



**Solutions for data centres**



**OBO**  
BETTERMANN



**THINK CONNECTED.**

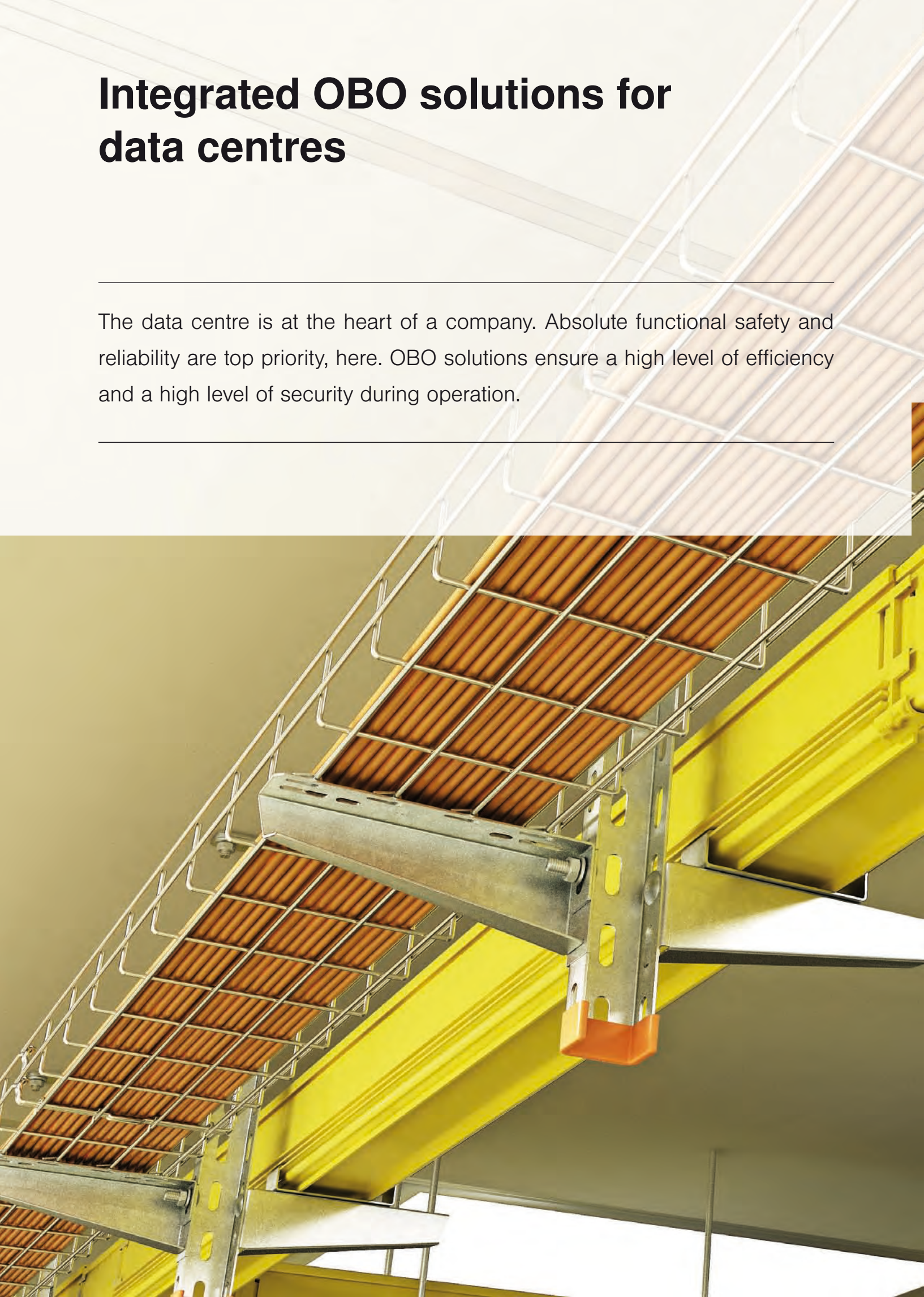


# Integrated OBO solutions for data centres

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The data centre is at the heart of a company. Absolute functional safety and reliability are top priority, here. OBO solutions ensure a high level of efficiency and a high level of security during operation.

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## Contents

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### **Complete supply and protection**

In the past, there were providers of support systems for data and fibre optic cables, providers of power supply systems, providers of surge protection, providers of fire protection and providers of function maintenance systems. Today, at OBO, everything comes from one source.

### **Our selection for your project**

This solutions catalogue contains a selection of our products for data centre structures. You can find over 30,000 additional products for all areas of electrical installations in our seven main catalogues, or on the Internet.

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**Cable routing,  
fibre optic cables**

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**Routing of power/  
copper cables**

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**Mounting systems**

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**Fire protection systems**

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**Lightning and surge protection**

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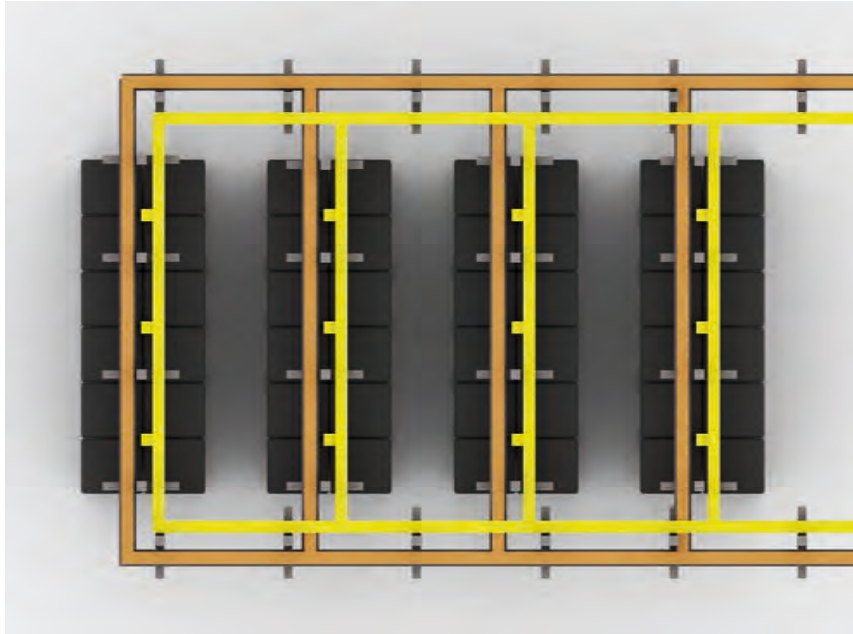
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**Directories**

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## Increased efficiency through integrated planning and networked systems



Our data centre solutions also remain true to the OBO motto “Think connected”. We can offer you systems necessary for the electrical infrastructure of a data centre.

Take advantage of the synergy effects of perfectly matched components in all the project phases, from planning to mounting. Besides a wide range of products for feeding data and energy, we can offer you a range of systems to ensure the safe operation of your data centre in any area. Usually the data centre requirements are the same. However, structural conditions and infrastructure connections are not comparable. We make a distinction between:

### Smaller data centres

- In small and medium-sized companies
- In stations for national networking of FTTO and FTTH
- In a setup as a standalone solution or housed in existing systems

### Medium-sized data centres

- In larger companies
- At service providers and service centres for data backup and archiving

### Large data centres

- In large companies
- In infrastructural buildings such as airports and railway stations
- At larger service providers and service centres for data backup and archiving

Should you have any questions regarding planning and execution, then OBO Customer Service will gladly provide you with help and advice – get in touch with us.











**Connection from above  
and below**

In modern data centres, the computer infrastructure is usually supplied in two stages: Data cables come from above and the power supply from below. This ensures tidy, fault-free connection of the complete data centre structures. Our systems are perfectly matched to these requirements.



## Perfect connection for power and data

### **Cable routing for fibre optic cables**

The modular system ensures a flexible, secure connection of sensitive fibre optic cables to the computer infrastructure. With various routing duct variants, fittings, end pieces, reductions and exits, you can match the system exactly to local requirements. The cable routing duct requires no metallic components and is completely halogen-free (PPO, ROHS-conformant, UL2024A standard-certified).

### **Cable routing for power and copper cables**

Our cable tray and mesh cable tray systems run power and data cables – either in ceilings or in raised floors. The variety of our systems guarantees the right solution for any conceivable application.

### **Mounting systems**

Cable routing duct for fibre optic cables, mesh cable trays or cable trays have a shared base: The universally applicable mounting systems. They ensure secure anchoring – beneath the ceiling, on the wall or in the floor, and are available in many different versions.



## OBO systems are safe – even in emergencies



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**Secure operation and protection of the data centre is of key importance for your company. OBO can offer you a perfectly matched protection package against all kinds of faults.**

### **Lightning and surge protection**

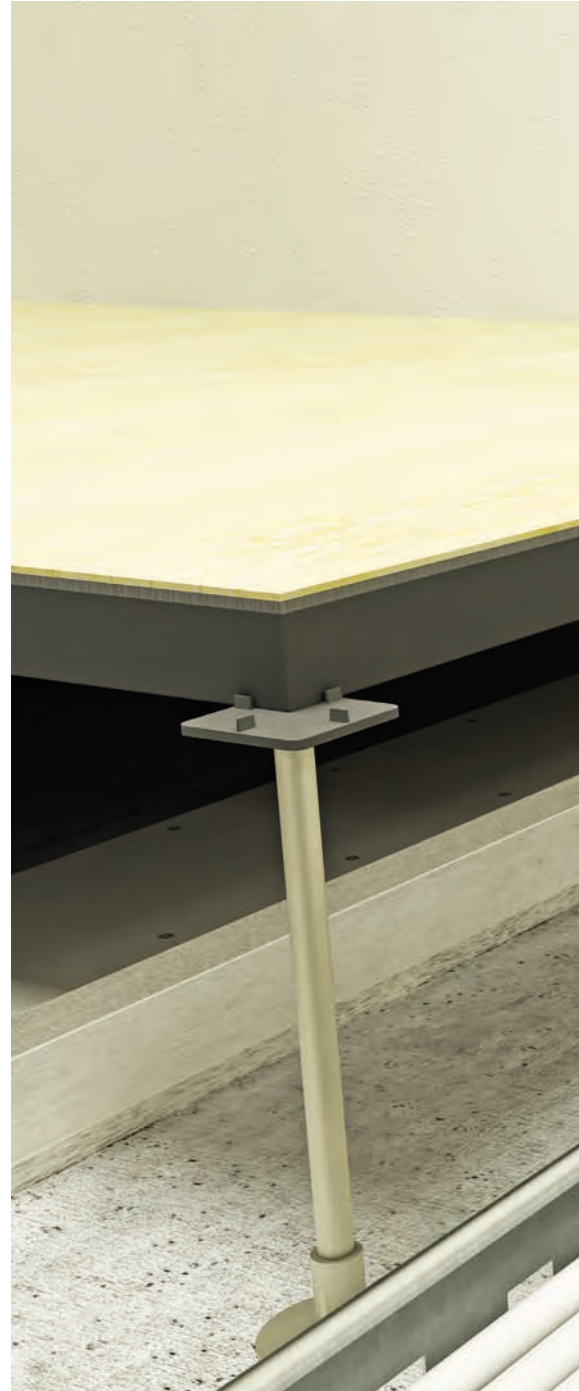
Our lightning and surge protection systems protect against both lightning strikes and surges via the power and data networks.

### **Fire protection**

If there is a fire, then extinguishing it is of paramount importance. OBO insulation systems prevent the spread of the fire via cable penetrations. This prevents the spread of fire and smoke into the next rooms.

### **Function maintenance**

In addition, special function maintenance systems can also provide considerable time savings when shutting down the system and making backups. They can also be used to maintain power to the emergency lighting, fire alarm systems or systems for active fire-fighting.

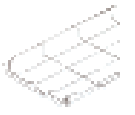
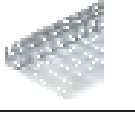









## Routing of power/copper cables

	Mesh cable tray systems	Mesh cable tray, GR-Magic	22
	Cable tray systems	Cable tray RKS-Magic®	24
	Cable ladder systems	Cable ladder LG 60 VS	25





# Mesh cable tray systems

Routing of power/copper cables

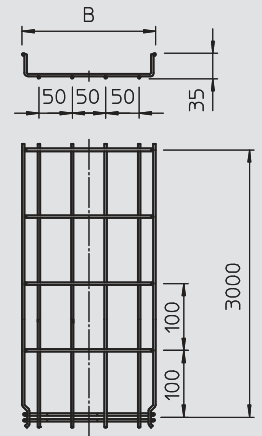


## Mesh cable tray GR-Magic® 35

Type	Width mm	Wire Ø mm	Length mm	Useful cross- section cm <sup>2</sup>	Weight kg/100 m	Item No.
<b>GRM 35 50 G</b>	50	3.9	3000	17,5	45.300	<b>6000 06 0</b>
<b>GRM 35 100 G</b>	100	3.9	3000	35	49.300	<b>6000 06 2</b>
<b>GRM 35 150 G</b>	150	3.9	3000	52,5	63.100	<b>6000 06 3</b>
<b>GRM 35 200 G</b>	200	3.9	3000	70	76.800	<b>6000 06 4</b>
<b>GRM 35 300 G</b>	300	4.8	3000	105	159.100	<b>6000 06 6</b>

**ST** Steel      **G** Electrogalvanised /m

Mesh cable tray with shaped connector of side height 35 mm.  
Magnetic shield insulation without cover 15 dB, with cover 25 dB.

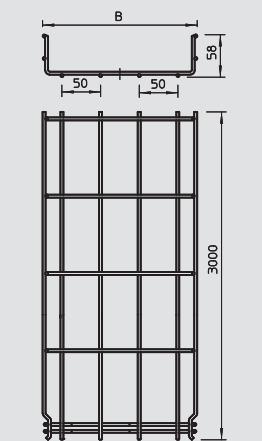


## Mesh cable tray GR-Magic® 55

Type	Width mm	Wire Ø mm	Length mm	Useful cross- section cm <sup>2</sup>	Weight kg/100 m	Item No.
<b>GRM 55 50 G</b>	50	3.9	3000	16	67.000	<b>6001 44 1</b>
<b>GRM 55 100 G</b>	100	3.9	3000	40	72.400	<b>6001 44 2</b>
<b>GRM 55 150 G</b>	150	3.9	3000	63	85.800	<b>6001 44 4</b>
<b>GRM 55 200 G</b>	200	3.9	3000	87	100.000	<b>6001 44 6</b>
<b>GRM 55 200 4.8 G</b>	200	4.8	3000	87	151.000	<b>6001 44 7</b>
<b>GRM 55 300 G</b>	300	4.8	3000	129	194.500	<b>6001 44 8</b>
<b>GRM 55 400 G</b>	400	4.8	3000	175	236.700	<b>6001 45 0</b>
<b>GRM 55 500 G</b>	500	4.8	3000	220	279.000	<b>6001 45 2</b>
<b>GRM 55 600 G</b>	600	4.8	3000	265	321.200	<b>6001 45 4</b>

**ST** Steel      **G** Electrogalvanised /m

Mesh cable tray with shaped connector of side height 55 mm.  
Magnetic shield insulation without cover 15 dB, with cover 25 dB.

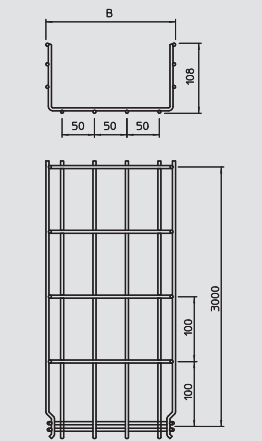


## Mesh cable tray GR-Magic® 105

Type	Width mm	Wire Ø mm	Length mm	Useful cross- section cm <sup>2</sup>	Weight kg/100 m	Item No.
<b>GRM 105 100 G</b>	100	3.9	3000	82	100.000	<b>6002 40 2</b>
<b>GRM 105 150 G</b>	150	3.9	3000	130	110.900	<b>6002 40 4</b>
<b>GRM 105 200 G</b>	200	4.8	3000	175	194.500	<b>6002 40 6</b>
<b>GRM 105 300 G</b>	300	4.8	3000	268	236.700	<b>6002 40 8</b>
<b>GRM 105 400 G</b>	400	4.8	3000	363	278.000	<b>6002 41 0</b>
<b>GRM 105 500 G</b>	500	4.8	3000	459	319.000	<b>6002 41 5</b>
<b>GRM 105 600 G</b>	600	4.8	3000	554	359.000	<b>6002 41 7</b>

**ST** Steel      **G** Electrogalvanised /m

Mesh cable tray with shaped connector of side height 105 mm.  
Magnetic shield insulation without cover 15 dB, with cover 25 dB.

