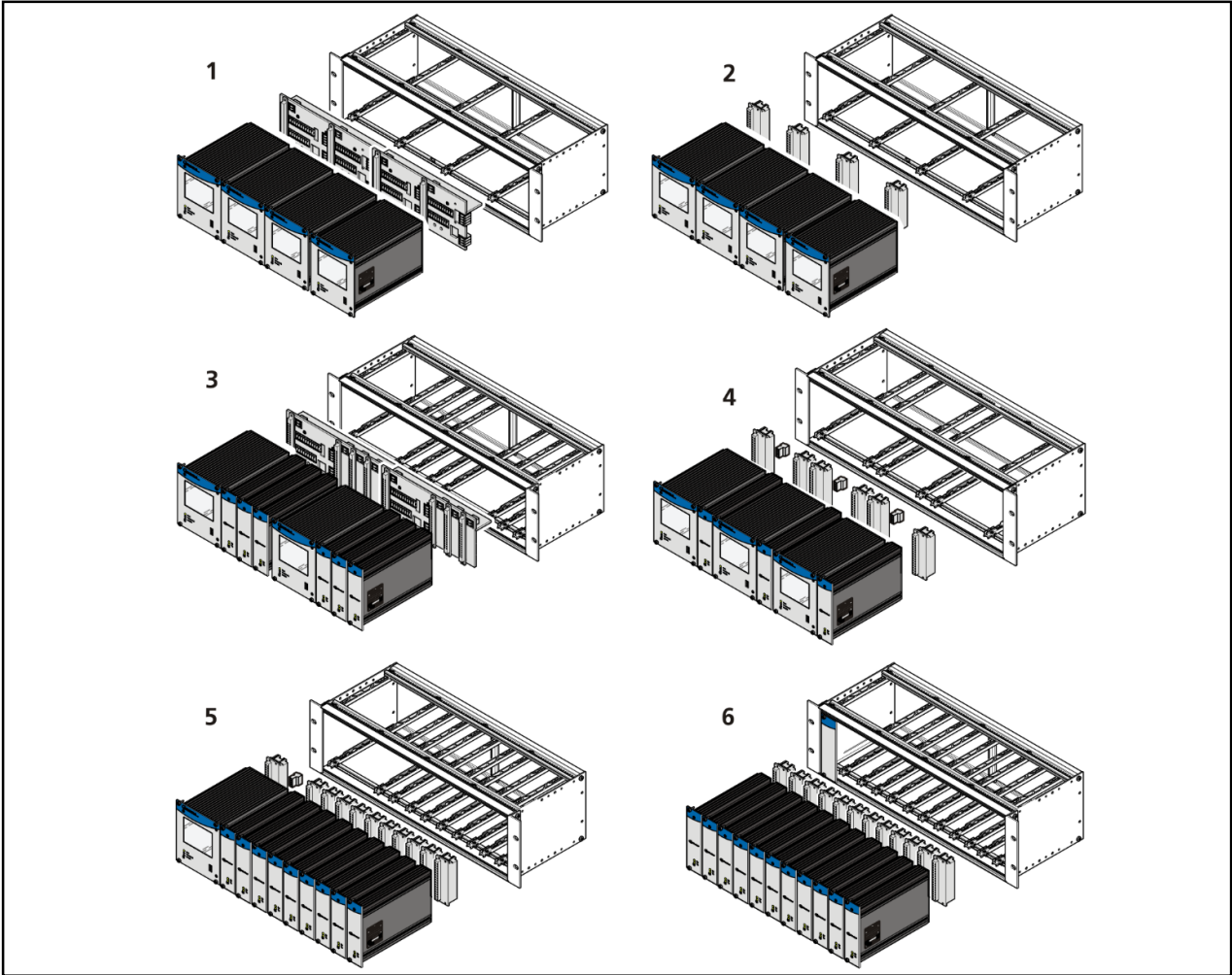


Item Pos.	Component Komponenten	Connection Anschluss
1	2 Master	1 Terminal panel master/master ¹ 1 Anschlussplatine Master/Master ¹
2	1 Master, 3 Slaves	1 Terminal panel master/slave ¹ 1 Anschlussplatine Master/Slave ¹
3	2 Master	2 Terminal blocks 2 Klemmenblöcke
4	1 Master, 0 – 3 Slaves	1 Terminal block for master, 0 – 3 Terminal block for slave module 1 Klemmenblock für Master, 0 – 3 Klemmenblöcke für Slave Modul

¹ NRTL certification US/CAN
 NRTL Zertifikat US/CAN

Installation variants 19"-subrack

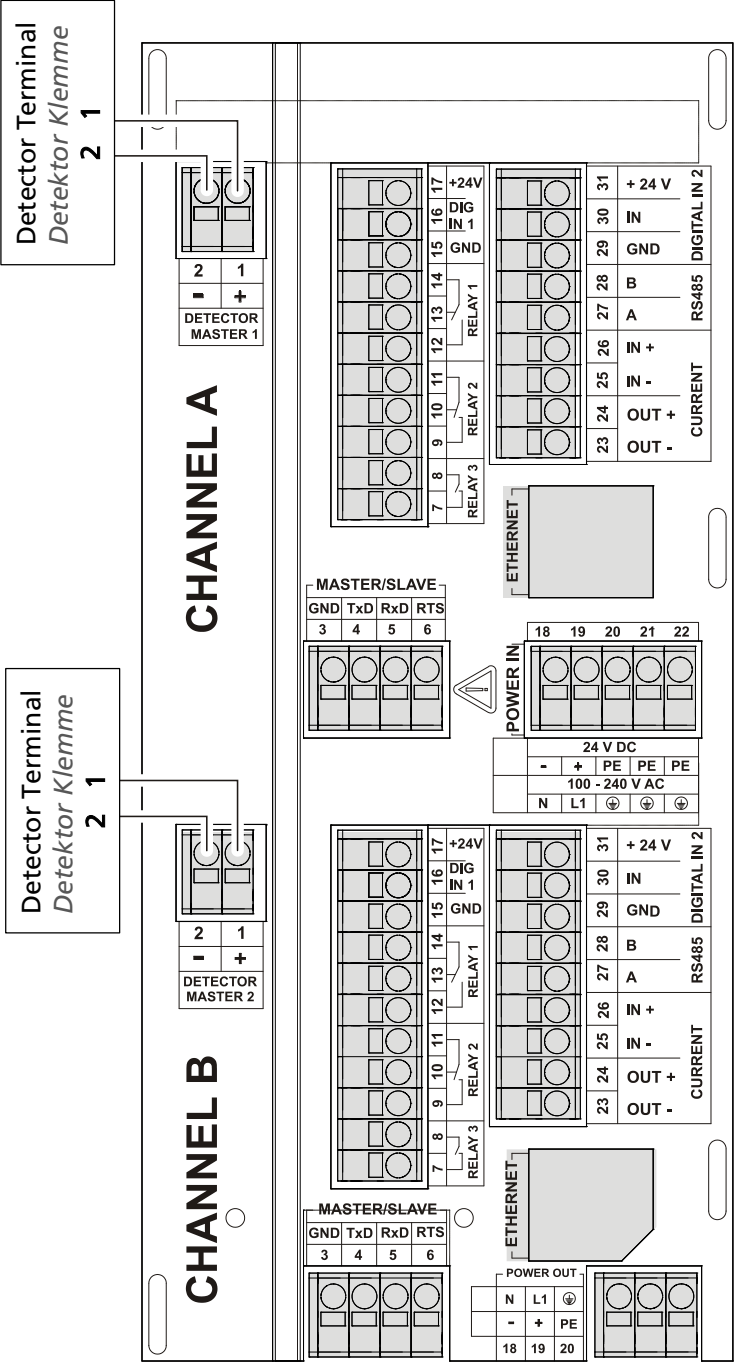
Einbauvarianten 19"-Baugruppenträger



Item Pos.	Componsens Komponenten	Connection Anschluss
1	4 Master	2 Terminal panel master 2 Anschlussplatine Master
2	4 Master ²	4 Terminal blocks 4 Klemmenblöcke
3	2x (1 Master, 3 Slaves)	2 Terminal panel master/slave 2 Anschlussplatten Master/Slave
4	4x (1 Master, 1 Slave) ²	6 Terminal blocks; master/slave plugs 6 Klemmenblöcke; Master/Slave Stecker
5	1 Master, 9 Slaves ²	10 Terminal blocks; master/slave plug 10 Klemmenblöcke; Master/Slave Stecker
6	11 Slaves ²	11 Terminal blocks 11 Klemmenblöcke

²Application example. The modules can be arranged arbitrarily with terminal blocks.
Anwendungsbeispiele. Mit Klemmenblöcken können Module frei zusammengestellt werden.