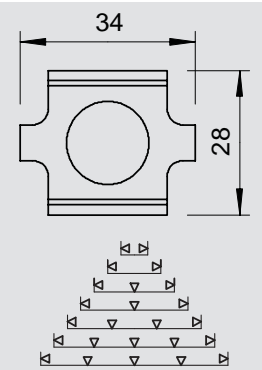


## Joint connector

Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
<b>GSV 34 G</b>	25	3.000	<b>6016 59 6</b>

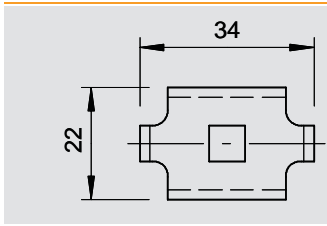
**ST** Steel      **G** Electrogalvanised /pc.

Screwed version of joint connector for cable trays.



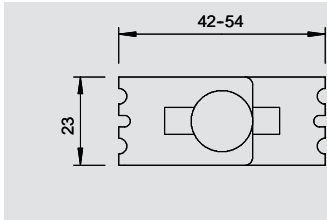


## Mesh cable tray systems



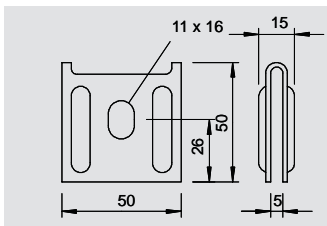
Type			Clamping piece		
	Pack.	Weight	Item No.		
	pcs	kg/100 pcs.			
<b>GKS 34 G</b>	100	2.000	<b>6016 85 5</b>		
<b>ST</b> Steel	<b>G</b> Electrogalvanised				
/pc.					

Clamp for fastening mesh cable trays to wall or support brackets.



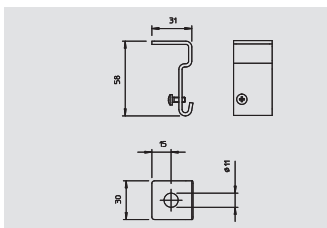
Type			Corner connector		
	Pack.	Weight	Item No.		
	pcs	kg/100 pcs.			
<b>GEV 36 G</b>	100	3.000	<b>6016 71 5</b>		
<b>ST</b> Steel	<b>G</b> Electrogalvanised				
/pc.					

Corner connector for the creation of mesh cable tray bend elements.



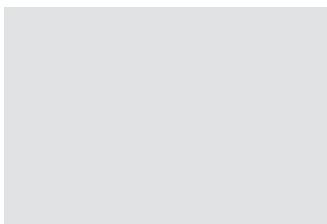
Type			Wall and floor fastener		
	Pack.	Weight	Item No.		
	pcs	kg/100 pcs.			
<b>K 12 1818 FS</b>	25	7.600	<b>6437 10 9</b>		
<b>ST</b> Steel	<b>FS</b> Strip-galvanised				
/pc.					

Wall clamp and central hanger for mesh cable trays.



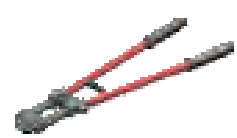
Type		Side holder			
	For threaded rod	Pack.	Weight	Item No.	
		pcs	kg/100 pcs.		
<b>SH M10 FS</b>	M10	50	5.500	<b>6015 33 6</b>	
<b>ST</b> Steel	<b>FS</b> Strip-galvanised				
/pc.					

Side holder for suspension of mesh cable trays.



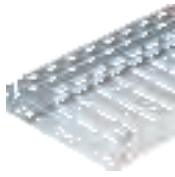
Type			Bolt cutter		
	Length	Cutting area	Pack.	Weight	Item No.
	mm	mm	pcs	kg/100 pcs.	
<b>GR BS</b>	450	3-6.0	1	160.000	<b>6017 70 0</b>
<b>ST</b> Steel					
/pc.					

Bolt cutter for cutting mesh cable trays.



# Cable tray systems

Routing of power/copper cables

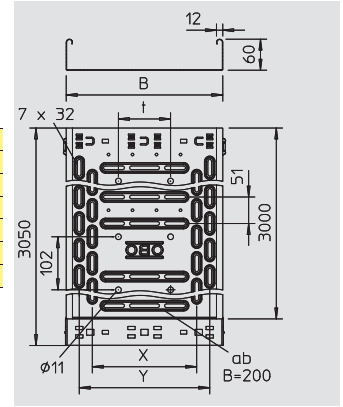


## Cable tray RKS-Magic®

Type	Width mm	Plate thickness mm	Length mm	Useful cross- section cm <sup>2</sup>	Dimen- sion x mm	Dimen- sion y mm	Dimen- sion t mm	Weight kg/100 m	Item No.
<b>RKSM 610 FS</b>	100	0.75	3050	58	—	50	—	134.300	<b>6047 61 1</b>
<b>RKSM 615 FS</b>	150	0.75	3050	88	50	100	—	157.700	<b>6047 63 0</b>
<b>RKSM 620 FS</b>	200	0.75	3050	118	100	150	—	183.000	<b>6047 63 8</b>
<b>RKSM 630 FS</b>	300	0.75	3050	178	200	250	100	239.000	<b>6047 65 4</b>
<b>RKSM 640 FS</b>	400	0.9	3050	238	300	350	200	331.300	<b>6047 68 9</b>
<b>RKSM 650 FS</b>	500	0.9	3050	298	400	450	300	392.300	<b>6047 71 9</b>
<b>RKSM 660 FS</b>	600	0.9	3050	358	450	550	400	453.300	<b>6047 73 5</b>

**ST** Steel      **FS** Strip-galvanised

RKSM 60 = efficient magic cable tray system with 60 mm side height.  
Magnetic shield insulation without cover 20 dB, with cover 50 dB.

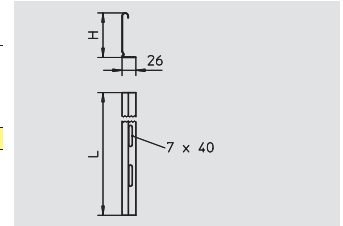


## Separating retainer

Type	Dimen- sion H mm	Dimen- sion L mm	Pack. m	Weight kg/100 m	Item No.
<b>TSG 60 FS</b>	60	3000	45	0.000	<b>6062 06 8</b>

**ST** Steel      **FS** Strip-galvanised

Barrier strip for separation of cables of different voltages or functions.

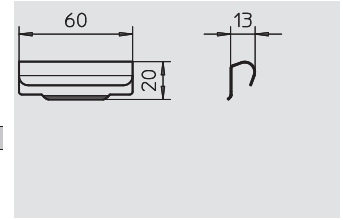


## Separating retainer connector

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>TSGV VA4310</b>	10	1.000	<b>6067 97 0</b>

**V2A** Stainless steel 1.4310

Barrier strip connector for screwless connection of the TSG barrier strip in all side heights.

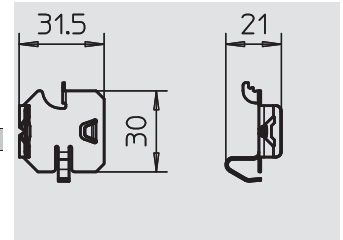


## Clamping piece for separating retainer fastening

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>KS KR VA4310</b>	30	0.580	<b>6062 28 0</b>

**V2A** Stainless steel 1.4310

Clamping piece for screwless fastening of barrier strips in the cable tray types RKSM, MKS and SKS.

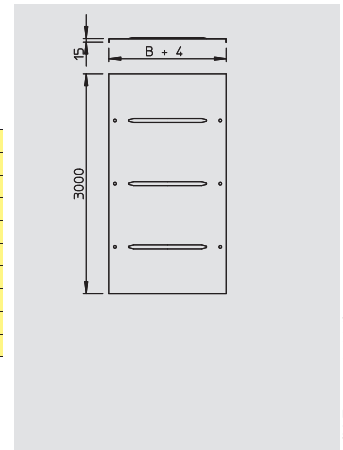


## Cover with sash lock

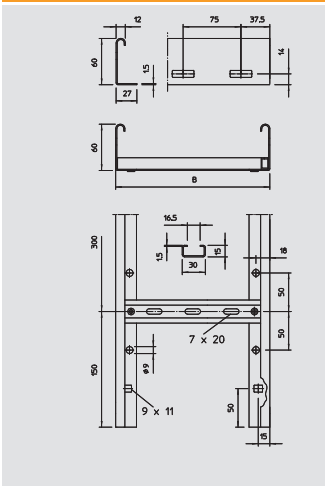
Type	Width mm	Plate thickness mm	Length mm	Weight kg/100 m	Item No.
<b>DRL 050 FS</b>	50	0.75	3000	62.100	<b>6052 05 3</b>
<b>DRL 075 FS</b>	75	0.75	3000	81.700	<b>6052 02 9</b>
<b>DRL 100 FS</b>	100	0.75	3000	101.300	<b>6052 09 6</b>
<b>DRL 150 FS</b>	150	1	3000	140.600	<b>6052 15 0</b>
<b>DRL 200 FS</b>	200	1	3000	179.800	<b>6052 20 7</b>
<b>DRL 300 FS</b>	300	1	3000	258.300	<b>6052 30 4</b>
<b>DRL 400 FS</b>	400	1	3000	336.800	<b>6052 40 1</b>
<b>DRL 500 FS</b>	500	1.25	3000	518.500	<b>6052 50 9</b>
<b>DRL 550 FS</b>	550	1.25	3000	567.600	<b>6052 56 8</b>
<b>DRL 600 FS</b>	600	1.25	3000	616.700	<b>6052 60 6</b>

**ST** Steel      **FS** Strip-galvanised

Cover for cable trays and cable ladders with three pairs of turn-buckles.  
Take appropriate constructive protection measures if there are high wind speeds.





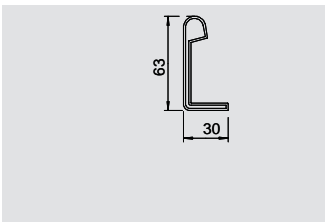


## Cable ladder LG 60 VS

Type	Width mm	Rail thickness mm	Length mm	Weight kg/100 m	Item No.
LG 620 VS 3000FS	200	1.5	3000	281.700	6208 53 8
LG 630 VS 3000FS	300	1.5	3000	306.000	6208 54 1
LG 640 VS 3000FS	400	1.5	3000	330.000	6208 54 4
LG 650 VS 3000FS	500	1.5	3000	354.300	6208 54 7
LG 660 VS 3000FS	600	1.5	3000	378.300	6208 55 0
LG 620 VS 6000FS	200	1.5	6000	273.800	6208 62 7
LG 630 VS 6000FS	300	1.5	6000	298.000	6208 63 0
LG 640 VS 6000FS	400	1.5	6000	322.200	6208 63 3
LG 650 VS 6000FS	500	1.5	6000	346.300	6208 63 6
LG 660 VS 6000FS	600	1.5	6000	370.500	6208 63 9

**ST** Steel      **FS** Strip-galvanised      /m

Cable ladder with perforated side rail of side height 60 mm with riveted C profile rungs, open in an upwards direction (VS version).  
Magnetic shield insulation without cover 10 dB, with cover 15 dB.

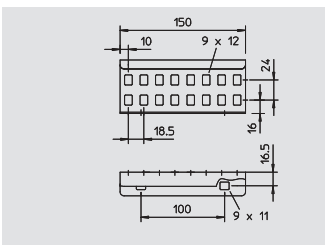


## Protective cap

Type	Colour	Pack. pair	Weight kg/100 pairs	Item No.
SKH 60 OR	Pastel orange	40	1.100	6222 53 7

**PE** Polyethylene      /pair

Protective cap to cover cable ladder ends of side height 60 mm.

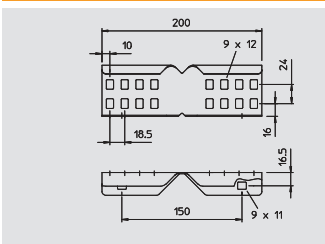
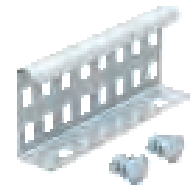


## Straight connector

Type	Side height mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LVG 60 FS	60	20	20.000	6208 84 0

**ST** Steel      **FS** Strip-galvanised      /pc.

Straight connector as external connector to connect cable ladders and fittings with a side height of 60 mm and continuous rail perforation.

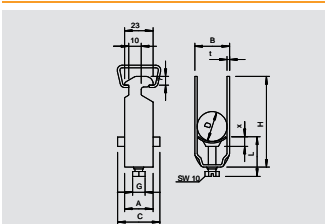


## Angle connector

Type	Side height mm	Pack. pcs	Weight kg/100 pcs.	Item No.
LWVG 60 FS	60	20	24.000	6208 89 5

**ST** Steel      **FS** Strip-galvanised      /pc.

Angle connector as external connector to join cable ladders and fittings with a side height of 60 mm and continuous rail perforation.



## Clamp clip

Type	Clamping range D mm	Dimen- sion A mm	Dimen- sion B mm	Dimen- sion C mm	Dimen- sion G mm	Dimen- sion t mm	Dimen- sion H mm	Dimen- sion L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
2056 12 FT	8-12	23	16	34	M6	1.5	40	34	100	3.540	1160 12 5
2056 16 FT	12-16	23	20	34	M6	1.5	44	34	100	3.820	1160 16 8
2056 22 FT	16-22	23	27	34	M6	1.5	50	34	100	4.508	1160 22 2
2056 28 FT	22-28	23	33	34	M6	2	58	34	100	6.240	1160 28 1
2056 34 FT	28-34	23	39	34	M8	2	58	34	100	7.680	1160 34 6
2056 40 FT	34-40	23	45	45	M8	2	72	37.5	100	8.260	1160 40 0
2056 46 FT	40-46	23	51	40	M8	2	79	44.5	100	10.900	1160 45 1
2056 52 FT	46-52	23	57	40	M8	2	79	44.5	100	11.900	1160 52 4
2056 58 FT	52-58	23	64	40	M8	2.5	93	45.5	100	14.300	1160 58 3
2056 64 FT	58-64	23	70	40	M8	2.5	99	45.5	100	15.600	1160 64 8
2056 70 FT	64-70	25	76	40	M8	2.5	106	45.5	50	18.200	1160 70 2
2056 76 FT	70-76	25	82	40	M8	2.5	114	45.5	25	20.600	1160 76 1
2056 82 FT	76-82	25	88	40	M8	2.5	121	45.5	25	22.000	1160 82 6
2056 90 FT	82-90	25	97	40	M8	3	130	57.5	25	26.200	1160 90 7
2056 100 FT	90-100	25	107	40	M8	3	140	57.5	25	27.800	1160 99 0

**ST** Steel      **FT** Hot-dip galvanised      price/100 pc.

Suitable for all C profile rails with slot width 16–17 mm.  
Hot-dip galvanised steel clip and bolt, polypropylene pressure trough, halogen-free, colour light grey RAL 7035.  
Version with welding and/or locknuts for use under difficult circumstances and for shake protection on request.





### **One suspension/two systems**

Beneficial synergies occur during planning. Fibre optic cable mounting systems can also be used for power/copper cabling and vice-versa. The range of installations can fulfil any requirements, as OBO mounting systems are available in light- to heavy-duty designs. Light ceiling suspensions can, for example, be fitted with threaded rod suspensions or clamp constructions. Heavy-duty constructions are fastened to the ceiling or wall using supports or bracket suspensions.

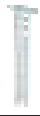




### **And much, much more....**

The following pages provide you with a brief overview of our mounting systems, matched to the installation requirements of computer centres.

Of course, all the systems listed here as well as others are available in other materials and surfaces. The main KTS (Cable support systems) catalogue contains a detailed overview of our complete product range.



## Mounting systems

	Mounting systems	US 3 suspended support US 5 suspended support Wall and support brackets	28 28 29
	Wall and support brackets		29
	Spacer clamp		29
	Threaded rod		30
	Bolt tie		30



# Mounting systems

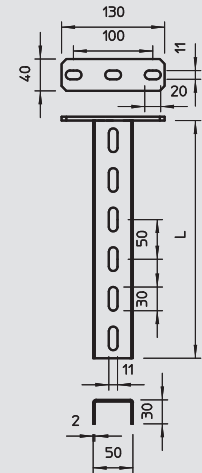


## US 3 suspended support

Type	Length mm	Material thickness mm	Tensile load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
US 3 K 20 FT	200	2	5	1	50.500	6342 35 1
US 3 K 30 FT	300	2	5	1	64.400	6342 35 3
US 3 K 40 FT	400	2	5	4	78.300	6342 35 5
US 3 K 50 FT	500	2	5	1	92.300	6342 35 7
US 3 K 60 FT	600	2	5	1	106.200	6342 35 9
US 3 K 70 FT	700	2	5	1	120.200	6342 36 2
US 3 K 80 FT	800	2	5	1	134.100	6342 36 4
US 3 K 90 FT	900	2	5	1	147.800	6342 36 6
US 3 K 100 FT	1000	2	5	1	162.000	6342 36 8
US 3 K 110 FT	1100	2	5	1	175.900	6342 37 0
US 3 K 120 FT	1200	2	5	1	189.900	6342 37 2

**ST** Steel **FT** Hot-dip galvanised /pc.

Suspended support (U profile) of dimensions 50 x 30 mm with welded head plate.

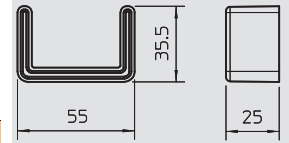


## Protective cap

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
US 3 KS OR	Pastel orange	20	1.070	6338 45 8

**PE** Polyethylene /pc.

Protective cap to cover the ends of US 3 supports.

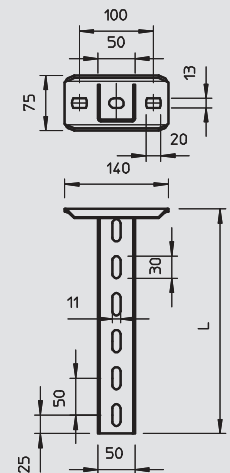


## US 5 suspended support

Type	Length mm	Material thickness mm	Tensile load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
US 5 K 20 FT	200	2.5	10	1	85.000	6341 52 7
US 5 K 30 FT	300	2.5	10	2	110.000	6341 53 5
US 5 K 40 FT	400	2.5	10	1	136.000	6341 54 3
US 5 K 50 FT	500	2.5	10	1	161.000	6341 55 1
US 5 K 60 FT	600	2.5	10	1	186.000	6341 57 8
US 5 K 70 FT	700	2.5	10	1	211.000	6341 58 6
US 5 K 80 FT	800	2.5	10	1	236.000	6341 59 4
US 5 K 90 FT	900	2.5	10	1	262.000	6341 60 8
US 5 K 100 FT	1000	2.5	10	1	287.000	6341 61 6
US 5 K 110 FT	1100	2.5	10	1	311.000	6341 62 4
US 5 K 120 FT	1200	2.5	10	1	338.000	6341 63 2

**ST** Steel **FT** Hot-dip galvanised /pc.

U support of dimensions 50 x 50 mm with welded head plate.

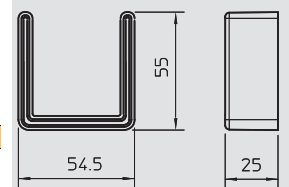


## Protective cap

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
US 5 KS OR	Pastel orange	20	1.300	6338 46 2

**PE** Polyethylene /pc.

Protective cap for end covering of US 5 supports.

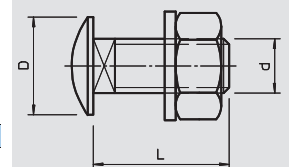


## Truss-head bolt

Type	Grade	Dimen- sion mm	Dimen- sion L mm	Dimen- sion d mm	Dimen- sion D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
FRS 10X25 F 8.8	8.8	M10 x 25	25	10	24	50	4.500	6407 56 0

**ST** Steel **F** Hot-dip galvanised price/100 pc.

Truss-head bolt with square neck. With washer and hexagonal nut.

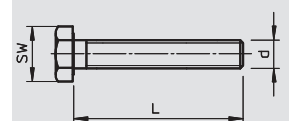


## Hexagonal bolt

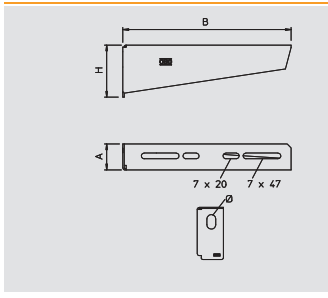
Type	Dimen- sion mm	Dimen- sion L mm	Dimen- sion d mm	SW mm	Pack. pcs	Weight kg/100 pcs.	Item No.
SKS 10X80 F	M10 x 80	80	10	17	20	7.700	6418 25 0
SKS 10X90 F	M10 x 90	90	10	17	20	8.000	6418 25 2

**ST** Steel **F** Hot-dip galvanised /pc.

Hexagonal bolt for universal fixing of structure components.





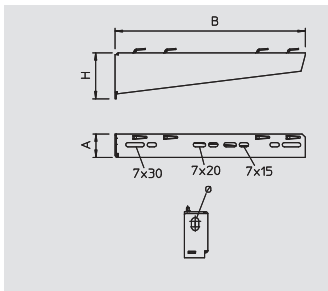


## Wall and support bracket MWA 12

Type	Width mm	Dimension H mm	Dimension A mm	Hole Ø mm	F in kN kN	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>MWA 12 21S FS</b>	210	65	32.5	11	1.2	30	24.500	<b>6424 73 2</b>
<b>MWA 12 31S FS</b>	310	75	38	11	1.2	30	57.000	<b>6424 74 0</b>
<b>MWA 12 41S FS</b>	410	83	38	11	1.2	30	68.000	<b>6424 75 9</b>

**ST** Steel **FS** Strip-galvanised /pc.

Folded light-duty wall and support bracket.

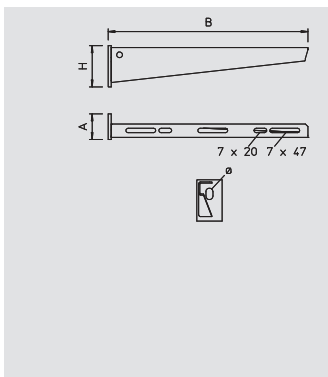


## Wall and support bracket MWAG 12

Type	Width mm	Dimension H mm	Dimension A mm	Hole Ø mm	F in kN kN	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>MWAG 12 21 FS</b>	210	65	32.5	11	1.2	30	24.400	<b>6424 60 8</b>
<b>MWAG 12 31 FS</b>	310	75	38	11	1.2	30	50.300	<b>6424 61 6</b>
<b>MWAG 12 41 FS</b>	410	83	38	11	1.2	25	68.100	<b>6424 62 4</b>

**ST** Steel **FS** Strip-galvanised /pc.

Folded light-duty wall and support bracket for screwless mesh cable tray fastening.

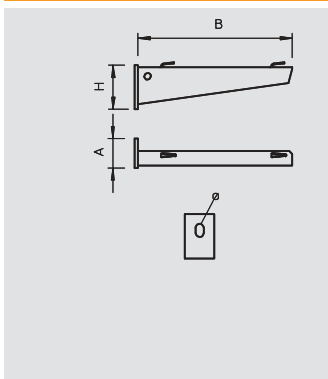


## Wall and support bracket AW 15

Type	Width mm	Dimension H mm	Dimension A mm	Hole Ø mm	F in kN kN	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>AW 15 16 FT</b>	160	55	40	11	1.5	30	21.000	<b>6420 66 4</b>
<b>AW 15 21 FT</b>	210	60	40	11	1.5	30	26.000	<b>6420 68 0</b>
<b>AW 15 31 FT</b>	310	65	40	11	1.5	30	32.500	<b>6420 71 0</b>
<b>AW 15 41 FT</b>	410	70	40	11	1.5	30	55.000	<b>6420 74 5</b>
<b>AW 15 51 FT</b>	510	75	40	11	1.5	20	72.000	<b>6420 78 8</b>
<b>AW 15 56 FT</b>	560	80	40	11	1.5	20	77.000	<b>6420 79 6</b>
<b>AW 15 61 FT</b>	610	80	40	11	1.5	20	85.000	<b>6420 82 6</b>

**ST** Steel **FT** Hot-dip galvanised /pc.

Light-duty wall and support bracket with welded head plate.

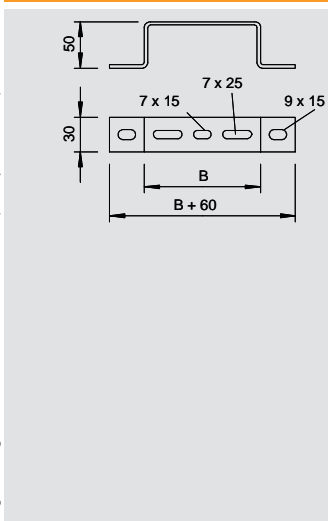


## Wall and support bracket AWG 15

Type	Width mm	Dimension H mm	Dimension A mm	Hole Ø mm	F in kN kN	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>AW G 15 16 FT</b>	160	55	40	11	1.5	30	20.000	<b>6420 60 7</b>
<b>AW G 15 21 FT</b>	210	60	40	11	1.5	30	26.000	<b>6420 60 8</b>
<b>AW G 15 31 FT</b>	310	65	40	11	1.5	30	35.000	<b>6420 61 0</b>
<b>AW G 15 41 FT</b>	410	70	40	11	1.5	30	56.000	<b>6420 61 2</b>
<b>AW G 15 51 FT</b>	510	75	40	11	1.5	20	69.000	<b>6420 61 4</b>
<b>AW G 15 61 FT</b>	610	80	40	11	1.5	20	84.000	<b>6420 61 6</b>

**ST** Steel **FT** Hot-dip galvanised /pc.

Light-duty wall and support bracket with welded head plate for screwless mesh cable tray fastening.



## Spacer clamp

Type	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>DBL 50 150 FS</b>	150	20	19.300	<b>6015 51 4</b>
<b>DBL 50 200 FS</b>	200	20	22.800	<b>6015 52 2</b>
<b>DBL 50 300 FS</b>	300	20	38.000	<b>6015 53 0</b>
<b>DBL 50 400 FS</b>	400	20	47.400	<b>6015 54 9</b>
<b>DBL 50 500 FS</b>	500	25	59.100	<b>6015 55 2</b>
<b>DBL 50 600 FS</b>	600	20	69.000	<b>6015 55 5</b>
<b>DBL 50 100 FT</b>	100	20	16.000	<b>6015 56 5</b>
<b>DBL 50 150 FT</b>	150	20	19.500	<b>6015 57 3</b>
<b>DBL 50 200 FT</b>	200	20	23.000	<b>6015 58 1</b>
<b>DBL 50 300 FT</b>	300	20	38.250	<b>6015 60 3</b>
<b>DBL 50 400 FT</b>	400	20	47.700	<b>6015 61 1</b>
<b>DBL 50 500 FT</b>	500	25	62.600	<b>6015 61 4</b>
<b>DBL 50 600 FT</b>	600	20	73.100	<b>6015 61 7</b>

**ST** Steel **FS** Strip-galvanised **FT** Hot-dip galvanised /pc.

Stand-off bracket for cable trays and mesh cable trays.



# Mounting systems

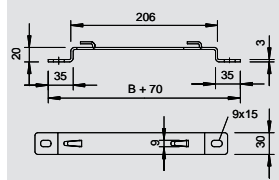


## Spacer clamp

Type	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
DBLG 20 050 FS	50	20	10.300	6015 64 6
DBLG 20 100 FS	100	20	13.800	6015 65 4
DBLG 20 150 FS	150	20	17.400	6015 65 8
DBLG 20 200 FS	200	20	20.900	6015 66 2
DBLG 20 300 FS	300	20	37.300	6015 67 0
DBLG 20 400 FS	400	20	46.700	6015 68 9
DBLG 20 500 FS	500	25	56.900	6015 69 3
DBLG 20 600 FS	600	25	66.400	6015 69 7
DBLG 20 050 FT	50	20	10.700	6015 64 8
DBLG 20 100 FT	100	20	14.300	6015 65 6
DBLG 20 150 FT	150	20	18.100	6015 66 0
DBLG 20 200 FT	200	20	21.700	6015 66 4
DBLG 20 300 FT	300	20	38.800	6015 67 2
DBLG 20 400 FT	400	20	48.600	6015 69 1
DBLG 20 500 FT	500	25	59.200	6015 69 5
DBLG 20 600 FT	600	25	69.100	6015 69 9

ST Steel FS Strip-galvanised FT Hot-dip galvanised /pc.

Stand-off bracket for stand-off of mesh cable trays on the floor or on the wall.



## Threaded rod

Type	Thread	Dimension d mm	Dimension L mm	Breaking load kN	Pack. pcs	Weight kg/100 pcs.	Item No.
2078 M8 1M G	M8	8	1000	14.6	50	30.000	3141 12 8
2078 M10 1M G	M10	10	1000	23.2	25	49.000	3141 20 9
2078 M12 1M G	M12	12	1000	33.7	20	100.000	3141 30 6
2078 M8 2M G	M8	8	2000	14.6	25	60.000	3141 13 6
2078 M10 2M G	M10	10	2000	23.2	25	98.000	3141 14 0
2078 M12 2M G	M12	12	2000	33.7	20	140.000	3141 14 4

ST Steel G Electrogalvanised price/100 pc.

Threaded rod to DIN 976.

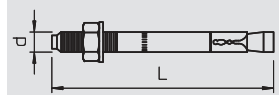


## Bolt tie

Type	Thread	Dimension L mm	Dimension d mm	Clamping range mm	Perm. load range, tension zone kN	Pack. pcs	Weight kg/100 pcs.	Item No.
FAZ II 8 10 GS	M8	77	8	10	2.4	50	3.720	3498 50 6
FAZ II 10 10 GS	M10	95	10	10	4.3	50	7.680	3498 54 9

ST Steel G Electrogalvanised price/100 pc.

Bolt tie for fastening high loads. Matches OBO mounting systems and wall support brackets and supports.

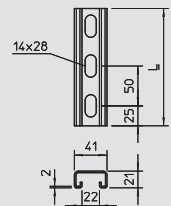


## Mounting rail, MS 21

Type	Version	Interface	Dimension b x h mm	Material thickness mm	Length mm	Pack. m	Weight kg/100 m	Item No.
MS 21 L 2M FS	Perforated	FS	41x21	2	2000	1	201.488	1122 91 8
MS 21 L 3M FS	Perforated	FS	41x21	2	3000	1	201.488	1122 92 0
MS 21 L 6M FS	Perforated	FS	41x21	2	6000	1	201.488	1122 92 2

ST Steel FS Strip-galvanised price/100 m

Heavyweight profile/mounting rail with continuous perforation in base, slot width 22 mm.



## Mounting rail, MS 41

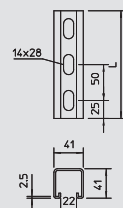
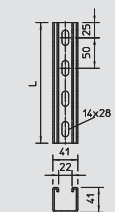
Type	Version	Interface	Dimension b x h mm	Material thickness mm	Length mm	Pack. m	Weight kg/100 m	Item No.
MS 41 L 1M 2 FS	Perforated	FS	41x41	2	1000	1	201.488	1122 97 0
MS 41 L 3M 2 FS	Perforated	FS	41x41	2	3000	1	201.488	1122 97 2
MS 41 L 6M 2 FS	Perforated	FS	41x41	2	6000	1	201.488	1122 97 4

ST Steel FS Strip-galvanised price/100 m

Heavyweight profile/mounting rail with continuous perforation in base, slot width 22 mm.