Connection diagram terminal board master/master
Anschlussplan Anschlussplatine Master/Master



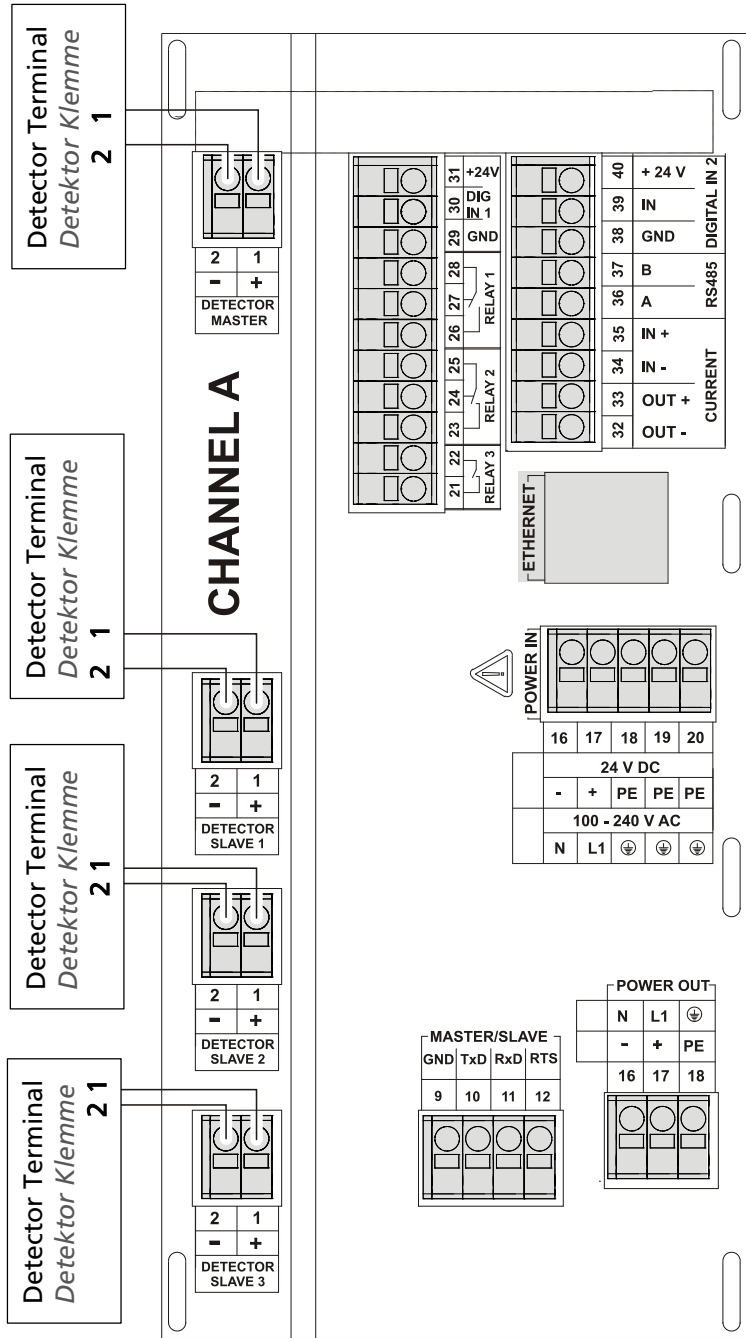
#	Connector Anschluss	Function Funktion
1	DETECTOR MASTER +	Connection Detector Verbindung Detektor LB 4700 / LB 44xx
2	DETECTOR MASTER -	
3	MASTER/SLAVE GND	Connection of additional slave units Anschluss von weiteren Slave-Einheiten
4	MASTER/SLAVE TxD	
5	MASTER/SLAVE RxD	
6	MASTER/SLAVE RTS	DIGITAL OUT
7	RELAIS 3 NC	
8	RELAIS 3 COM	
9	RELAIS 2 NC	DIGITAL OUT
10	RELAIS 2 NO	
11	RELAIS 2 COM	
12	RELAIS 1 NC	Error DIGITAL OUT Fehler DIGITAL OUT
13	RELAIS 1 NO	
14	RELAIS 1 COM	
15	DIGITAL IN 1 GND	GND
16	DIGITAL IN 1 IN	Logic Input
17	+ 24 V (GND --> 15)	24 V out (max. 200 mA)
18	POWER DC 24 V - / AC N	24 VDC / 100-240 VAC
19	POWER DC 24 V + / AC L1	
20	PE	
21	PE	
22	PE	4 mA ... 20 mA
23	CURRENT OUT -	
24	CURRENT OUT +	conveyor speed Fördergeschwindigkeit
25	CURRENT IN - (└┐)	
26	CURRENT IN + (┐└)	Communication and service interface (Master-Master) Kommunikations- und Service-Schnittstelle (Master-Master)
27	RS 485 A	
28	RS 485 B	GND
29	DIGITAL IN 2 GND	
30	DIGITAL IN 2 IN	Logic Input
31	+ 24 V (GND --> 29)	24 V out (max. 200 mA)

In a 19" subrack for 4 masters (Id 59484), there is another one with Channel C / D next to the connector board for Channel A / B. The channel assignment of Channel C / D is identical to that of Channel A / B.

In einem 19" Baugruppenträger für 4 Master (Id.59484), ist neben der oben gezeigten Anschlussplatine für Channel A/B, eine weitere mit Channel C/D enthalten. Die Klemmenbelegung von Channel C/D ist identisch mit der von Channel A/B.

Connection diagram terminal board master/slave

Anschlussplan Anschlussplatine Master/Slave

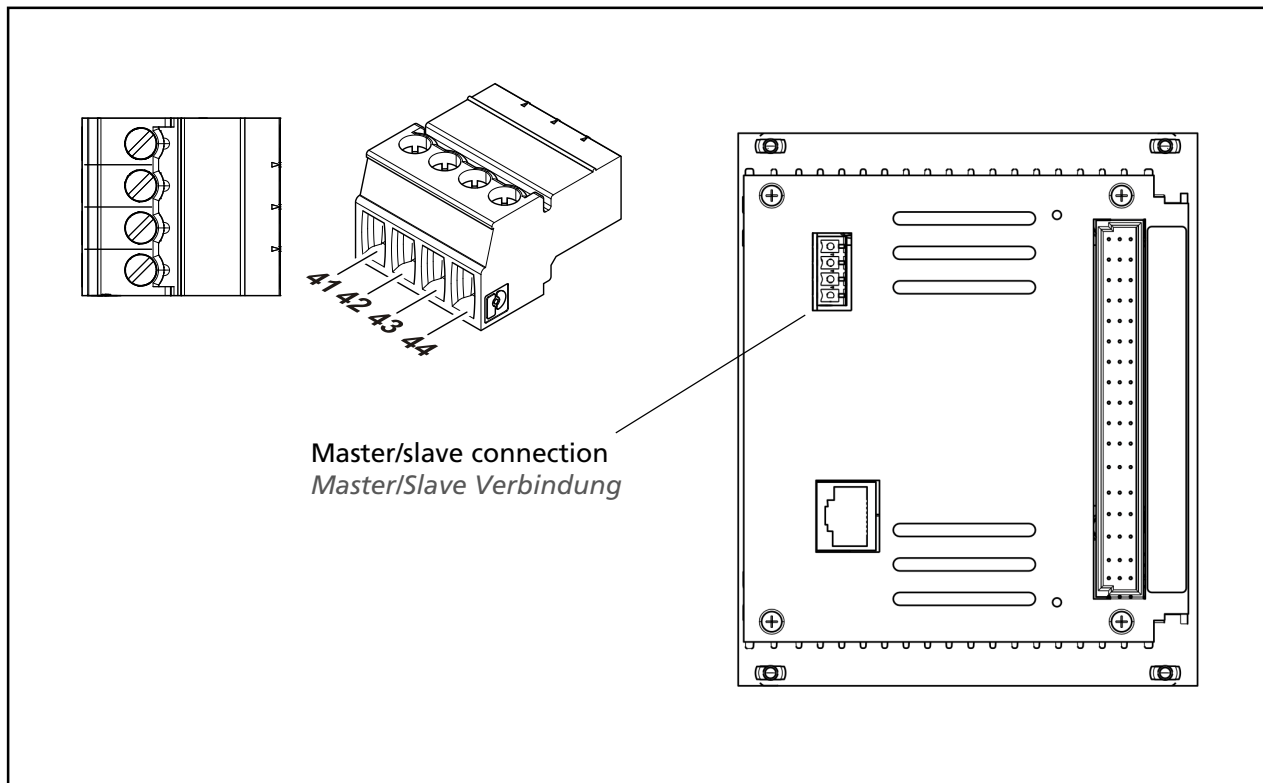


The connections master/slave A and master/slave B are identical.