Type	Version	Interface	Dimension b x h mm	Material thickness mm	Length mm	Pack. m	Weight kg/100 m	Item No.
MS 41 L 1M FS	Perforated	FS	41x41	2.5	1000	1	244.768	1122 90 8
MS 41 L 3M FS	Perforated	FS	41x41	2.5	3000	1	244.768	1122 91 0
MS 41 L 6M FS	Perforated	FS	41x41	2.5	6000	1	244.768	1122 91 2

ST Steel FS Strip-galvanised price/100 m

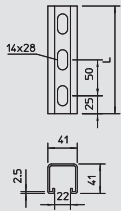
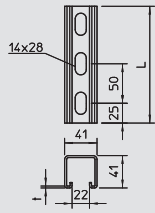


Mounting systems

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## Mounting rail, MS 41



Type	Version	Interface	Dimension b x h mm	Material thickness mm	Length mm	Pack. m	Weight kg/100 m	Item No.
<b>MS 41 LS 1M 2 FS</b>	Perforated	FS	41x41	2	1000	1	183.888	<b>1123 00 8</b>
<b>MS 41 LS 3M 2 FS</b>	Perforated	FS	41x41	2	3000	1	183.888	<b>1123 01 0</b>
<b>MS 41 LS 6M 2 FS</b>	Perforated	FS	41x41	2	6000	1	183.888	<b>1123 01 2</b>

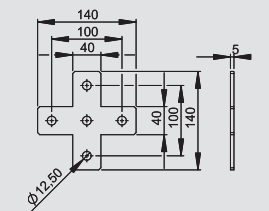
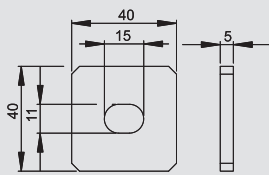
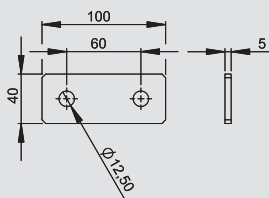
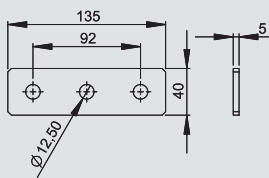
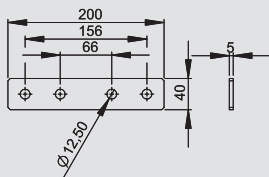
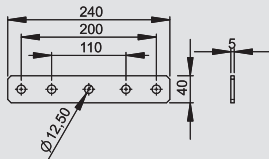
**ST** Steel **FS** Strip-galvanised price/100 m  
Heavyweight profile/mounting rail with continuous, three-sided perforation, slot width 22 mm.

Type	Version	Interface	Dimension b x h mm	Material thickness mm	Length mm	Pack. m	Weight kg/100 m	Item No.
<b>MS 41 LS 1M FS</b>	Perforated	FS	41x41	2.5	1000	1	222.770	<b>1122 48 1</b>
<b>MS 41 LS 3M FS</b>	Perforated	FS	41x41	2.5	3000	1	222.770	<b>1122 91 4</b>
<b>MS 41 LS 6M FS</b>	Perforated	FS	41x41	2.5	6000	1	222.770	<b>1122 91 6</b>

**ST** Steel **FS** Strip-galvanised price/100 m



## Rail mounting system, MS 41



Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS 5 G</b>	With continuous perforation 12.5 mm	10	10	38.810	<b>1124 61 1</b>

**ST** Steel **G** Electrogalvanised /pc.  
Connection plate with five holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS 4 G</b>	With continuous perforation 12.5 mm	10	10	32.340	<b>1124 60 9</b>

**ST** Steel **G** Electrogalvanised /pc.  
Connection plate with four holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS 3 G</b>	With continuous perforation 12.5 mm	10	10	21.830	<b>1124 60 7</b>

**ST** Steel **G** Electrogalvanised /pc.  
Connection plate with three holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS 2 G</b>	With continuous perforation 12.5 mm	10	10	16.170	<b>1124 60 5</b>

**ST** Steel **G** Electrogalvanised /pc.  
Connection plate with two holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS 1 G</b>	With 15 x 11 mm slot	10	10	6.470	<b>1124 60 3</b>

**ST** Steel **G** Electrogalvanised /pc.  
Connection plate with lengthwise slot, for example for mounting threaded rods to profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS X G</b>	—	10	10	39.000	<b>1124 61 7</b>

**ST** Steel **G** Electrogalvanised /pc.  
Connection plate with five holes for cross connection of profile rails 41 x 41 mm and 41 x 21 mm.



# Mounting systems

## Rail mounting system, MS 41

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS L G</b>	—	10	10	20.000	<b>1124 61 3</b>

**ST** Steel **G** Electrogalvanised /pc.

Connection plate with three holes for angled connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS T G</b>	—	10	10	40.000	<b>1124 61 5</b>

**ST** Steel **G** Electrogalvanised /pc.

Connection plate with four holes for T-shaped connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GVMS G</b>	With continuous perforation 12.5 mm	10	10	38.000	<b>1124 60 1</b>

**ST** Steel **G** Electrogalvanised /pc.

Connector gripping from outside with four holes for straight connection of profile rails 41 x 41 mm and 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS 4141 G</b>	With continuous perforation 12.5 mm	10	10	29.830	<b>1124 63 3</b>

**ST** Steel **G** Electrogalvanised /pc.

Fastening clip with 3 holes for cross-wise connection of profile rails 41 x 41 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS 4121 G</b>	With continuous perforation 12.5 mm	10	10	23.550	<b>1124 63 1</b>

**ST** Steel **G** Electrogalvanised /pc.

Fastening clip with 3 holes for cross-wise connection of profile rails 41 x 21 mm.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS L 45 G</b>	45° bracket	10	10	21.200	<b>1124 62 7</b>

**ST** Steel **G** Electrogalvanised /pc.

Installation profile with three holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 45°.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS L 45 G</b>	45° bracket	10	10	31.400	<b>1124 62 9</b>

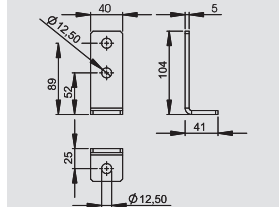
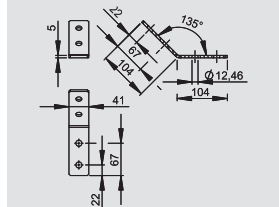
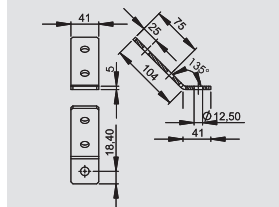
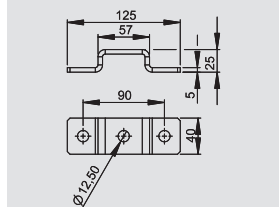
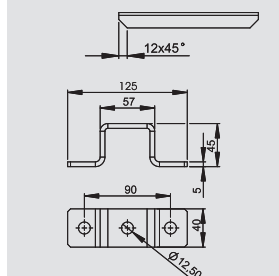
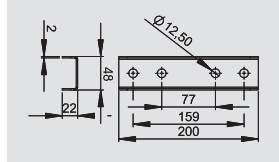
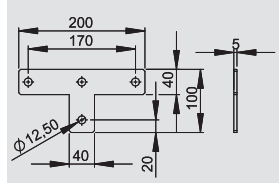
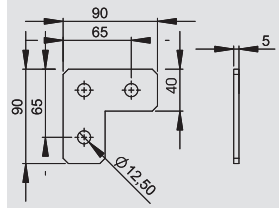
**ST** Steel **G** Electrogalvanised /pc.

Installation profile with four holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 45°.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS L 90 G</b>	90° bracket	10	10	21.830	<b>1124 62 1</b>

**ST** Steel **G** Electrogalvanised /pc.

Installation profile with three holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 90°.

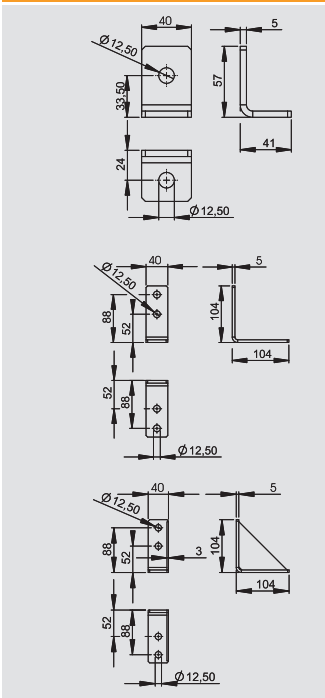


Mounting systems



12 LDC Lösungskatalog Datencenter / en / 06/04/2010 (LLExpport\_01024)





## Rail mounting system, MS 41

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS L 90 G</b>	90° bracket	10	10	16.170	<b>1124 61 9</b>

**ST** Steel **G** Electrogalvanised /pc.

Installation profile with two holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 90°.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS L 90 G</b>	90° bracket	10	10	24.000	<b>1124 62 3</b>

**ST** Steel **G** Electrogalvanised /pc.

Installation profile with two holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 90°.

Type	Version	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>GMS L 90 G</b>	90° bracket	10	10	42.000	<b>1124 62 5</b>

**ST** Steel **G** Electrogalvanised /pc.

Reinforced mounting bracket with four holes to connect profile rails 41 x 41 mm and 41 x 21 mm at an angle of 90°.





### **Perfect fire protection for perfect data protection**

OBO can offer a complete range of professional products for all application areas of fire protection systems in building installation. Tested cable insulation systems have proved the required effect in a fire test. The approvals are based on fire tests, which are carried out by official materials testing offices on the basis of DIN 4102 Part 9.

Tested function maintenance systems guarantee, in the event of fire, to maintain the power supply.






In addition, we can also offer the knowledgeable advice of an experienced, competent system manufacturer.

### **Additional BSS systems and advice**

On the following pages, you will find an extract from our main catalogue, which will inform you about the various different insulation systems. You can find additional detailed explanations and planning aids in our BSS catalogue (Fire protection systems).



## Fire protection systems

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# Insulation, KBK bag installation



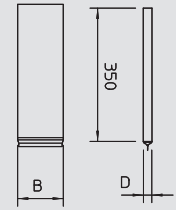
## KBK fire protection cushion

Type	Dimension mm	Dimension B mm	Dimension D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>KBK-1</b>	350 x 120 x 10	120	10	20	18.000	<b>7202 70 9</b>
<b>KBK-2</b>	350 x 170 x 23	170	23	20	33.000	<b>7202 72 5</b>
<b>KBK-3</b>	350 x 170 x 40	170	40	10	63.000	<b>7202 74 1</b>

/pc.

Cable fire protection cushions, fire resistance class S90, DIBt approvals Z-19.15-1115 and 1119.

The cushions consist of a close-knit, dense and mechanically solid glass fabric with a special filling. The shell and the filling are free of asbestos and mineral fibres and are also weatherproof and waterproof.

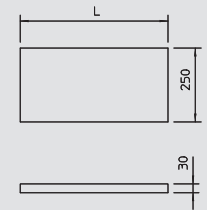


## KBK-FP fibre silicate plate

Type	Dimension mm	Dimension L mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>KBK-FP1</b>	500 x 250 x 30	500	1	110.500	<b>7202 90 3</b>
<b>KBK-FP2</b>	1,000 x 250 x 30	1000	1	211.000	<b>7202 91 1</b>

/pc.

Fibre silicate plate as support for KBK cushion insulation. Materials class A1 – non-combustible



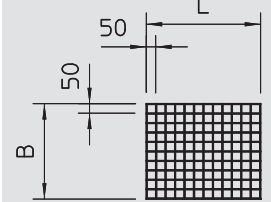
## KBK-SG steel wire grid

Type	Dimension mm	Dimension L mm	Dimension B mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>KBK-SG1</b>	500 x 600	600	500	1	135.000	<b>7202 96 2</b>
<b>KBK-SG2</b>	600 x 1,000	1000	600	1	270.000	<b>7202 97 0</b>

**ST** Steel      **FT** Hot-dip galvanised

/pc.

Steel wire grid for KBK cushion insulation; as support and protection grid for ceiling insulation.

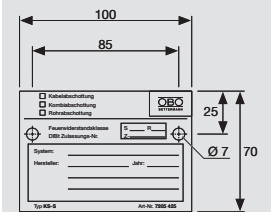


## Identification plate

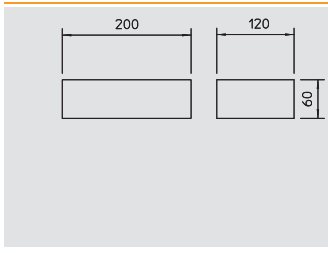
Type	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>KS-S</b>	1	2.400	<b>7205 42 5</b>

/pc.

Universal identification plate to be written on for all OBO insulation. For approved identification, including two push-fit anchors.



# Insulation, FBA foam series



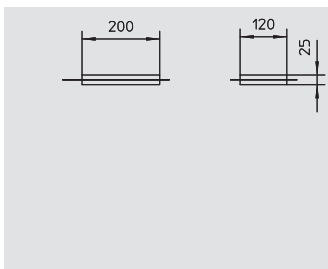
## FBA-B200 foam block

Type	Dimension mm	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
<b>FBA-B200</b>	200 x 120 x 60	20	40.000	<b>7202 50 6</b>



/pc.

Foam block for combination insulation, fire resistance class S90, DIBt approval Z-19.15-1849. Protect the blocks against water in order to guarantee safe foaming in case of fire.



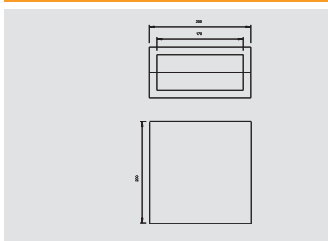
## FBA-BV200 vacuum block

Type	Dimension mm	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
<b>FBA-BV200</b>	200 x 120 x 25	10	40.000	<b>7202 51 6</b>



/pc.

Vacuum block for combination insulation. On cutting the film, the vacuum block expands to its original size. Can be used with or without film. Protect the blocks against water in order to guarantee safe foaming in case of fire.



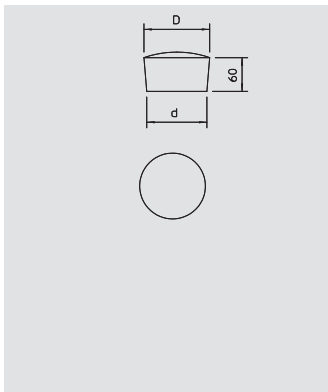
## FBA-F box insulation

Type	Dimension mm	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
<b>FBA-F</b>	200 x 200 x 100	1	122.000	<b>7202 66 0</b>



/pc.

Box with inlays, fire resistance classes S30 and S90, DIBt approval Z-19.15-1557. Scope of delivery: 1 two-part frame, 2 internal pieces



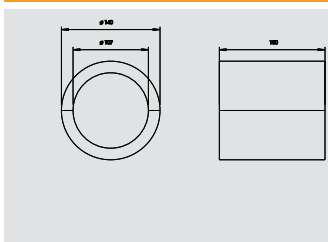
## FBA-S plug

Type	For opening Ø mm	Dimension D mm	Dimension d mm	Pack.	Weight	Item No.
				pcs	kg/100 pcs.	
<b>FBA-S65</b>	65	75	65	20	8.000	<b>7202 55 1</b>
<b>FBA-S78</b>	78	87	78	20	11.000	<b>7202 55 5</b>
<b>FBA-S107</b>	107	117	107	20	19.000	<b>7202 55 9</b>
<b>FBA-S122</b>	122	132	122	20	23.100	<b>7202 56 3</b>
<b>FBA-S134</b>	134	144	134	20	28.600	<b>7202 56 7</b>
<b>FBA-S165</b>	165	175	165	20	43.200	<b>7202 57 1</b>
<b>FBA-S200</b>	200	210	200	20	67.000	<b>7202 57 5</b>
<b>FBA-S250</b>	250	260	250	10	86.500	<b>7202 57 9</b>



/pc.

Plug, fire resistance classes S30 and S90, DIBt approval Z-19.15-1558. Protect the FBA plugs against water in order to guarantee safe foaming in case of fire.



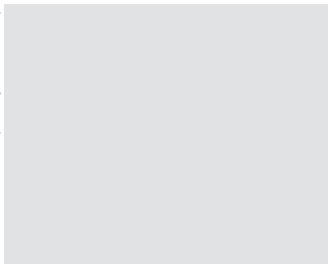
## FBA-SR pipe shell

Type	For opening Ø mm	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
<b>FBA-SR</b>	140	4	73.000	<b>7202 58 6</b>



/pc.

Pipe shell, fire resistance classes S30 and S90, DIBt approval Z-19.15-1558. Scope of delivery: 1 two-part pipe shell Ø 140 mm, 2 plugs FBA-S107



## FBA-D drilling-crown insulation

Type	Dimension mm	Dimension L mm	Pack.	Weight	Item No.
			pcs	kg/100 pcs.	
<b>FBA-D100</b>	100 x 78	100	4	15.500	<b>7202 62 4</b>
<b>FBA-D150</b>	150 x 78	150	8	19.200	<b>7202 62 8</b>



/pc.

Drill crown insulation, fire resistance classes S30 and S90, DIBt approval Z-19.15-1559. Scope of delivery: 1 pipe shell Ø 78 mm, 2 plugs Ø 50 mm

Fire protection systems



# Insulation, FBA foam series



## FBA-SP filler in a cartridge

Type	Dimension	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
<b>FBA-SP</b>	310ml	1	46.000	<b>7202 32 2</b>

/pc.

Fire protection filler in a cartridge.  
 Usable as small insulation in a FBA-SP system, fire resistance class S90, DIBt approval Z-19.15-1851, and as join closing compound in all insulation of the FBA series.  
 In dry, frost-free rooms, the fire protection compound can be stored at temperatures of +5 °C to +30 °C for up to 12 months.

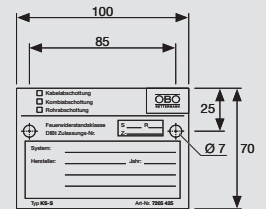


## Identification plate

Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
<b>KS-S</b>	1	2.400	<b>7205 42 5</b>

/pc.

Universal identification plate to be written on for all OBO insulation. For approved identification, including two push-fit anchors.



# Insulation, Pyrosit fire protection foam

## Pyrosit fire protection case

Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
<b>FBS90-K</b>	1	340.000	<b>7208 22 9</b>



/pc.

The Pyrosit FBS90 fire protection kit contains a complete set of all the required products to install two-component foam insulation. The complete set consists of: 2 x FBS90-S, 1 x FBS90-P, 1 x FBS90-M and 1 x KS-S.

## Pyrosit FBS90 fire protection foam

Type	Dimension	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
<b>FBS90-S</b>	310ml	1	57.000	<b>7208 22 1</b>



/pc.

PYROSIT 2-component fire protection foam in a cartridge, fire resistance class S90. DIBt approval Z-19.15-1894. Including mixing tubes. In dry, frost-free rooms, the fire protection foam can be stored for up to six months at a temperature of +5 °C to +30 °C. Always process with cartridge pistol FBS90-P2!

Note: The 2-component cartridge pistol, type FP520, can still be used.

## Pyrosit cartridge pistol

Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
<b>FBS90-P2</b>	2	117.000	<b>7208 22 5</b>



/pc.

High-quality 2-component cartridge pistol for use with the PYROSIT FBS90 fire protection foam. The cartridge pistol can also be used with normal 300 ml cartridges.

## Pyrosit mixer pipe set

Type	Pack.	Weight	Item No.
	PU	kg/100 PUs	
<b>FBS90-M</b>	1	10.000	<b>7208 23 3</b>



/VPE

10 mixing tubes and 5 extension tubes in the set for Pyrosit FBS90 fire protection foam.

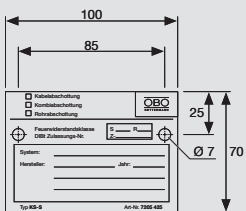
## Identification plate

Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
<b>KS-S</b>	1	2.400	<b>7205 42 5</b>



/pc.

Universal identification plate to be written on for all OBO insulation. For approved identification, including two push-fit anchors.



# Function maintenance, individual routing



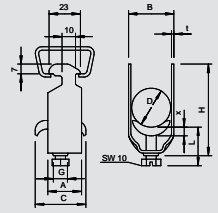
## Clamp clip, single, metal pressure trough

Type	Clamping range D	Dimension A	Dimension B	Dimension C	Dimension G	Dimension t	Dimension H	Dimension L	Pack.	Weight	Item No.
	mm	mm	mm	mm	mm	mm	mm	mm	pcs	kg/100 pcs.	
2056 M 12 FT	8-12	23	16	30	M6	1.5	40	32.5	100	3.200	1156 00 4
2056 M 16 FT	12-16	23	20	30	M6	1.5	44	32.5	100	3.500	1156 01 2
2056 M 22 FT	16-22	23	27	30	M6	1.5	50	46.5	100	4.400	1156 02 0
2056 M 28 FT	22-28	23	33	30	M6	2	58	46.5	100	6.100	1156 03 9
2056 M 34 FT	28-34	23	39	35	M8	2	66	44	100	7.700	1156 04 7
2056 M 40 FT	34-40	23	45	35	M8	2	72	44	100	8.600	1156 05 5
2056 M 46 FT	40-46	23	51	35	M8	2	79	44	100	9.600	1156 06 3
2056 M 52 FT	46-52	23	57	35	M8	2	86	44	100	10.400	1156 07 1
2056 M 58 FT	52-58	23	64	35	M8	2.5	93	44	100	13.100	1156 09 8
2056 M 64 FT	58-64	23	70	35	M8	2.5	99	56	100	14.500	1156 10 1
2056 M 70 FT	64-70	25	76	35	M8	2.5	106	56	50	16.100	1156 12 8
2056 M 76 FT	70-76	25	82	40	M8	2.5	114	56	25	18.300	1156 13 6
2056 M 82 FT	76-82	25	88	40	M8	2.5	121	56	25	19.100	1156 14 4
2056 M 90 FT	82-90	25	97	40	M8	3	130	56	25	23.300	1156 15 2
2056 M 100 FT	90-100	25	107	40	M8	3	140	56	25	25.400	1156 16 0

**ST** Steel **FT** Hot-dip galvanised price/100 pc.

Suitable for all C profile rails with slot width 16–17 mm.  
Clip, bolt and pressure trough made of hot-dip galvanised steel.

Version with welding and/or locknuts for use under difficult circumstances and for shake protection on request.

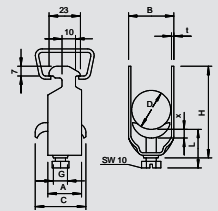


## Clamp clip, double, metal pressure trough

Type	Clamping range D	Dimension A	Dimension B	Dimension C	Dimension G	Dimension t	Dimension H	Dimension L	Pack.	Weight	Item No.
	mm	mm	mm	mm	mm	mm	mm	mm	pcs	kg/100 pcs.	
2056 M2 12 FT	8-12	23	16	34	M6	1.5	52	34	50	3.980	1156 17 9
2056 M2 16 FT	12-16	23	20	34	M6	1.5	61	34	50	4.750	1156 18 7
2056 M2 22 FT	16-22	23	27	34	M6	1.5	73	47	50	6.900	1156 19 5
2056 M2 28 FT	22-28	23	33	34	M6	2	87	47	50	7.800	1156 20 9

**ST** Steel **FT** Hot-dip galvanised price/100 pc.

Suitable for all C profile rails with slot width 16–17 mm.  
Clip, bolt and pressure trough made of hot-dip galvanised steel.

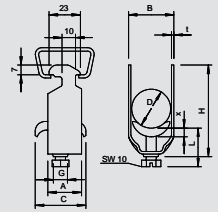


## Clamp clip, triple, metal pressure trough

Type	Clamping range D	Dimension A	Dimension B	Dimension C	Dimension G	Dimension t	Dimension H	Dimension L	Pack.	Weight	Item No.
	mm	mm	mm	mm	mm	mm	mm	mm	pcs	kg/100 pcs.	
2056 M3 12 FT	8-12	23	16	34	M6	1.5	70	47	50	4.050	1156 24 1
2056 M3 16 FT	12-16	23	20	34	M6	1.5	82	47	50	5.800	1156 26 8
2056 M3 22 FT	16-22	23	27	34	M6	1.5	101	47	50	6.500	1156 27 6
2056 M3 28 FT	22-28	23	33	34	M6	2	121	47	50	9.500	1156 28 4

**ST** Steel **FT** Hot-dip galvanised price/100 pc.

Suitable for all C profile rails with slot width 16–17 mm.  
Clip, bolt and pressure trough made of hot-dip galvanised steel.

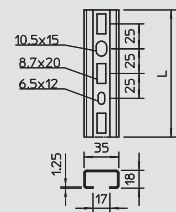


## Profile rail, slot 17 mm

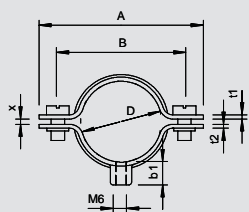
Type	Version	Interface	Dimension b x h	Material thickness	Length	Pack.	Weight	Item No.
			mm	mm	mm	pcs	kg/100 pcs.	
1268 L 200 FS	Perforated	FS	35 x 18	1.25	200	25	14.300	1104 26 8
1268 L 300 FS	Perforated	FS	35 x 18	1.25	300	25	21.450	1104 28 4
1268 L 400 FS	Perforated	FS	35 x 18	1.25	400	10	28.550	1104 29 2
1268 L 500 FS	Perforated	FS	35 x 18	1.25	500	10	35.750	1104 30 6
1268 L 2M FS	Perforated	FS	35 x 18	1.25	2000	20	71.500	1104 50 0

**ST** Steel **FS** Strip-galvanised price/100 m price/100 pc.

Light-duty profile rail, perforated, slot width 17 mm.



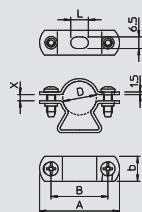




## Cable and pipe spacer clip 732

Type	Clamping range D mm	Size	Bolt	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
732 6 GTP	5-6	-	M5 x 10	1200	100	1.160	1360 05 1
732 8 GTP	7-8	-	M5 x 10	1200	100	1.310	1360 08 6
732 10 GTP	9-10	-	M5 x 12	1000	100	1.360	1360 10 8
732 12 GTP	10.5-12	M12	M5 x 12	1000	100	1.460	1360 12 4
732 14 GTP	12.5-14	PG7	M5 x 12	1000	100	1.480	1360 14 0
732 15 GTP	13.5-15	PG9	M5 x 12	1000	100	1.530	1360 15 9
732 16 GTP	14.5-16	M16	M5 x 12	1000	100	1.590	1360 16 7
732 18 GTP	16.5-18	PG11	M5 x 12	1000	100	1.620	1360 18 3
732 20 GTP	18.5-20	M20	M5 x 12	600	50	1.730	1360 20 5
732 22 GTP	20-22	PG13,5	M5 x 12	500	50	1.780	1360 22 1
732 24 GTP	22-24	PG16	M5 x 12	500	50	1.840	1360 24 8
732 26 GTP	24-26	M25	M5 x 12	500	50	1.920	1360 26 4
732 28 GTP	26-28	PG21	M5 x 12	500	50	2.840	1360 28 0
732 30 GTP	28-30	PG21	M5 x 12	400	50	3.040	1360 30 2
732 33 GTP	31-33	M32	M5 x 12	250	25	3.120	1360 33 7
732 35 GTP	33-35	-	M5 x 12	250	25	3.280	1360 35 3
732 38 GTP	36-38	PG29	M5 x 12	250	25	3.490	1360 38 8
732 40 GTP	38-40	M40	M5 x 12	250	25	3.600	1360 39 6
732 42 GTP	40-42	M40	M5 x 12	250	25	3.840	1360 42 6
732 45 GTP	43-45	-	M5 x 12	250	25	3.990	1360 45 0
732 48 GTP	46-48	PG36	M5 x 12	250	25	4.040	1360 48 5
732 50 GTP	48-50	M50	M5 x 14	200	25	4.160	1360 50 7
732 60 GTP	58-60	PG48	M5 x 14	200	25	4.960	1360 60 4
732 63 GTP	61-63	M63	M5 x 14	200	25	5.000	1360 63 9

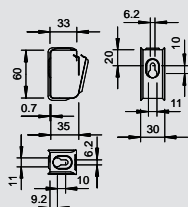
**ST** Steel **GTP** Electrogalvanised, transparently passivated price/100 pc.  
With M6 thread.



## Cable and pipe spacer clip 733

Type	Clamping range D mm	Hole size mm	Material thickness mm	Size	Bolt	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
733 21 G	19-21	6,5 x 10	1.5	M20	M5 x 14	500	50	2.730	1361 20 1
733 23 G	21-23	6,5 x 10	1.5	Pg16	M5 x 14	500	50	2.870	1361 23 6
733 29 G	24-29	6,5 x 10	1.5	M25	M5 x 18	450	50	3.480	1361 29 5
733 38 G	30-38	6,5 x 10	1.5	M32	M5 x 18	250	25	4.040	1361 38 4
733 48 G	39-48	6,5 x 10	1.5	M40	M5 x 18	300	25	4.810	1361 48 1
733 54 G	48-54	6,5 x 14	1.5	M50	M5 x 18	300	25	5.800	1361 51 1
733 61 G	53-61	6,5 x 14	1.5	Pg48	M5 x 18	240	20	6.370	1361 61 9
733 63 G	63	8 x 18	2	M63	M5 x 18	160	20	6.940	1361 63 5

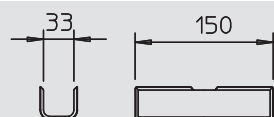
**ST** Steel **G** Electrogalvanised price/100 pc.  
Steel screw material.  
\*Size M16 are not suitable for nail guns.  
\* Sizes M16 to PG16 not suitable for bolt-firing tool.



## Collecting clamp GRIP "M" 15

Type	No. of conductors NYM 3 x 1.5	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
2031 M 15 FS	15	50	50	3.700	2207 02 8

**ST** Steel **FS** Strip-galvanised price/100 pc.  
Metal collecting clamp for high mechanical stability, even in case of fire. Halogen-free, fire load-free. Suitable for secure mounting above fire protection ceilings. Also approved as a cable-specific variant for electrical function maintenance to DIN 4102 Part 12. For wall/ceiling mounting: Lock can be opened without tools. Type 2031 M 70 FS incl. fire protection bolt tie MMS 6x50. Detailed information on the approved routing variants can be found in the appropriate testing documentation.



## Long trough for collecting clamp GRIP "M" 15

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
2031 LW15	25	8.200	2207 18 4

**ST** Steel **FS** Strip-galvanised price/100 pc.  
Long trough for collecting clamp type 2031/M15, for function maintenance as cable-specific mounting variant.



# Function maintenance, individual routing

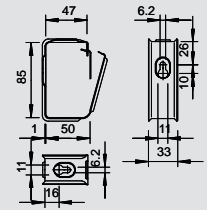


## Collecting clamp GRIP "M" 30

Type	No. of conductors NYM 3 x 1.5	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>2031 M 30 FS</b>	30	25	25	6.200	<b>2207 03 6</b>

**ST** Steel **FS** Strip-galvanised price/100 pc.

Metal collecting clamp for high mechanical stability, even in case of fire. Halogen-free, fire load-free. Suitable for secure mounting above fire protection ceilings. Also approved as a cable-specific variant for electrical function maintenance to DIN 4102 Part 12. For wall/ceiling mounting: Lock can be opened without tools. Type 2031 M 70 FS incl. fire protection bolt tie MMS 6x50. Detailed information on the approved routing variants can be found in the appropriate testing documentation.



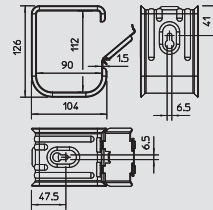
## Collecting clamp GRIP "M" 70

Type	No. of conductors NYM 3 x 1.5	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>2031 M 70 FS</b>	70	10	10	34.500	<b>2207 06 0</b>

**ST** Steel **FS** Strip-galvanised price/100 pc.

Metal collecting clamp for high mechanical stability, even in case of fire. Halogen-free, fire load-free. Suitable for secure mounting above fire protection ceilings. Also approved as a cable-specific variant for electrical function maintenance to DIN 4102 Part 12. For wall/ceiling mounting: Lock can be opened without tools. Type 2031 M 70 FS incl. fire protection bolt tie MMS 6x50. Detailed information on the approved routing variants can be found in the appropriate testing documentation.

Including fire protection bolt tie MMS 6 type MMS 6 x 50

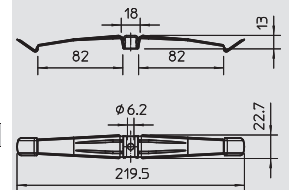


## Metal pressure clip, for 16 cables

Type	No. of conductors NYM 3 x 1.5	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>2033 M</b>	16	25	25	2.310	<b>2204 00 0</b>

**V2A** Stainless steel 1.4310 price/100 pc.

Metal pressure clip for space-saving mounting with high mechanical stability, even in case of fire. Halogen-free, fire load-free. Also suitable for secure mounting above fire protection ceilings. Tested and approved as a cable-specific variant for electrical function maintenance to DIN 4102 Part 12. For ceiling mounting. Clamping height 10 mm – extendable to 13 mm with spacer. Fastening hole Ø 6 mm. Detailed information on the approved routing variants can be found in the appropriate testing documentation.