Die Anschlüsse Master/Slave A und Master/Slave B sind identisch.

#	Connector Anschluss	Function Funktion
1	DETECTOR MASTER +	Connection Detector Verbindung Detektor LB 4700 / LB 44xx
2	DETECTOR MASTER -	
1	DETECTOR SLAVE 1 +	Connection Detector Verbindung Detektor LB 4700 / LB 44xx
2	DETECTOR SLAVE 1 -	
1	DETECTOR SLAVE 2 +	
2	DETECTOR SLAVE 2 -	
1	DETECTOR SLAVE 3 +	
2	DETECTOR SLAVE 3 -	
9	MASTER/SLAVE GND	Connection of additional slave units Anschluss von weiteren Slave- Einheiten
10	MASTER/SLAVE TxD	
11	MASTER/SLAVE RxD	
12	MASTER/SLAVE RTS	24 V DC / 100-240 V AC
16	POWER DC 24 V - / AC N	
17	POWER DC 24 V + / AC L1	
18	PE	
19	PE	DIGITAL OUT
20	PE	
21	RELAIS 3 NC	
22	RELAIS 3 COM	DIGITAL OUT
23	RELAIS 2 NC	
24	RELAIS 2 NO	
25	RELAIS 2 COM	Error DIGITAL OUT Fehler DIGITAL OUT
26	RELAIS 1 NC	
27	RELAIS 1 NO	
28	RELAIS 1 COM	GND
29	DIGITAL IN 1 GND	
30	DIGITAL IN 1 IN	Logic Input
31	+ 24 V (GND --> 29)	24 V out (max. 200 mA)
32	CURRENT OUT -	4 mA ... 20 mA
33	CURRENT OUT +	
34	CURRENT IN - ()	conveyor speed Fördergeschwindigkeit
35	CURRENT IN + ()	
36	RS 485 A	Communication and service interface (Master-Master)
37	RS 485 B	
38	DIGITAL IN 2 GND	GND
39	DIGITAL IN 2 IN	Logic Input
40	+ 24 V (GND --> 38)	24 V out (max. 200 mA)

Assignment terminals master/slave plug *Klemmenbelegung Master/Slave Stecker*

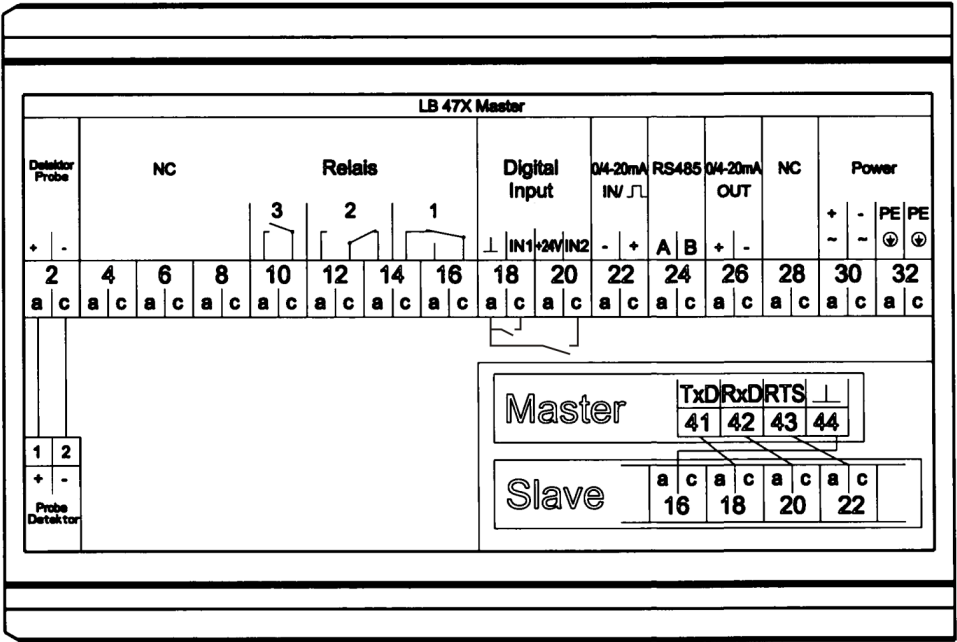
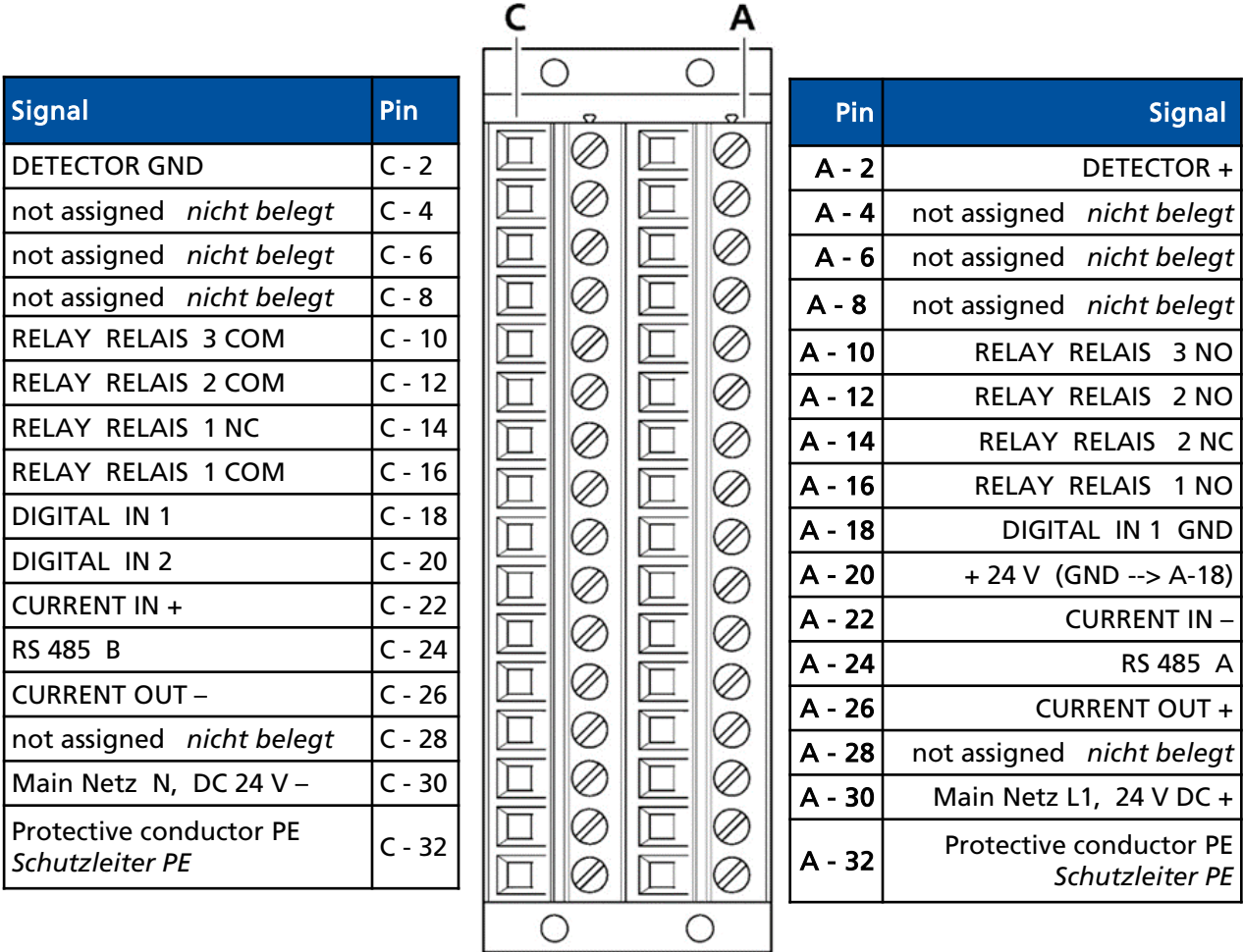


Signal	Pin
TxD	41
RxD	42
RTS	43
GND	44

The master/slave plug is not used by applications with terminal panels. The master/slave plug is contained in the purchase order terminal block (Part No. 59477). In the case of existing 19" subrack and retrofitting to LB472, the master-slave plug (Part No. 64608) must be ordered separately.