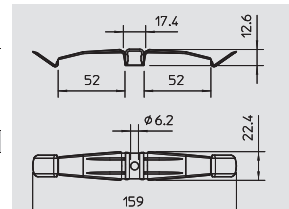


## Metal pressure clip, for 10 cables

Type	No. of conductors NYM 3 x 1.5	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>2034 M</b>	10	50	50	1.860	<b>2204 01 0</b>

**V2A** Stainless steel 1.4310 price/100 pc.

Metal pressure clip for space-saving mounting with high mechanical stability, even in case of fire. Halogen-free, fire load-free. Also suitable for secure mounting above fire protection ceilings. Tested and approved as a cable-specific variant for electrical function maintenance to DIN 4102 Part 12. For ceiling mounting. Clamping height 10 mm – extendable to 13 mm with spacer. Fastening hole Ø 6 mm. Detailed information on the approved routing variants can be found in the appropriate testing documentation.

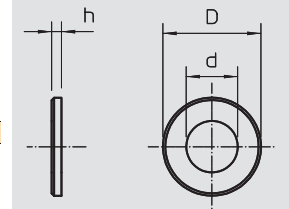


## Spacer for pressure clips

Type	Dimension D mm	Dimension d mm	Dimension h mm	Box quantity pcs	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>2033 D 15x3 G</b>	15	6.4	3	3000	50	0.340	<b>2205 09 7</b>

**ST** Steel **G** Electrogalvanised price/100 pc.

To increase the clamping height of pressure clips from 10 to 13 mm for large cable cross-sections.

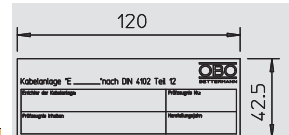


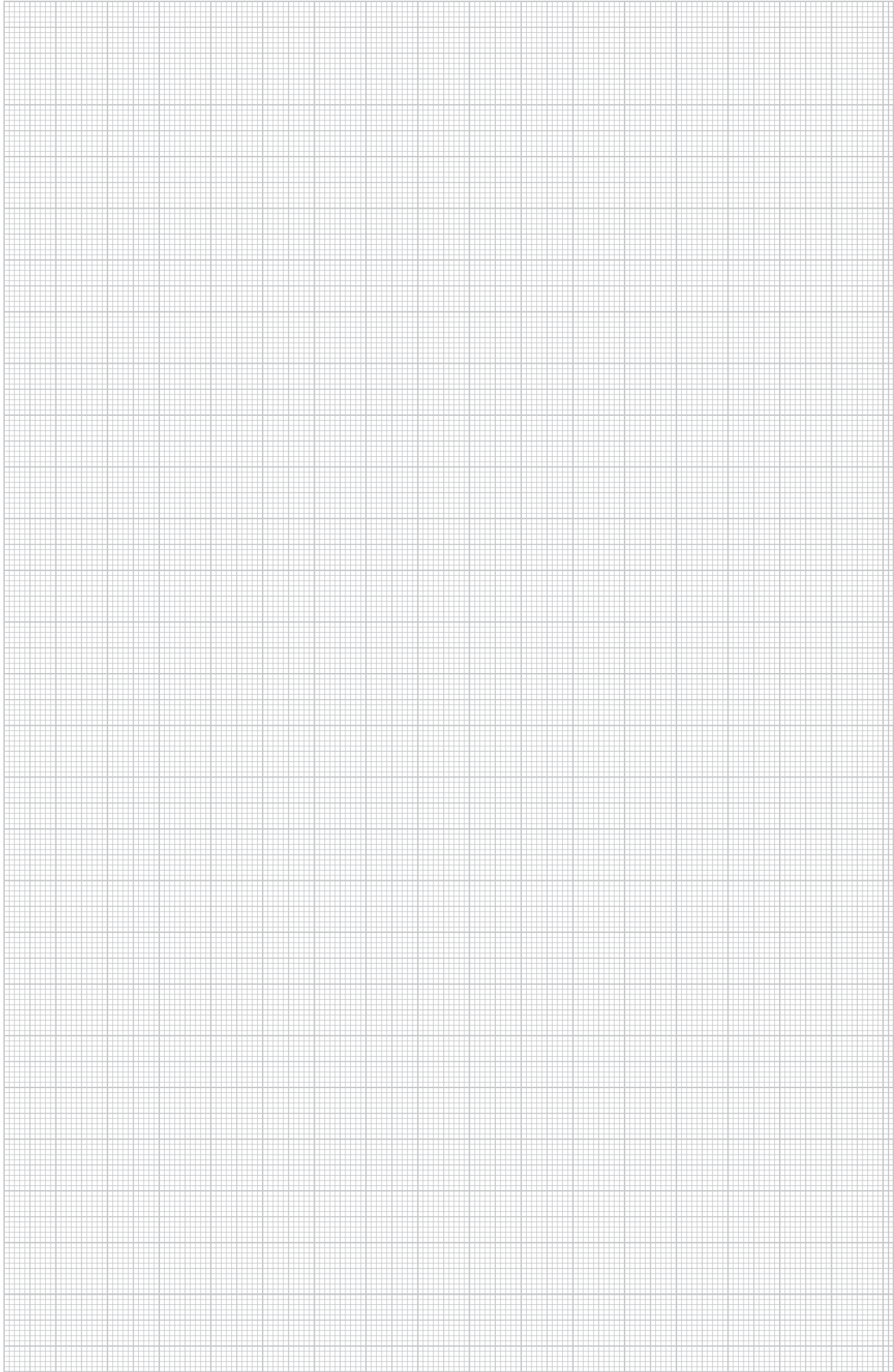
## Identification plate

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>KS-E</b>	10	0.220	<b>7205 42 2</b>

**PVC** Polyvinylchloride /pc.

The self-adhesive identification plate for labelling contains all the data required for approved cable system labelling for function maintenance as required by DIN 4102 Part 12.







# Function maintenance, anchorings

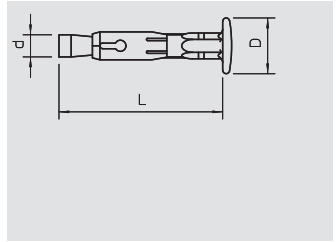


## Nail tie with nail head

Type	Clamping range	Dimension d	Dimension L	Dimension D	Pack.	Weight	Item No.
	mm	mm	mm	mm	pcs	kg/100 pcs.	
<b>FNA II 6X30/5</b>	5	6	40	15	100	1.120	<b>3498 46 8</b>

**ST** Steel **G** Electrogalvanised price/100 pc.

Nail tie with drive-in head. European technical approval for concrete. Fire resistance class to F 120 according to fire protection testing report.

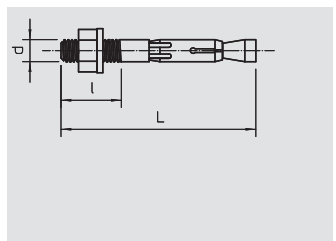


## Nail tie with thread end

Type	Thread	Clamping range	Dimension d	Dimension l	Dimension L	Pack.	Weight	Item No.
		mm	mm	mm	mm	pcs	kg/100 pcs.	
<b>FNA II 6X30 M6/5</b>	M6	5	6	13	53	100	1.400	<b>3498 42 5</b>

**ST** Steel **G** Electrogalvanised price/100 pc.

Nail tie with M6 thread. European technical approval for concrete. Fire resistance class to F120 according to fire protection testing report.

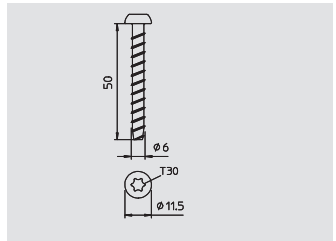


## MMS 6 Panhead

Type	Dimension	Pack.	Weight	Item No.
	mm	pcs	kg/100 pcs.	
<b>MMS6X50</b>	6 x 50	100	0.960	<b>3498 10 7</b>

**ST** Steel **GC** Electrogalvanised, yellow-chromated price/100 pc.

Fire protection bolt tie with pan head, drive T30, drill hole 5 mm. Fire protection tested according to DIN 4102. Fire resistance class to F90.

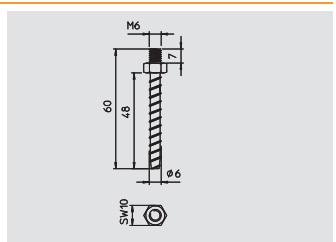


## MMS-ST with thread

Type	Thread	Dimension	Bore hole Ø	Pack.	Weight	Item No.
		mm	mm	pcs	kg/100 pcs.	
<b>MMS-ST6X60</b>	M6	6 x 60	5	100	1.400	<b>3498 26 3</b>

**ST** Steel **G** Electrogalvanised price/100 pc.

Fire protection bolt tie with M6 thread and hexagonal head, WAF 10, drill hole 5 mm. Fire protection tested according to DIN 4102. Fire resistance class to F90.

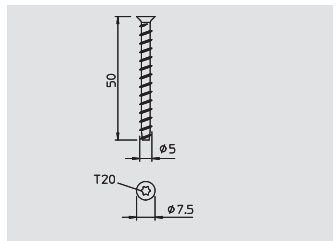


## HMS-KS countersunk head

Type	Dimension	Bore hole Ø	Pack.	Weight	Item No.
	mm	mm	pcs	kg/100 pcs.	
<b>HMS-KS5X50</b>	5 x 50	4	200	0.460	<b>3498 20 4</b>

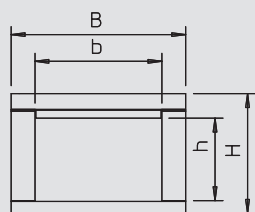
**ST** Steel **G** Electrogalvanised price/100 pc.

Fire protection bolt tie with conical countersunk head, drive T20, drill hole 4 mm. Fire protection tested according to DIN 4102. Fire resistance class to F90.



# BSK fire protection duct for direct wall and ceiling mounting

## BSK fire protection duct I 90/E 30, internal height 50 mm



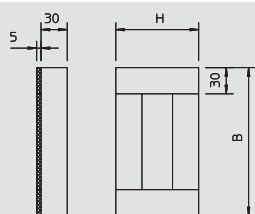
Type	Dimension B mm	Dimension H mm	Dimension h mm	Dimension b mm	Length mm	Weight kg/100 m	Item No.
<b>BSK 090506</b>	120	95	50	60	1000	730.000	<b>7215 15 0</b>
<b>BSK 090511</b>	170	95	50	110	1000	940.000	<b>7215 15 4</b>
<b>BSK 090521</b>	270	95	50	210	1000	1350.000	<b>7215 15 8</b>



/m

Fire protection duct I90/I30, to DIN 4102 Part 11 and Part 12, incl. 12 x countersunk head screws and 3 x 1 m sealing strip.

## BSK end piece I 90/E 30 for internal height 50 mm



Type	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>BSK-E090506</b>	120	95	1	38.000	<b>7215 25 0</b>
<b>BSK-E090511</b>	170	95	1	51.000	<b>7215 25 2</b>
<b>BSK-E090521</b>	270	95	1	78.000	<b>7215 25 4</b>



/pc.

End piece for fire protection duct BSK I90/E30  
Including bolts and sealing strip.

## BSK wall connection collar I 90 for internal height 50 mm

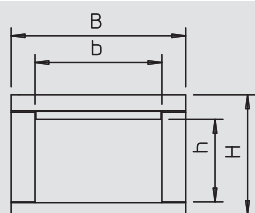
Type	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>BSK-K0506</b>	1	40.000	<b>7215 53 3</b>
<b>BSK-K0511</b>	1	45.000	<b>7215 53 7</b>
<b>BSK-K0521</b>	1	55.000	<b>7215 54 1</b>



/pc.

Wall connection collar for BSK, consisting of three single plates, to double the insulation for wall penetrations. Incl. fastening material Only for I90 classification.

## BSK fire protection duct I 90/E 30, internal height 105 mm



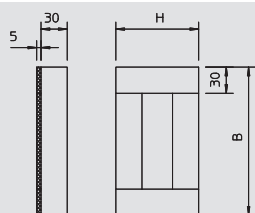
Type	Dimension B mm	Dimension H mm	Dimension h mm	Dimension b mm	Length mm	Weight kg/100 m	Item No.
<b>BSK 091016</b>	220	150	105	220	1000	1430.000	<b>7215 16 2</b>
<b>BSK 091026</b>	320	150	105	260	1000	1830.000	<b>7215 16 6</b>



/m

Fire protection duct I90/I30, to DIN 4102 Part 11 and Part 12, incl. 12 x countersunk head screws and 3 x 1 m sealing strip.

## BSK end piece I 90/E 30 for internal height 105 mm



Type	Dimension B mm	Dimension H mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>BSK-E091016</b>	220	150	1	93.000	<b>7215 25 6</b>
<b>BSK-E091026</b>	320	150	1	131.000	<b>7215 25 8</b>



/pc.

End piece for fire protection duct BSK I90/E30  
Including bolts and sealing strip.

## BSK wall connection collar I 90 for internal height 105 mm

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>BSK-K1016</b>	1	65.000	<b>7215 54 5</b>
<b>BSK-K1026</b>	1	75.000	<b>7215 54 9</b>



/pc.

Wall connection collar for BSK, consisting of three single plates, to double the insulation for wall penetrations. Incl. fastening material Only for I90 classification.

# BSK fire protection duct for direct wall and ceiling mounting

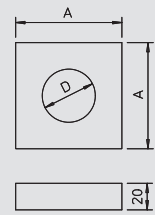


## BSK doubler I 90

Type	Dimension A mm	Dimension D mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>BSK-A0908</b>	80	40	1	10.000	<b>7215 45 2</b>
<b>BSK-A0910</b>	100	60	1	14.000	<b>7215 45 8</b>

/pc.

Doubler for cable routing for BSK I90 and for BSKH I90:  
BSK-A0908 for duct heights to 95 mm,  
BSK-A0910 for duct heights from 110 mm.  
Including fastening screws.



## BSK sealing strip I 90/E 30

Type	Dimension mm	Length m	Weight kg/100 pcs.	Item No.
<b>BSK-D0930</b>	5 x 30	15	37.500	<b>7215 42 3</b>

/pc.

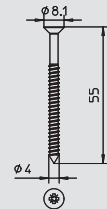
Self-adhesive sealing strip for BSK I90/E30 and BSKH I90/E30

## BSK countersunk head screw I 90/E 30

Type	Dimension mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>BSK-S0955</b>	4.0 x 55	50	0.340	<b>7215 40 0</b>

**ST** Steel **G** Electrogalvanised price/100 pc.

Countersunk head screw for fire protection duct I90/E30, for cover and doubler fastening

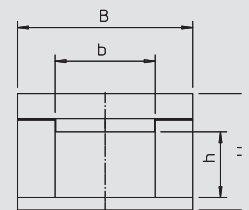


## BSK fire protection duct I 120/E 90, internal height 50 mm

Type	Dimension B mm	Dimension H mm	Dimension b mm	Dimension h mm	Length mm	Weight kg/100 m	Item No.
<b>BSK 120506</b>	180	130	60	50	1000	1490.000	<b>7215 21 0</b>
<b>BSK 120511</b>	230	130	50	110	1000	1800.000	<b>7215 21 6</b>
<b>BSK 120521</b>	330	130	50	210	1000	2420.000	<b>7215 22 2</b>

/m

Fire protection duct I120/E90, to DIN 4102 Part 11 and Part 12, incl. 12 x countersunk head screws and 3 x 1 m sealing strip.

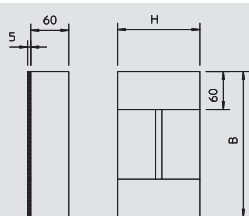


## BSK end piece I 120/E 90 for internal height 50 mm

Type	Dimension B mm	Dimension H mm	Pack. pcs	Item No.
<b>BSK-E120506</b>	180	130	1	<b>7215 27 0</b>
<b>BSK-E120511</b>	230	130	1	<b>7215 27 2</b>
<b>BSK-E120521</b>	330	130	1	<b>7215 27 4</b>

/pc.

End piece for fire protection duct BSK I120/E90  
Including bolts and sealing strip.

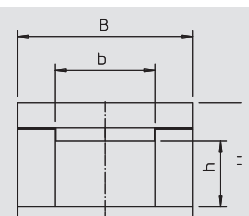


## BSK fire protection duct I 120/E 90, internal height 105 mm

Type	Dimension B mm	Dimension H mm	Dimension b mm	Dimension h mm	Length mm	Weight kg/100 m	Item No.
<b>BSK 121016</b>	280	185	105	160	1000	2570.000	<b>7215 22 8</b>
<b>BSK 121026</b>	380	185	105	260	1000	3190.000	<b>7215 23 4</b>

/m

Fire protection duct I120/E90, to DIN 4102 Part 11 and Part 12, incl. 12 x countersunk head screws and 3 x 1 m sealing strip.