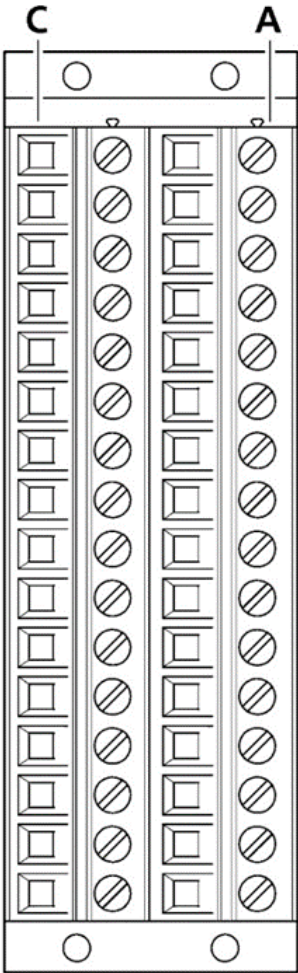
Der Master/Slave Stecker wird bei Einbauvarianten mit Anschlussplatinen nicht benötigt. Der Master/Slave Stecker ist im Lieferumfang des Klemmenblocks (Id. Nr. 59477) enthalten. Bei der Nachrüstung eines 19" Baugruppenträgers mit LB472 Modulen muss der Master-Slave Stecker (Id. Nr. 64608) gesondert bestellt werden

Assignment terminal block master EVU
Belegung Klemmenblock Master AWE

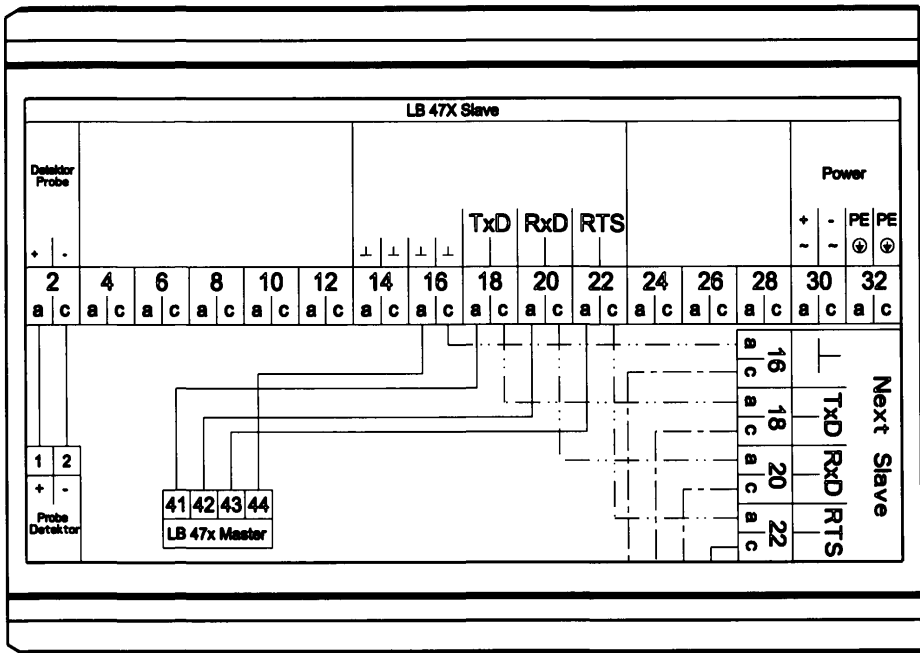


Assignment terminal block slave module
Belegung Klemmenblock Slave Modul

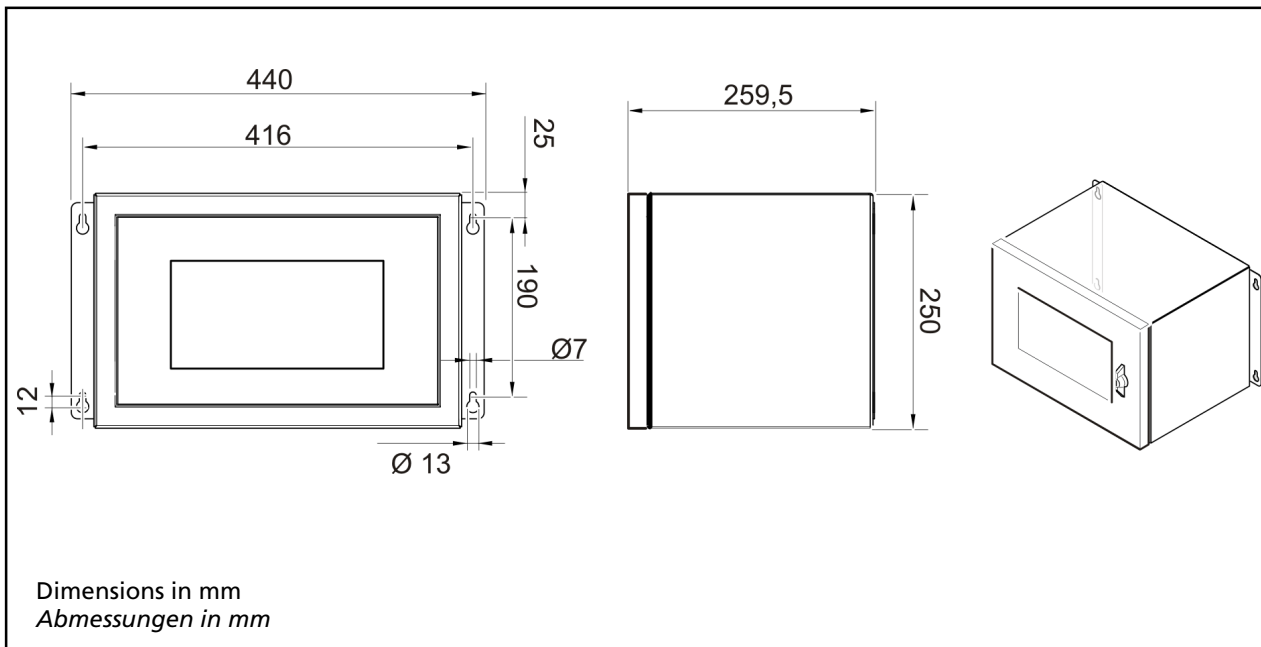
Signal	Pin
DETECTOR SLAVE GND	C - 2
not assigned <i>nicht belegt</i>	C - 4
not assigned <i>nicht belegt</i>	C - 6
not assigned <i>nicht belegt</i>	C - 8
not assigned <i>nicht belegt</i>	C - 10
not assigned <i>nicht belegt</i>	C - 12
GND	C - 14
GND	C - 16
TxD to the SLAVE	C - 18
RxD to the SLAVE	C - 20
RTS to the SLAVE	C - 22
not assigned <i>nicht belegt</i>	C - 24
not assigned <i>nicht belegt</i>	C - 26
not assigned <i>nicht belegt</i>	C - 28
Main Netz N AC, DC 24 V –	C - 30
Protective conductor PE <i>Schutzleiter PE</i>	C - 32



Pin	Signal
A - 2	DETECTOR SLAVE +15 V
A - 4	not assigned <i>nicht belegt</i>
A - 6	not assigned <i>nicht belegt</i>
A - 8	not assigned <i>nicht belegt</i>
A - 10	not assigned <i>nicht belegt</i>
A - 12	not assigned <i>nicht belegt</i>
A - 14	GND
A - 16	GND
A - 18	TxD to MASTER/SLAVE *
A - 20	RxD to the MASTER/SLAVE
A - 22	RTS to the MASTER/SLAVE
A - 24	not assigned <i>nicht belegt</i>
A - 26	not assigned <i>nicht belegt</i>
A - 28	not assigned <i>nicht belegt</i>
A - 30	Main Netz L1 AC, DC 24 V +
A - 32	Protective conductor PE <i>Schutzleiter PE</i>



Wall housing Wandgehäuse



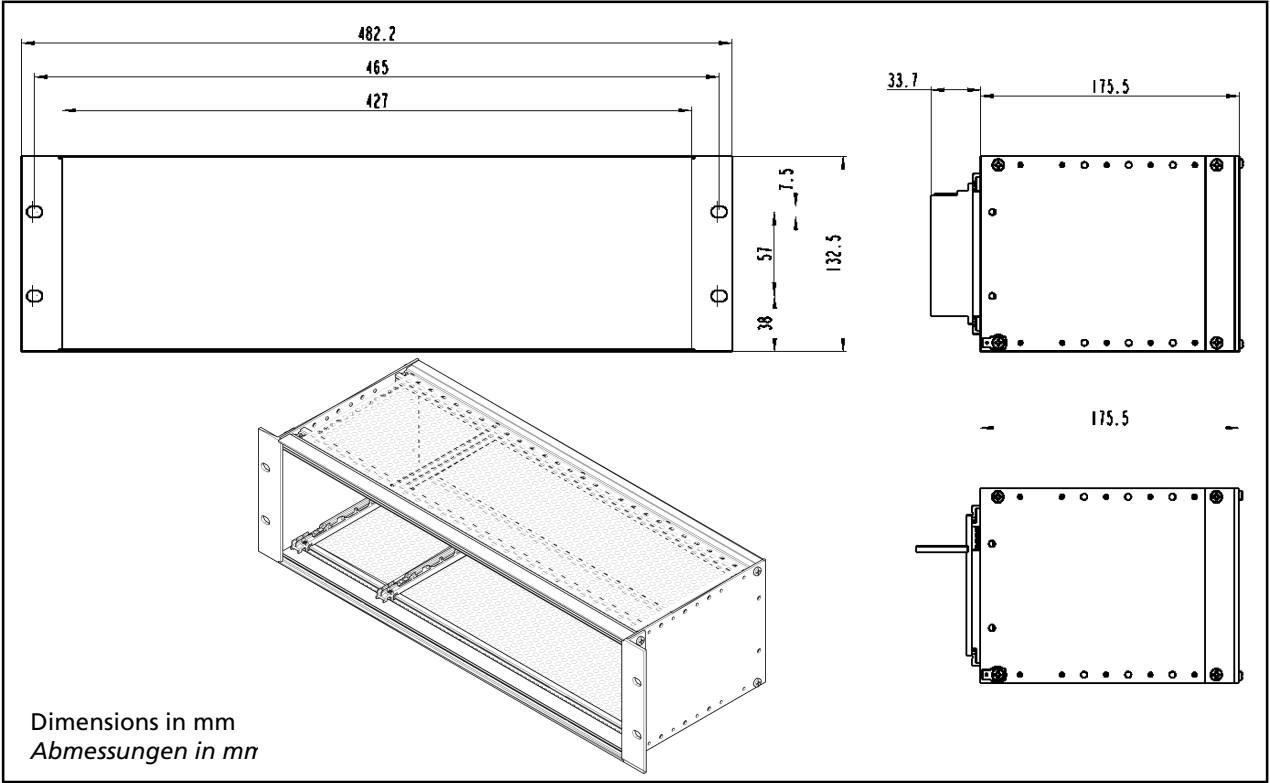
Technical Data Technische Daten

Dimensions Abmessungen	440x250x257 mm (WxHxD)
Max. Assembly Max. Bestückung	- 2 Master with terminal board (master/master) ¹ - 2 Master mit Anschlussplatine (Master/Master) ¹ - 1 Master, 3 Slave with terminal board (master/slave) - 1 Master, 3 Slave mit Anschlussplatine (Master/Slave) - 2 Master with calmp blocks ² - 2 Master mit Klemmenblöcken ²
Weight (with circuit board, without modules) Gewicht (mit Anschlussplatine, ohne Module)	8.8 kg
Degree of protection Schutzgrad	IP65
Operational temperature Betriebstemperatur	-20°C ... +40°C
User interface, colours Oberfläche, Farbe	powder coated, grey pulverbeschichtet, grau
Cable entry Kabeleinführung	8 x M16 (f. cable 4.5 - 10.00 mm/L = Long thread) 2 x M32 (f. cable 11.0 - 21.00 mm/L = Long thread) 8 x M16 (f. Kabel 4,5 – 10,00 mm/L = Langgewinde) 2 x M32 (f. Kabel 11,0 – 21,00 mm/L = Langgewinde)

¹ NRTL certification US/CAN
 NRTL Zertifikat US/CAN

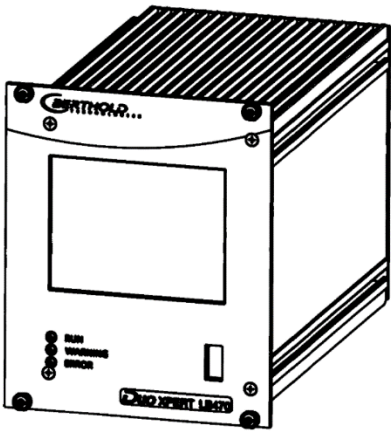
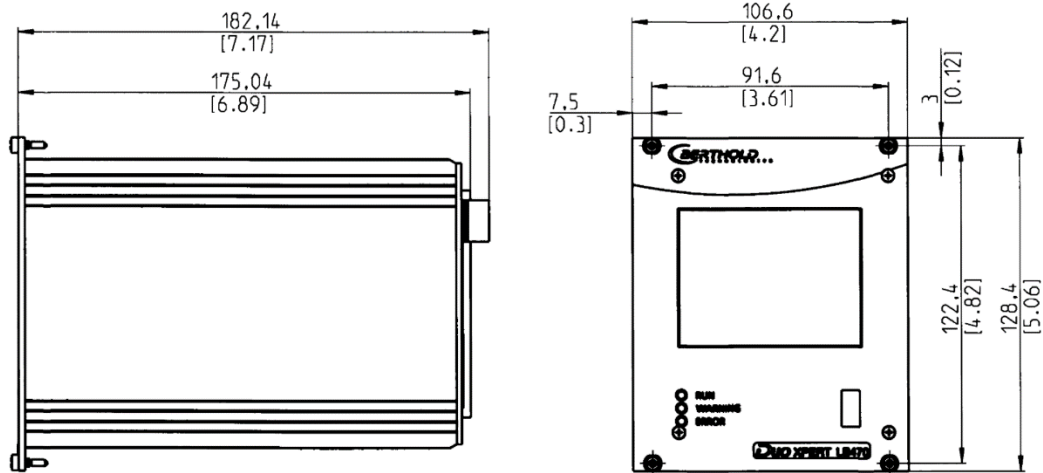
² Kein Zertifikat
 No certification

19" subrack
19" Baugruppenträger



Technical Data Technische Daten	
Dimensions Abmessungen	3HE/84TE/5T, 482x132x172 mm (WxHxD)
Max. Assembly Max. Bestückung	- 3 Master, 3 Slave - 2 Master, 6 Slave - 4 Master - 1 Master, 9 Slave - 12 Slave
Weight (with circuit board, without modules) Gewicht (mit Anschlussplatine, ohne Module)	1.4 kg
Weight terminal block Gewicht Klemmenblock	220 g
Operational temperature Betriebstemperatur	-20°C ... +50°C, not condensing nicht kondensierend
Storage temperature Lagerungstemperatur	-30°C ... +60°C
Degree of protection Schutzklasse	IP20

Master EVU
Master AWE



Dimensions in mm
Abmessungen in mm

Technical Data Technische Daten	
Dimensions Abmessungen	117/128/172 mm (WxHxD)
Weight Gewicht	1200 g
Operational temperature Betriebstemperatur	-20°C ... +50°C, not condensing. Avoid direct sunlight. Unobstructed air circulation must be provided to the subrack. -20°C ... +50°C nicht kondensierend. Direkte Sonneneinstrahlung ist zu vermeiden. Für eine ungehinderte Luftzirkulation um den Baugruppenträger ist zu sorgen.
Storage temperature Lagerungstemperatur	-20°C ... +85°C
Degree of protection Schutzgrad	IP20

Connections	- USB port for the connection to the USB storage medium - Master/slave connection (4-pin) and plug - RJ45 connection for Ethernet (on back wall) - 32-pin plug connector according to DIN 19465 Series C
Anschlüsse	- <i>USB-Port zum Anschluss von USB-Speichermedium</i> - <i>Master/Slave Buchse (4-polig) und Stecker</i> - <i>RJ45-Buchse für Ethernet (an Rückwand)</i> - <i>32 polige Stiftleiste nach DIN 19465 Baureihe C</i>
Display	- graphical LCD display - 320 x 240 points, 262,000 colours - Dimmable LED background lighting - Touch screen - <i>graphisches LCD-Display</i> - <i>320 x 240 Punkte, 262.000 Farben</i> - <i>Dimmbare LED Hintergrundbeleuchtung</i> - <i>Touchscreen</i>
Computer core	- Processor: Dual Core DSP/ARM Controller - clock frequency: 300 MHz internal (20 MHz external quartz) - ROM: 512 KByte - RAM: 64 MByte ext. SDRAM, 128 KByte int. shared RAM - FLASH: 8 MByte external serial
Rechnerkern	- <i>Prozessor: Dual Core DSP/ARM Controller</i> - <i>Taktfrequenz: 300 MHz intern (20 MHz externer Quarz)</i> - <i>ROM: 512 KByte</i> - <i>RAM: 64 MByte ext. SDRAM, 128 KByte int. shared RAM</i> - <i>FLASH: 8 MByte extern seriell</i>
Connections	- USB port for the connection to the USB storage medium - Master/slave connection (4-pin) and plug - RJ45 connection for Ethernet (on back wall) - 32-pin plug connector according to DIN 19465 Series C
Anschlüsse	- <i>USB-Port zum Anschluss von USB-Speichermedium</i> - <i>Master/Slave Buchse (4-polig) und Stecker</i> - <i>RJ45-Buchse für Ethernet (an Rückwand)</i> - <i>32 polige Stiftleiste nach DIN 19465 Baureihe C</i>