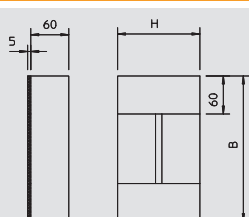


## BSK end piece I 120/E 90 for internal height 105 mm

Type	Dimension B mm	Dimension H mm	Pack. pcs	Item No.
<b>BSK-E121016</b>	280	185	1	<b>7215 27 6</b>
<b>BSK-E121026</b>	380	185	1	<b>7215 27 8</b>

/pc.

End piece for fire protection duct BSK I120/E90  
Including bolts and sealing strip.





# BSK fire protection duct for direct wall and ceiling mounting

## BSK sealing strip I 120/E 90

Type	Dimension mm	Length m	Weight kg/100 pcs.	Item No.
<b>BSK-D1260</b>	5 x 60	15	74.200	<b>7215 43 2</b>

/pc.



Self-adhesive sealing strip for BSK I120/E90.

## BSK countersunk head screw I 120/E 90

Type	Dimension mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>BSK-S1280</b>	4.5 x 80	50	0.500	<b>7215 41 2</b>

**ST** Steel      **G** Electrogalvanised      price/100 pc.



Countersunk head screw for BSK I120/E90, for cover fastening.

## BSK separating clamp for ceiling mounting

Type	Dimension H mm	Dimension h mm	Dimension B mm	Dimension b mm	Dimension A mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>BSK-B0511</b>	46	18	55	37.5	36.5	25	7.500	<b>7215 35 6</b>
<b>BSK-B0521</b>	46	18	105	62.5	52.5	25	14.500	<b>7215 36 2</b>
<b>BSK-B1016</b>	101	69	80	50	40	25	19.000	<b>7215 36 8</b>
<b>BSK-B1026</b>	101	69	130	75	65	25	29.000	<b>7215 37 4</b>

**ST** Steel      **FS** Strip-galvanised      price/100 pc.



Separating clamp for BSK fire protection duct, as installation aid for ceiling mounting. Fastening by clamping under the fire protection bolt tie.

## BSK separating bracket for wall mounting

Type	Dimension B mm	Dimension H mm	Dimension h mm	Dimension A mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>BSK-W0511</b>	46	37.5	22.5	37.5	25	5.000	<b>7215 31 2</b>
<b>BSK-W0521</b>	46	62.5	52.5	52.5	25	9.000	<b>7215 31 8</b>
<b>BSK-W1016</b>	101	50	40	40	25	12.500	<b>7215 32 4</b>
<b>BSK-W1026</b>	101	75	97.5	65	25	17.500	<b>7215 33 0</b>

**ST** Steel      **FS** Strip-galvanised      price/100 pc.



Separating bracket for BSK fire protection duct, as installation aid for wall mounting. Fastening by clamping under the fire protection bolt tie.

## BSK mortar

Type	Pack.	Weight kg/100 pcs.	Item No.
<b>BSK-M</b>	1	350.000	<b>7215 50 0</b>

/pc.



Fire protection duct mortar, dried ready-to-use mortar in a bucket for filling joints and small cracks when mounting the fire protection ducts BSK and BSKH.

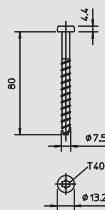
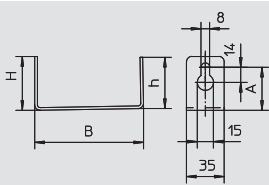
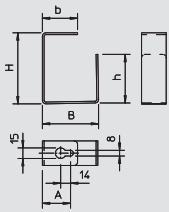
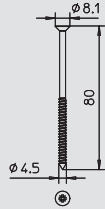
## Fire protection bolt tie

Type	Dimension mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>MMS7.5X80</b>	7.5 x 80	50	2.174	<b>3498 27 1</b>

**ST** Steel      **G** Electrogalvanised      price/100 pc.



Fire protection bolt tie with pan head, drive T40, drill hole 6 mm. Fire protection tested according to DIN 4102. Fire resistance class to F90.


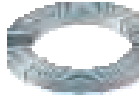








Avoidance of faults is top priority  
OBO lightning and surge protection systems help to maintain the function of computer centres if there are direct lightning strikes or, which is much more common, surge voltages, and thus are able to avoid faults.

And much, much more....  
On the following pages, you will find an extract from our main catalogue, which will inform you about the various different systems for internal and external lightning and surge protection. You can find additional detailed explanations and planning aids in our TBS catalogue (Transient and lightning protection systems).

## Lightning and surge protection

	External lightning protection	Round cable, aluminium	50
		Stand FangFix system 16 kg	50
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# External lightning protection

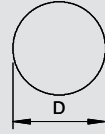


## Round conductor, aluminium

Type	Material symbol	Inter-face	Nominal size Ø mm	Cross-section mm <sup>2</sup>	Normal ring ca. m	Normal ring ca. kg	Weight kg/100 m	Item No.
<b>RD 8-ALU-T</b>	Al	—	8	50	150	20	13.500	<b>5021 29 4</b>

**Al** Aluminium price/100 m

- According to DIN EN 50164-2 (VDE 0185 Part 202)
- Meets the requirements of VDE 0185-305 (IEC 62305)
- RD 8/ALU: Semi-hard (E-AlMgSi0.5 corresponds to DIN 48801)
- RD 8/ALU-T: Twistable (E-AlMgSi0.5 corresponds to DIN 48801)
- RD 10/ALU: Pure aluminium (E-Al corresponds to DIN 48801)
- AL and ALMgSi may not be routed directly on, in or under the plaster, mortar or concrete nor underground

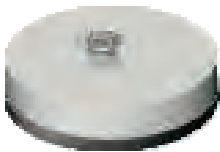


## Interception rod, one end rounded

Type	Material symbol	Length mm	Nominal size Ø mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>101 ALU-2000</b>	Al	2000	16	10	109.000	<b>5401 83 6</b>

**Al** Aluminium price/100 pc.

- Ø 16 mm, Al
- For stand system with female thread M16

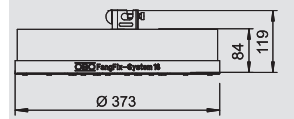


## Stand FangFix system 16 kg

Type	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>F-FIX-16</b>	1	1732.500	<b>5403 20 0</b>

price/100 pc.

- System consists of FangFix stone with base and clamp
- FangFix clamp made of VA; lightning current tested with 100 kA (10/350)
- 16 kg stone of Ø 365 mm, high level of stability
- Quick and easy mounting of interception rod using anchors
- Concrete, frost-resistant
- The FangFix stone can be stacked

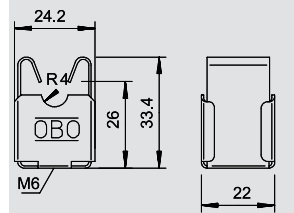


## Screwless cable brackets

Type	Fit mm	Installation height mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>177 20 VA M6</b>	Rd 8	20	50	2.500	<b>5207 33 9</b>

**V2A** Stainless steel, 1.4301

- With female thread M6 or through hole Ø 5 mm
- From stainless steel (V2A)
- Version -VK: copper-plated

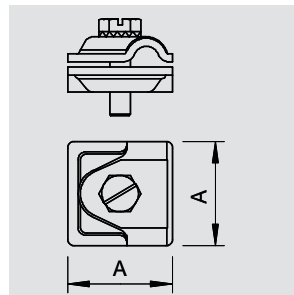


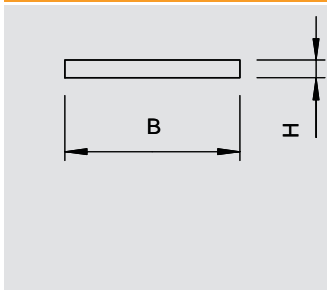
## Variable earthing connector

Type	Fit mm	Dimension A mm	Material symbol	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>249 8-10 ALU</b>	Rd 8-10	44	Al	30	6.600	<b>5311 51 9</b>

**Al** Aluminium price/100 pc.

- For T, cross and parallel connectors
- Quick installation using hex-head screw M10 x 30, high-grade stainless steel
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)



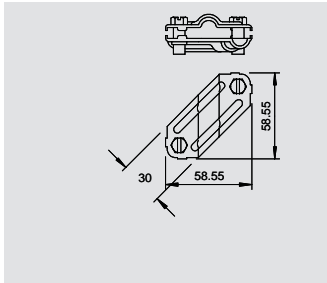
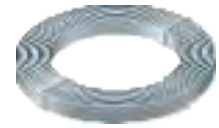


## Stainless steel flat conductor

Type	Material symbol	Inter-face	Dimension b x h mm	Cross-section mm <sup>2</sup>	Normal ring ca. m	Normal ring ca. kg	Weight kg/100 m	Item No.
<b>5052 V4A 30X3.5</b>	V4A	—	30 x 3,5	105	50	42	82.425	<b>5018 70 6</b>

**V4A** Stainless steel 1.4401 price/100 m

- According to DIN EN 50164-2 (VDE 0185 Part 202)
- Meets the requirements of VDE 0185-305 (IEC 62305)
- For use in areas at risk of corrosion
- For lightning protection, earthing systems and ring equipotential bonding

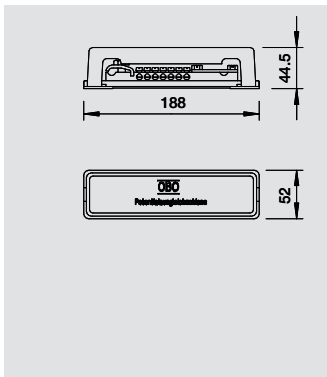


## Cross-connectors

Type	Fit mm	Material symbol	Inter-face	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>250 VA</b>	Rd 8-10/FL30	V2A	—	25	10.260	<b>5312 92 2</b>

**V2A** Stainless steel, 1.4301 price/100 pc.

- Fit: Rd 8-10 x Rd 8-10
- Fit: Rd 8-10 x FL 30
- Fit: FL 30 x FL 30
- Installed with 2 hex-head screws M8 x 20 (F)

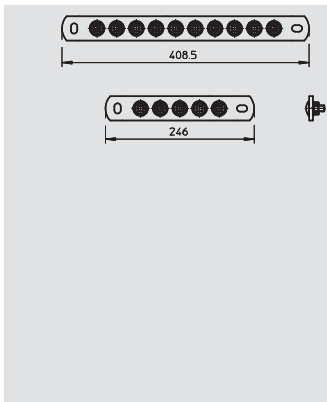


## Equipotential bonding rail for outside installation

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>1809 A</b>	Black	1	23.000	<b>5015 11 1</b>

**V2A** Stainless steel, 1.4301 /pc.

- Connection options:
- 7 single or multi-core conductors to 25 mm<sup>2</sup> or fine-core conductors to 16 mm<sup>2</sup>
  - 1 round conductor Rd 8-10
  - 1 flat strip to FL30 or round conductor Rd 8-10
  - Base plate and covering hood from polystyrene
  - Colour: black, UV-resistant
  - Screws and over-piece from VA
  - Capable of carrying lightning current 100 kA (10/350)

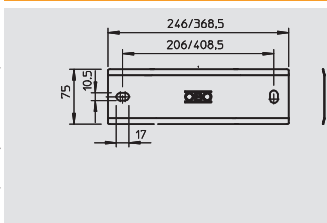


## Equipotential bonding rail for inside installation

Type	Material symbol	Number of connections	Width mm	Length mm	Height mm	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>1802 10 CU</b>	Cu	10	40	408.5	5	1	180.000	<b>5015 84 2</b>
<b>1802 10 VA</b>	V2A	10	40	408.5	6	1	190.000	<b>5015 86 6</b>

**V2A** Stainless steel, 1.4301 **Cu** Copper /pc.

- Main potential equalisation to VDE 0100 Part 410 and Part 540, and also lightning protection potential equalisation to VDE 0185-305 (IEC 62305)
- Insulation feet
- Quick, simple assembly of connection conductors to the contact rail using lock bolts M10
- The high-grade stainless steel versions (V2A) are suitable for outdoor use
- Complete with anchors and bolts for wall mounting
- With lock washer (DIN 137) for bolt locking against loosening (e.g. required in industry and Ex areas)

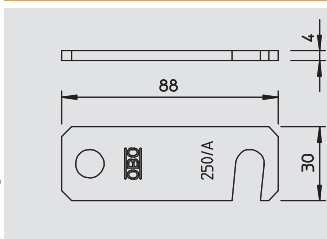


## Cover for BigBar

Type	Material symbol	Number of connections	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>1802 AH 10</b>	V2A	10	1	36.300	<b>5015 88 4</b>

**V2A** Stainless steel, 1.4301 /pc.

- Complete with all installation components



## Crossbar

Type	Material symbol	Inter-face	Connection option	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>1802 KL</b>	V2A	—	FL30	1	7.000	<b>5015 89 0</b>

**V2A** Stainless steel, 1.4301 /pc.

- For clamping flat conductors 30 x 3.5
- Fit BigBar 1802 potential equalisation rail



# Earthing and equipotential bonding

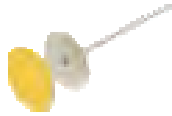
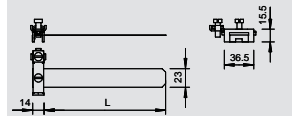


## Strip earthing clip

Type	for pipe Ø		Pack.	Weight	Item No.
	inch	mm			
<b>927 2</b>	3/8-4	17.2-114	10	8.550	<b>5057 52 3</b>

V2A Stainless steel, 1.4301 price/100 pc.

- For pipes of Ø 3/8 - 6"
- Connection options: Max. 2 cables 2.5-25 mm<sup>2</sup>
- Round conductor Rd 8
- Clip element, bolts and tightening strap made of rustproof stainless steel (VA)

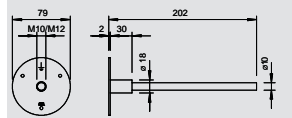


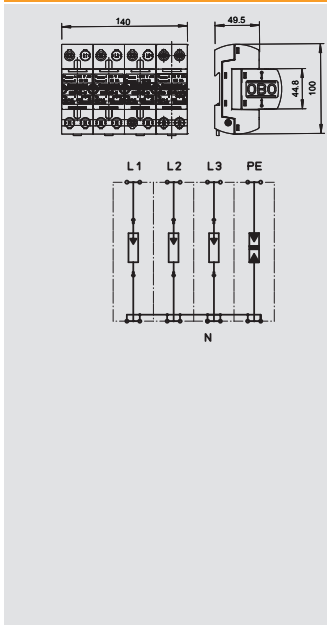
## Earthing fixed point

Type	Thread	Pack.	Weight	Item No.
<b>205 B-M10 VA</b>	M10	25	25.500	<b>5420 00 8</b>
<b>205 B-M12 VA</b>	M12	25	25.500	<b>5420 01 6</b>

V4A Stainless steel, 1.4404 /pc.

- Connection to earthing systems, arresters and reinforcement
- Contact plate: Ø 79 mm, made of rustproof stainless steel (V4A)
- Clamping bolt Ø 10 mm, rustproof (V2A)
- Incl. plastic cover for simple installation





## Combination arrester set, 4-pole

Type	Highest continuous voltage V	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>MCD 50-B 3+1</b>	255	3 + NPE	1	168.000	<b>5096 87 9</b>



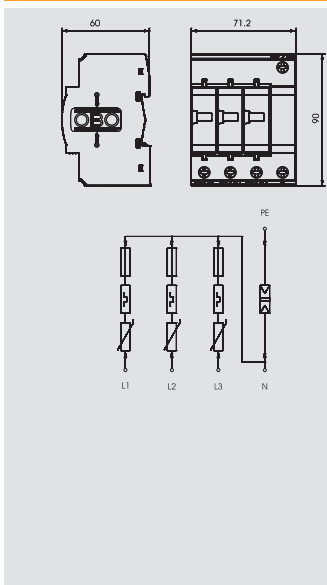
/pc.

Combination arrester, Type 1, according to DIN EN 61643-11(B according to VDE 0675 Part 6).

Completely pre-terminated and ready for connection, consisting of:  
 MCD 50-B: Coordinated lightning current arrester, Type 1 (Class B) to EN 61643-11 and MCD 125-B/NPE: Coordinated N-PE spark gap, Type 1 (Class B) to EN 61643-11 for use in TN-S and TT systems. Interface 0 to 1 according to lightning protection zone concept according to IEC 61312-1 and VDE 0185-305 (IEC62305).