Power Supply Stromversorgung

Voltage Spannung	100-240 V AC 50/60 Hz (wide range input) +/- 10% 21-32 V DC (24V DC power input)
Power consumption Leistungsaufnahme	22 VA, 15 W
Fuses Sicherungen	Internal, 2 x 250 V, 1A delayed, 5x20mm, 1500 A breaking capacity IEC 60127-2, 1x 250 V TR5 T80mA (Ø 8,5 mm)

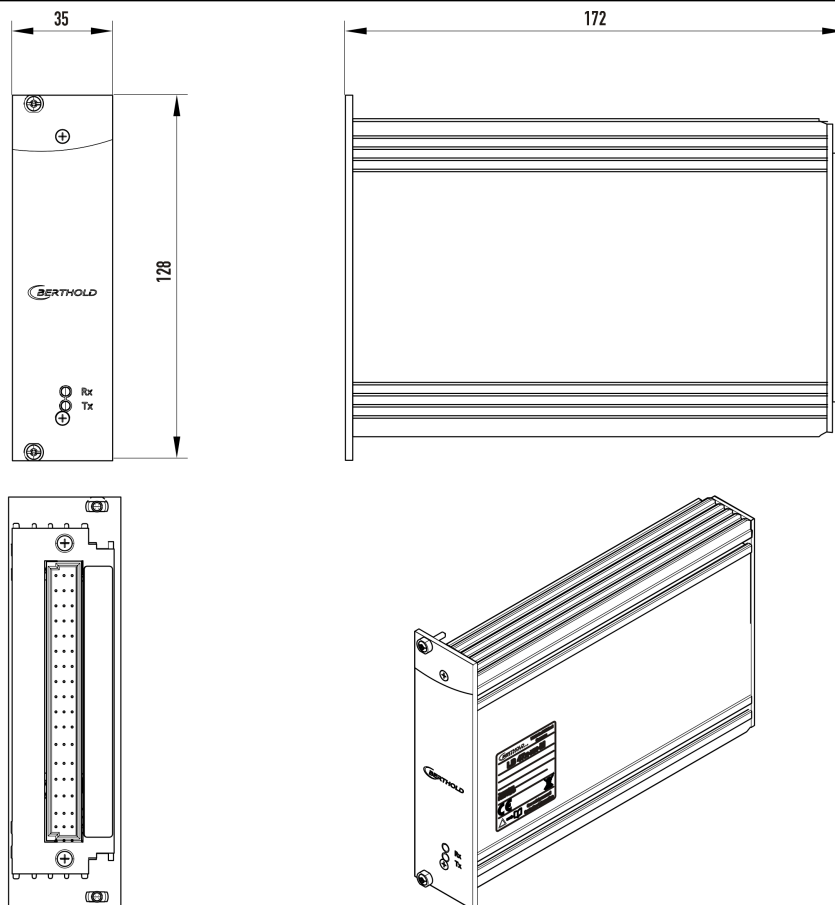
Schnittstellen

Current output	4-20mA internally switched from power source to sink current (according to NAMUR recommendation NE 006 and NE 043). Continuous short circuit proof and isolated (500V). Internal resistance about 105 ohms max. Burden when operating as a power source: 850 ohm. Internal monitoring of the loop current and additional error signalling by hardware on detection of a fault condition.
Stromausgang	4-20mA (nach Namur-Empfehlung NE 006 und NE 043) intern von Stromquelle auf Stromsenke umschaltbar. Dauerhaft kurzschlussfest und potentialgetrennt (500 V). Innenwiderstand ca. 105 Ohm max. Bürde bei Betrieb als Stromquelle: 850 Ohm. Interne Überwachung des Schleifenstroms und zusätzliche Fehlersignalisierung durch Hardware bei Erkennung eines Fehlerzustands.
Current input	4-20mA (according to NAMUR recommendation NE 006 and NE 043) switchable via software on frequency input, electrically isolated (500 V). Internal resistance approx. 300 ohm max. input voltage: 24 VDC
Stromeingang	4-20mA (nach Namur-Empfehlung NE 006 und NE 043) per Software umschaltbar auf Frequenzeingang, potentialgetrennt (500 V). Innenwiderstand ca. 300 Ohm max. Eingangsspannung: 24 VDC
Impulse input	Frequency 0-100kHz, Umax = 28 V, right angle signal form, low <1.5V; high 4 – 28 V. Switchable to current input
Impulseingang	Frequenz 0-100kHz, Umax = 28V, Rechteck-Signalform, Low <1,5V; High 4 – 28 V. Umschaltbar auf Stromeingang
Digital outputs	3 relays, Umax = 33 V ACeff, 46 V DC; Imax = 1 A functions: Relay 1: SPDT for error signalling Relay 2: SPDT assignable by software Relay 3: SPST assignable by software
Digitale Ausgänge	3 Relais, Umax = 33V ACeff, 46 V DC; Imax = 1 A Funktionen: Relais 1: SPDT zur Fehlersignalisierung Relais 2: SPDT über Software zuweisbar Relais 3: SPST über Software zuweisbar
Digital inputs	2 x together electrically isolated (500 V) Switch between DigIn and GND, Uoutmax approx. 24 V Function configurable via software
Digitale Eingänge	2 x gemeinsam potentialgetrennt (500 V), Schalter zwischen DigIn und GND, Uoutmax ca. 24 V Funktion über Software konfigurierbar
External supply	Output voltage: 24 VDC Output current: max. 150 mA
Externe Versorgung	Ausgangsspannung: 24 VDC Ausgangsstrom: max. 150 mA

RS485	for master/master communication, and testing and evaluation purposes. not isolated from main electronics and USB port electrically isolated from remaining I/Os (500 V) <i>für Master/Master Kommunikation und Prüf-und Testzwecke. Nicht potentialgetrennt von Hauptelektronik und USB-Anschluss potentialgetrennt von restlichen I/Os (500 V)</i>
USB port	1 x USB 2.0 Type A (Host) via front plate to the connection of an ext. mouse, keyboard or storage medium Uout = 5 V, Ioutmax = 0.5 A <i>1 x USB 2.0 Typ A (Host) über Frontplatte zum Anschluss einer ext. Maus, Tastatur oder Speichermedium Uout = 5 V, Ioutmax = 0,5 A</i>
Ethernet	RJ45 connection via back wall, 10 Mbit, DHCP supported, max. 3 m <i>RJ45-Buchse über Rückwand, 10 Mbit, DHCP unterstützt, max. 3 m</i>

Slave Module

Slave Modul



Dimensions in mm
 Abmessungen in mm

Technical Data

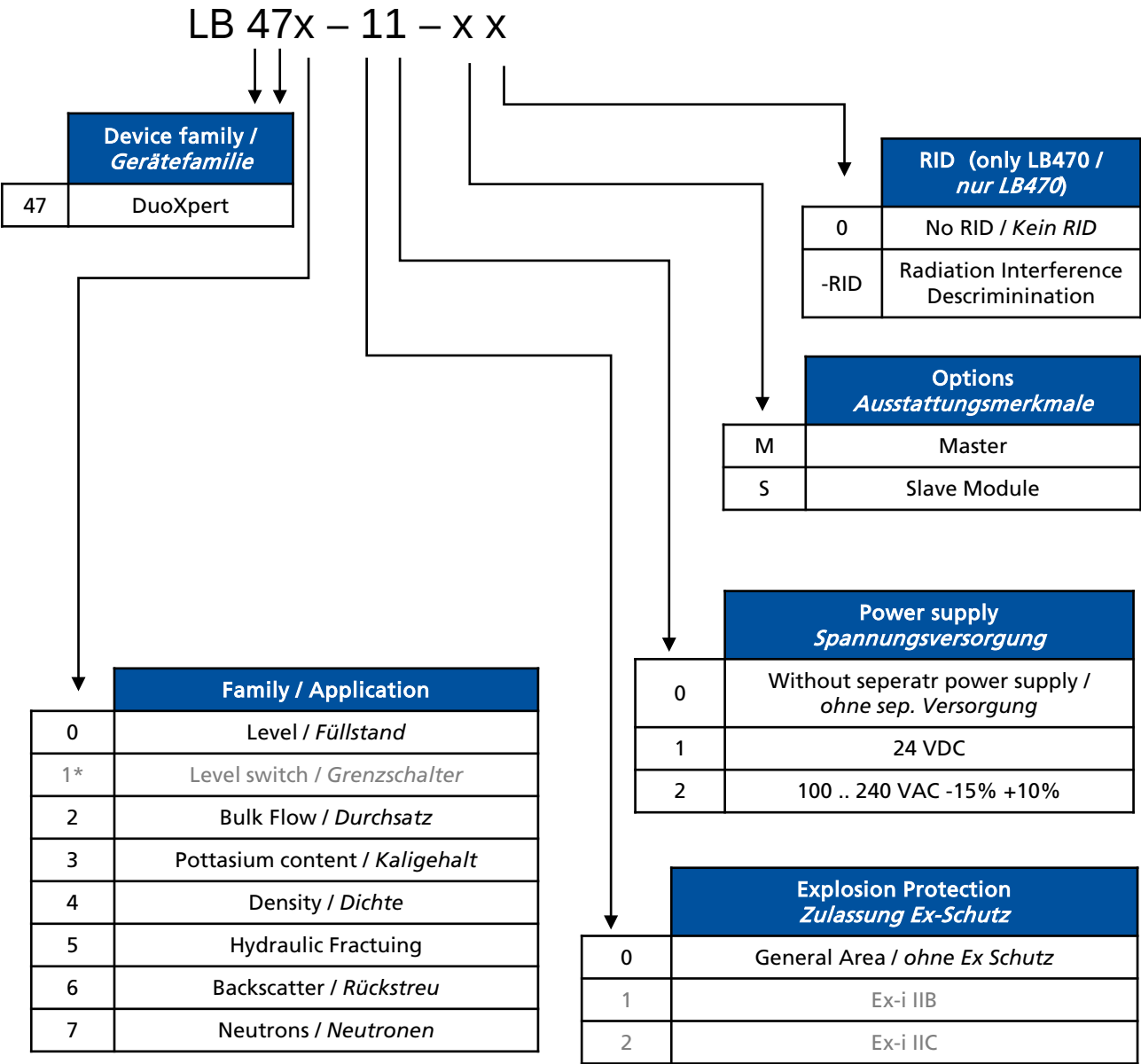
Technische Daten

Dimensions Abmessungen	35/128/172 mm (WxHxD)
Weight Gewicht	600 g
Operational temperature Betriebstemperatur	-20°C ... +50°C, not condensing. Avoid direct sunlight. Unobstructed air circulation must be provided to the subrack. -20°C ... +50°C nicht kondensierend. Direkte Sonneneinstrahlung ist zu vermeiden. Für eine ungehinderte Luftzirkulation um den Baugruppenträger ist zu sorgen.
Storage temperature Lagertemperatur	-20°C ... +60°C
Degree of protection Schutzgrad	IP20

Electrical Data
Elektrische Daten

Power consumption <i>Leistungsaufnahme</i>	6 VA, 5 W
Fuses <i>Sicherungen</i>	Internal, 2 x 250 V, 1A delayed, 5x20mm, 1500 A breaking capacity IEC 60127-2 <i>Intern, 2 x 250 V, 1A träge, 5x20mm, 1500 A Abschaltvermögen IEC 60127-2</i>
Connections <i>Anschlüsse</i>	- 32-pin plug connector - 32 polige Stiftleiste

Number Key LB 47x
Nummernschlüssel LB 47x



* Used by other hardware / belegt durch andere Hardware

Declaration of Conformity



BERTHOLD TECHNOLOGIES GmbH & Co. KG
Calmbacher Straße 22
75323 Bad Wildbad, Germany
Phone +49 7081 177-0
Fax +49 7081 177-100
info@Berthold.com
www.Berthold.com

EG-Declaration of Conformity (ORIGINAL) File.No.: CE20028-2

We, hereby declare under our sole responsibility that the design of the following products / systems / units / machines brought into circulation by us comply with the relevant harmonized rules of the EU.

This declaration loses its validity should modifications or unsuitable and improper use take place without our authorisation.

Product name: **radiomatrix evaluation system
DuoXpert**

Type / model: **LB 47x**

directive		applied standards	
LVD	2014/35/EU	EN 61010-1	2010
RoHS	2011/65/EG		
EMC	2014/30/EU	EN 61326-1 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-11 EN 61000-3-2 Namur NE21	2013 2012

This declaration is issued by the manufacturer
BERTHOLD TECHNOLOGIES GmbH & Co. KG
Calmbacher Str. 22, D-75323 Bad Wildbad, Germany
released by


Dr. Jürgen Briggmann

Head of R&D
Bad Wildbad, 1st of September, 2015

Registergericht / Court of Registration
Persönlich haftende Gesellschafterin / Fully liable Associates
Registergericht / Court of Registration
Geschäftsführung / Management
USt.-Id.-Nr. / VAT Reg. No.
Deutsche Steuernummer / German Tax No.
WEEE-Reg. No.

Stuttgart HRA 330991
BERTHOLD TECHNOLOGIES Verwaltungs-GmbH
Stuttgart HRB 331520
Horst Knauff, Dr. Dirk Mörmann
DE813050511
49038/08038
DE99468690

Sparkasse PF-CW	75323 Bad Wildbad	Konto/Account No. 8 045 003 (BLZ 666 500 85)	SWIFT-BIC PZHSDE66	IBAN: DE37 6665 0085 0008 0450 03
Volksbank	75119 Pforzheim	Konto/Account No. 957 004 (BLZ 666 900 00)	SWIFT-BIC VBPFDE66	IBAN: DE85 6669 0000 0000 9570 04
Commerzbank	75105 Pforzheim	Konto/Account No. 6 511 120 (BLZ 666 800 13)	SWIFT-BIC DRESDEFF 666	IBAN: DE05 6668 0013 0651 1120 00

Konformitätserklärung



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EG-Konformitätserklärung (ORIGINAL) Dok.Nr.: CE20028-1

Hiermit erklären wir in alleiniger Verantwortung, dass die Bauart des(r) nachfolgend bezeichneten Geräte / Systems / Anlage / Maschine in der von uns in den Verkehr gebrachten Ausführung den unten genannten einschlägigen Harmonisierungsvorschriften der EU entsprechen.

Durch nicht mit uns abgestimmte Änderungen oder nicht bestimmungsgemäßen Gebrauch verliert diese Erklärung ihre Gültigkeit.

Produktbezeichnung: **radiometrisches Auswertesystem DuoXpert**

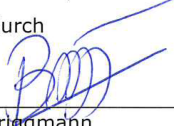
Typenbezeichnung / Modell: **LB 47x**

Richtlinie (Fundstelle)		angewendete Normen und weitere Spezifikationen	
NSR	2014/35/EU	EN 61010-1	2010
RoHS	2011/65/EG		
EMV	2014/30/EU	EN 61326-1 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-11 EN 61000-3-2 Namur NE21	2013 2012

Diese Erklärung wird verantwortlich für den Hersteller

BERTHOLD TECHNOLOGIES GmbH & Co. KG
Calmbacher Str. 22, D-75323 Bad Wildbad

abgegeben durch


Dr. Jürgen Briegmann
Leiter Entwicklung
Bad Wildbad, den 1. September 2015

Registergericht / Court of Registration
Persönlich haftende Gesellschafterin / Fully liable Associates
Registergericht / Court of Registration
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USt.-Id.-Nr. / VAT Reg. No.
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WEEE-Reg. No.

Stuttgart HRA 330991
BERTHOLD TECHNOLOGIES Verwaltungs-GmbH
Stuttgart HRB 331520
Horst Knauff, Dr. Dirk Mörmann
DE813050511
49038/08038
DE99468690

Sparkasse PF-CW 75323 Bad Wildbad
Volksbank 75119 Pforzheim
Commerzbank 75105 Pforzheim

Konto/Account No. 8 045 003 (BLZ 666 500 85)
Konto/Account No. 957 004 (BLZ 666 900 00)
Konto/Account No. 6 511 120 (BLZ 666 800 13)

SWIFT-BIC PZHSDE66
SWIFT-BIC VBPFDE66
SWIFT-BIC DRESDEFF 666

IBAN: DE37 6665 0085 0008 0450 03
IBAN: DE85 6669 0000 0000 9570 04
IBAN: DE05 6668 0013 0651 1120 00

Certificates *Zertifikate*

NRTL certification US/CAN wall-mounted housing *NTRL Zertifikat US/CAN Wandgehäuse*

 Nemko Nemko-CCL, Inc.	Certificate of Compliance
Certificate: NA201610530	Date Issued: January 20, 2016
Project: 257087-7.1	
Issued to: Berthold Technologies GmbH & Co. KG Calmbacher Straße 22 75323 Bad Wildbad Germany	
<i>The products listed below have been certified as being compliant with all applicable requirements of the specifications listed and are eligible to bear the following certification mark</i>	
	
Issued by: 	Robert Keller, Senior Engineer/Safety Supervisor
Authorized by: 	Thomas Jackson, Certification Manager
<u>PRODUCTS</u>	
MEASUREMENT, CONTROL, OR LABORATORY EQUIPMENT – Certified to US and Canada Standards	
Product: Process measurement unit Model: Wall-mounted LB 47x, 1M/3S; Wall-mounted LB 47x, 2M (x can be 0 to 8 and describes different software versions for the master and slave modules not affecting safety). Ratings: Wall-mounted LB 47x, 1M/3S: 40VA 100-240V, 50/60Hz, Class I; Wall-mounted LB 47x, 2M: 44VA 100-240V, 50/60Hz, Class I	
The certification system, as described in ISO/IEC Guide 67 (Conformity Assessment – Fundamentals of Product Certification), most closely resembles System 3	
Nemko-CCL, Inc. 1940 West Alexander Street Salt Lake City, Utah 84119-3039 Tel (801) 972-6146 Fax (801) 972-9432	
NFCC-002 Issue 2 May 2014	Page 1 of 3

NRTL certification US/CAN wall-mounted housing (continued)

NTRL Zertifikat US/CAN Wandgehäuse (Fortsetzung)

APPLICABLE REQUIREMENTS

UL Std. No. 61010-1 2nd Edition - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements

CAN/CSA-C22.2 No. 61010-1-04 Second Edition - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements

This certificate is issued on condition that the holder complies and will continue to comply with the requirements of the above mentioned specifications and pursuant to the terms and conditions specified in the Certification Agreement.

The certification system, as described in ISO/IEC Guide 67 (Conformity Assessment – Fundamentals of Product Certification), most closely resembles System 3

Nemko-CCL, Inc. 1940 West Alexander Street Salt Lake City, Utah 84119-3039 Tel (801) 972-6146 Fax (801) 972-8432

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NRTL certification US/CAN wall-mounted housing (continued)

NTRL Zertifikat US/CAN Wandgehäuse (Fortsetzung)

Supplement to Certificate of Compliance

Certificate: NA201610530

Project: 257087-7.1

Nemko-CCL grants a license to the applicant to apply the Certification Mark to the certified products and that the mark shall only be affixed at the following factory locations

Factory Information

Factory Name	Location
Berthold Technologies GmbH & Co. KG	Calmbacher Straße 22 75323 Bad Wildbad Germany

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
257087-7.1	January 20, 2016	Original Certification: Model: Wall-mounted LB 47x, 1M/3S; Wall-mounted LB 47x, 2M (x can be 0 to 8 and describes different software versions for the master and slave modules not affecting safety). Ratings: Wall-mounted LB 47x, 1M/3S: 40VA 100-240V, 50/60Hz, Class I; Wall-mounted LB 47x, 2M: 44VA 100-240V, 50/60Hz, Class I

This Supplement forms an integral part of the Certificate of Compliance

The certification system, as described in ISO/IEC Guide 67 (Conformity Assessment – Fundamentals of Product Certification), most closely resembles System 3

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NRTL certification US/CAN DuoXpert LB 47x

NTRL Zertifikat US/CAN DuoXpert LB 47x



Nemko-CCL, Inc.

Certificate of Compliance

Certificate: NA201510498

Date Issued: September 17, 2015

Project: 235982-14.1

Issued to: Berthold Technologies GmbH & Co. KG
Calmbacher Straße 22
75323 Bad Wildbad
Germany

The products listed below have been certified as being compliant with all applicable requirements of the specifications listed and are eligible to bear the following certification mark



Issued by:

Robert Keller, Senior Engineer/Safety Supervisor

Authorized by:

Thomas Jackson, Certification Manager

PRODUCTS

MEASUREMENT, CONTROL, OR LABORATORY EQUIPMENT – Certified to US and Canada Standards

Product: Process measurement unit for building-in

Model: DuoXpert LB47x-02-M; DuoXpert LB47x-02-S (x can be 0 to 8 and describes different software versions for the master and slave modules not affecting safety)

Ratings: LB47x-02-M: 100-240V AC 22VA 50/60Hz; LB47x-02-S: 100-240V AC 6VA 50/60Hz

APPLICABLE REQUIREMENTS

UL Std. No. 61010-1 3rd Edition - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements

CAN/CSA-C22.2 No. 61010-1-12 Third Edition – Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements

This certificate is issued on condition that the holder complies and will continue to comply with the requirements of the above mentioned specifications and pursuant to the terms and conditions specified in the Certification Agreement.

The certification system, as described in ISO/IEC Guide 67 (Conformity Assessment – Fundamentals of Product Certification), most closely resembles System 3

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NRTL certification US/CAN DuoXpert LB 47x (continued)

NTRL Zertifikat US/CAN DuoXpert LB 47x (Fortsetzung)

Supplement to Certificate of Compliance

Certificate: NA201510498

Project: 235982-14.1

Nemko-CCL grants a license to the applicant to apply the Certification Mark to the certified products and that the mark shall only be affixed at the following factory locations

Factory Information

Factory Name	Location
Berthold Technologies GmbH & Co. KG	Calmbacher Straße 22 75323 Bad Wildbad Germany

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
235982-14.1	September 17, 2015	Original Certification: Model: DuoXpert LB47x-02-M; DuoXpert LB47x-02-S (x can be 0 to 8 and describes different software versions for the master and slave modules not affecting safety) Ratings: LB47x-02-M: 100-240V AC 22VA 50/60Hz; LB47x-02-S: 100-240V AC 6VA 50/60Hz

This Supplement forms an integral part of the Certificate of Compliance

The certification system, as described in ISO/IEC Guide 67 (Conformity Assessment – Fundamentals of Product Certification), most closely resembles System 3

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Parts overview

Übersicht Zubehör

ID. No. <i>Id. Nr.</i>	Description <i>Beschreibung</i>
64578	LB 472-02-M Bulk Flow Transmitter (Master, 24 VDC) <i>LB 472-02-M Fördermengenmessgerät (Master, 24 VDC)</i>
64577	LB 472-02-M Bulk Flow Transmitter (Master, 100...240 VAC) <i>LB 472-02-M Fördermengenmessgerät (Master, 100...240 VAC)</i>
63286	LB 470 Slave (24 VDC) <i>LB 470 Slave (24 VDC)</i>
63285	LB 470 Slave (100...240 VAC) <i>LB 470 Slave (100...240 VAC)</i>
56925-2BA1	Operating manual DuoSeries LB 472 Bulk Flow, German <i>Betriebsanleitung Fördermenge (deutsch)</i>
56925-2BA2	Operating manual DuoSeries LB 472 Bulk Flow, English <i>Betriebsanleitung Fördermenge (englisch)</i>
63781	Wall-mounted Housing for LB 47x 1x Master / 3x Slave (24 VDC) <i>Wandgehäuse für LB 47x, 1x Master / 3x Slave (24 VDC)</i>
63782	Wall-mounted Housing for LB 47x 1x Master / 3x Slave (110...240 VAC) <i>Wandgehäuse für LB 47x, 1x Master / 3x Slave (110...240 VAC)</i>
63783	Wall-mounted Housing for 2x LB 47x Master (24 VDC) <i>Wandgehäuse für LB 47x, 2x Master (24 VDC)</i>
63784	Wall-mounted Housing for 2x LB 47x Master (110...240 VAC) <i>Wandgehäuse für LB 47x, 2x Master (110...240 VAC)</i>
64402	Wall-mounted Housing for 2x LB 47x Master (terminal blocks) <i>Wandgehäuse für LB 47x, 2x Master (Klemmblöcke)</i>
59484	19" rack for LB 47x, 4 x Master <i>19"-Baugruppenträger für LB 47x, 4 x Master</i>
59481	19" rack for LB 47x, 3x (1x Master & 1x Slave) <i>19"-Baugruppenträger für LB 47x, 3x (je 1x Master & 1x Slave)</i>
64607	19" rack, 84 HP / 3 RU for use with terminal blocks <i>19"-Baugruppenträger für den Einsatz mit Klemmblöcken</i>
59477	Terminal block for LB 47x, Master <i>Klemmenblock für LB 47x, Master</i>
59478	Terminal block for LB 47x, Slave <i>Klemmenblock für LB 47x, Slave (mit Führungsschienen)</i>
37526	Front Cover Plate 21 HP / 3 RU (Master) <i>Blindplatte 21TE / 3 HE (Master)</i>
59501	Front Cover Plate 7 HP / 3 RU (Slave) <i>Blindplatte 7TE / 3 HE (Slave)</i>
64608	Connector for LB 47x slaves when changing from LB 44x to LB 47x slaves <i>Stecker für LB 47x Slaves bei Umrüstung von LB44x auf LB47x Slaves</i>