- Arresting capacity 50 kA 10/350  $\mu$ s per pole (L-N)
- Arresting capacity 125 kA (10/350  $\mu$ s) per pole (N-PE)
- Suitable for any TN or TT system
- Conforms to VDN Directive 2nd Edition 2004
- Protection level < 1.3 kV
- Line follow current quenching 25 kA Ipeak
- Incl. plug caps for identifying the connections
- Encapsulated, non-extinguishing spark gap

Application: Lightning protection equipotential bonding in buildings with external lightning protection of Class I to IV and in standard distributor housings.



## Lightning current and surge arrester/CombiController V50

Type	Highest continuous voltage V	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>V50-B+C 3+NPE</b>	280	3+NPE	1	55.000	<b>5093 65 4</b>



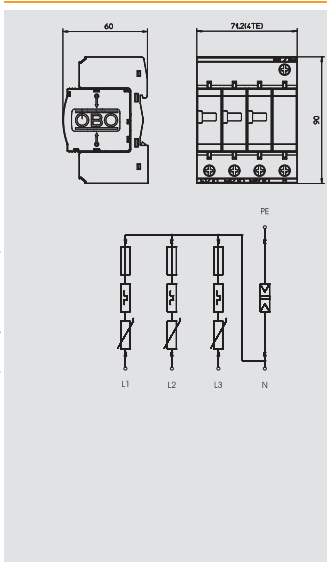
/pc.

Combination arrester set, lightning and surge arrester Type 1+2 to DIN EN 61643-11 (B+C to VDE 0675 part 6).

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity 12.5 kA (10/350) per pole and 50 kA (10/350) in total
- Universally suitable for TN and TT systems
- With new Multibase base with multi-connection terminals
- Complete unit, consisting of cover and base, pre-mounted and ready for connection
- Arrester, connectable with dynamic cut-off unit
- With visual function display
- Voltage protection level < 1,3 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in distributor housings
- Labelled connections

Application: Equipotential bonding in buildings, even those with external lightning protection of class III and IV, and in standard distributor housings.

\* Complete = cover and base



## Surge arrester/V20, 280 V

Type	Highest continuous voltage V	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>V20-C 3+NPE-280</b>	280	3 + NPE	1	41.700	<b>5094 65 6</b>



/pc.

V 20-C/...: Surge protection device Type 2 (Class C) to VDE 0675 part 6-11 (DIN EN 61643-11).

- With new MultiBase base part and Multi-connection clamps
- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- VDE-tested
- Suitable for TN- and TT network systems
- Plug-in upper part; upper part can be separated from base without tools
- Including thermal and dynamic separating device
- With visual display of defects
- High current conductivity and long service life
- Marked connections

Application example: residential buildings, single-family homes without outer lightning protection system.

\* Complete = cover and base





# Surge protection in energy technology



## Surge arrester/V10 Compact

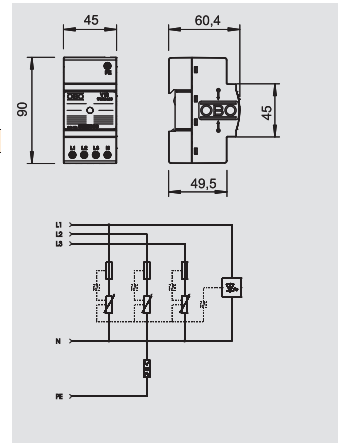
Type	Highest continuous voltage V	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>V10 COMPACT 255</b>	255	3 + NPE	1	15.800	<b>5093 38 0</b>

/pc.

Surge arrester, Type 2+3 to EN 61643-11 (Class C+D to VDE 0675 Parts 6-11)

- Suitable for TN and TT network systems
- Integrated 3+1 solution
- Incl. thermal and dynamic cut-off unit
- With visual function display
- High current conductivity with long lifespan
- Labelled connections
- Separation unit only 45 mm

Application: Industrial, housing and protection of rotary current systems



## Fine power protection/application hat profile rail

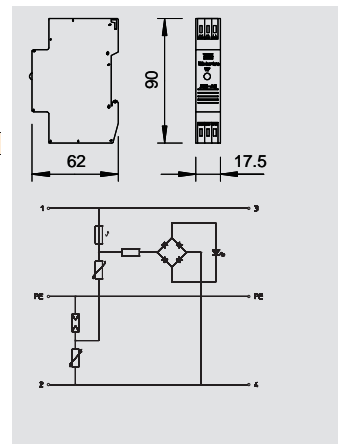
Type	U max AC V	U max DC V	Version	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>VF230-AC/DC</b>	255	350	230 V version	1	8.000	<b>5097 64 9</b>

/pc.

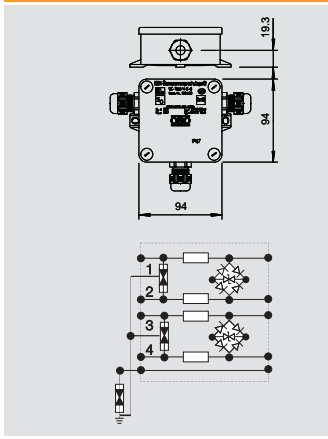
Surge protection device, fine protection Type 3 to EN 61643-11 (Class D to VDE 0675, Parts 6-11)

- Suitable for DC and AC voltage systems
- With visual function display
- With installation-friendly, screwless connection terminals
- In a space-saving 17.5 mm grid
- Y circuit

Application: Universal use on 35 mm hat profile rail in every normal commercially available distributor housings.



# Surge protection for telecommunication systems



## Surge protection for ISDN and DSL systems

Type	Version	Connection system	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>SC-TELE 4-C-G</b>	Combi protection	Terminal	1	30.000	<b>5081 68 8</b>

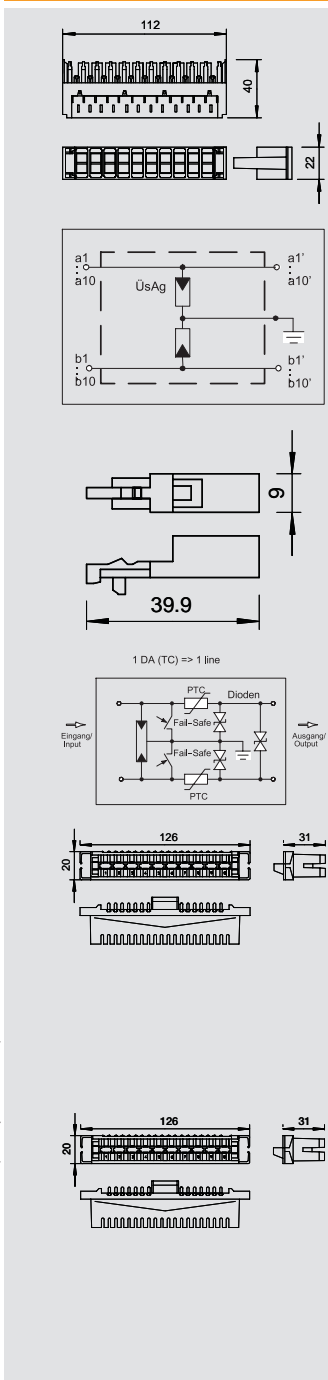


/pc.

Data cable protection device for telecommunication systems in insulated housing

- Suitable for any analogue, ISDN or DSL system
- Supports ADSL 2
- With two-level protective circuit
- Insulating housing to IP 54
- With screwless terminals for quick mounting
- For 2 DA systems (4 protected cores)

Application: For use at supply location on line, upstream of NT-S0 or splitter interface.



## Surge protection for LSA-Plus systems

Type	Highest continuous voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>LSA-B-MAG</b>	180	1	8.600	<b>5084 02 0</b>



/pc.

LSA-B-MAG: LSA basic protection magazine for use in multi-core data cable systems, MCR systems and telephone switchboards.

- Basic protection
- Fitted with 20 gas discharge protectors
- Max. voltage: 180 V

Application: Direct on LSA-Plus separation or connection bars

Type	Highest continuous voltage V	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>LSA-BF-180</b>	180	1	0.500	<b>5084 02 4</b>

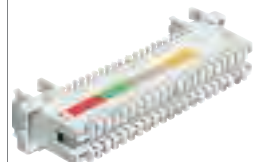


/pc.

LSA-BF 180: LSA basis and fine protection, for application in measurement technology systems.

- Basic and fine protection
- Course protection using fail-safe technology
- With PTC protection components against overcurrent
- Max. voltage: 180 V

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>LSA-A-LEI</b>	Grey	1	5.100	<b>5084 00 8</b>



/pc.

LSA-A-LEI: LSA attaching strip 2/10 for attaching ten double-cores.

- For use with protection element LSA-B-MAG
- Fastening to mounting trough LSA-M
- Colour: grey
- Clampable cross-sections 0.14-0.5 (AWG 26 to 20)

Type	Colour	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>LSA-T-LEI</b>	White	1	5.400	<b>5084 01 2</b>



/pc.

LSA-T-LEI: LSA separating strip 2/10 for attaching up to ten double-cores.

- For use with protection element LSA-BF-180, LSA-BF-24, LSA-B-MAG
- Fastening to mounting trough LSA-M
- Colour: white
- Clampable cross-sections 0.14-0.5 (AWG 26 to 20)



# Surge protection for telecommunication systems



## Surge protection for LSA-Plus systems

Type	Colour	Pack.	Weight	Item No.
		pcs	kg/100 pcs.	
<b>LSA-E-LEI</b>	<b>Red</b>	1	6.500	<b>5084 01 6</b>

/pc.

LSA-E-LEI: LSA earthing strip, 40-pin for attaching earth lines or screens to the earth connection.

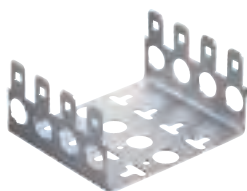
- Complete with connection line, green-yellow, 1.5 mm<sup>2</sup>
- Colour: red



Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
<b>LSA-E</b>	1	1.000	<b>5084 03 2</b>

/pc.

LSA-E: Earth rail as earth connection between overvoltage protectors LFS-BF... (1 DA) and distributor connector LSA-...-LEI.



Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
<b>LSA-M</b>	1	7.500	<b>5084 03 6</b>

/pc.

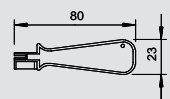
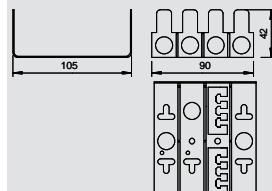
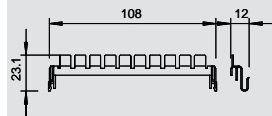
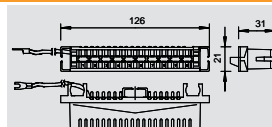
LSA-M: Installation frame for four connection or separating strips Grid 22.5 mm. Depth: 22 mm; 30 mm; 50 mm



Type	Pack.	Weight	Item No.
	pcs	kg/100 pcs.	
<b>LSA-TOOL</b>	1	0.600	<b>5084 04 0</b>

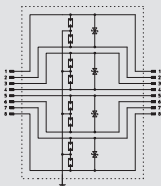
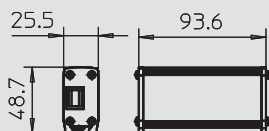
/pc.

LSA-TOOL: Simple tool for soldering, bolting and stripping-free connection of cores, without cutter.



# Surge protection for network technology

## Surge protection for high-speed networks up to 10 GBit



Type	Version	Connection system	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>ND-CAT6A/EA</b>	8-pole	RJ45	1	16.600	<b>5081 80 0</b>



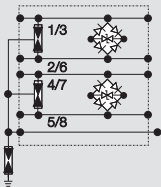
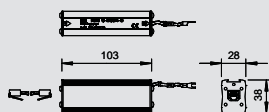
/pc.

Data cable protection devices for high-speed networks

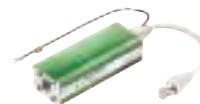
- High-quality RJ-45 sockets
- Low protection level at high current load
- Support for Power over Ethernet + up to 1 A
- Tested transmission quality in networks up to 10 GBit (Class EA) or CAT6A
- Quick installation through connectable version

Application example: 10 GBit Ethernet, 10/100 MBit Ethernet, PoE applications

## Surge protection for class D networks



Type	Version	Connection system	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>RJ45 S-ATM8-IND</b>	—	RJ45	1	13.500	<b>5081 79 8</b>



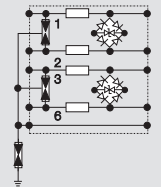
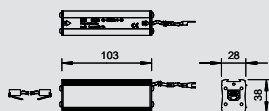
/pc.

Universal data line protection device for network technology and telecommunication systems.

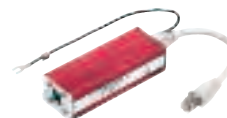
- In aluminium housing
- Protection of eight cores
- With two-stage protection circuit
- Simple installation
- With RJ 45-Western connector
- Incl. 150 mm connecting cable with RJ 45 connectors
- Cat 5 network technology, 10BaseT, 100BaseT

Application: for analogue, ISDN, DSL system, Ethernet Twisted Pair.

## Surge protection for various IT systems



Type	Version	Connection system	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>RJ45 S-E100 4-B</b>	Basic protection, 4 wires	RJ45	1	21.000	<b>5081 72 6</b>
<b>RJ45 S-E100 4-C</b>	Combi protection, 4 wires	RJ45	1	21.000	<b>5081 73 4</b>
<b>RJ45 S-E100 4-F</b>	Fine protection, 4 wires	RJ45	1	21.000	<b>5081 74 2</b>



/pc.

Data cable protection device for information technology systems

- In aluminium housing
- RJ 45 Connector
- Incl. 150 mm connecting cable with RJ 45 connectors
- Simple mounting using adapter plug
- Two-stage protective circuit

Application: Twisted pair, control circuits, communication cables





# Surge protection for measuring, control and regulation systems



## Testable lightning barriers for control circuits

Type	Nominal voltage V	Version	Maximum continuous voltage Vc / AC V	Maximum continuous voltage Vc / DC V	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>MDP-4 D-5-T</b>	5	4-pole	7	10	1	5.800	<b>5098 41 1</b>

/pc.

MDP.../D...T: lightning barriers with test function

- Protection device for multi-wire systems
- Direct screen earthing
- With easy-to-mount, screwless connection terminals
- Space-saving width of just 8.1 mm
- Protective circuit testable with Life Control
- High bandwidth to 100 MHz

Application: universal use on 35 mm hat rail in any standard distributor housing.



Type	Nominal voltage V	Version	Maximum continuous voltage Vc / AC V	Maximum continuous voltage Vc / DC V	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>MDP-4 D-24-T</b>	24	4-pole	20	28	1	5.800	<b>5098 43 1</b>

/pc.

MDP.../D...T: Lightning barrier with test function

- Protection device for multi-wire systems
- Direct shield earthing
- With easy-to-mount screwless connection terminals
- Space-saving width of just 8.1 mm
- Protection circuit testable with Life Control
- High bandwidth to 100 MHz

Application: Use on 35 mm hat profile rail in any standard distribution housing.



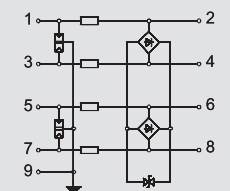
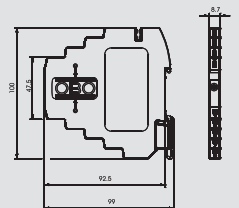
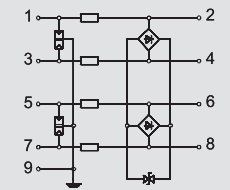
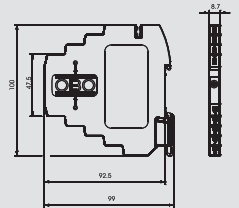
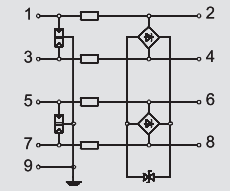
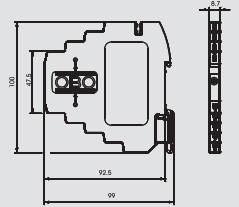
Type	Nominal voltage V	Version	Maximum continuous voltage Vc / AC V	Maximum continuous voltage Vc / DC V	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>MDP-4 D-48-T</b>	48	4-pole	41	58	1	5.800	<b>5098 45 0</b>

/pc.

MDP.../D...T: lightning barriers with test function

- Protection device for multi-wire systems
- Direct screen earthing
- With easy-to-mount, screwless connection terminals
- Space-saving width of just 8.1 mm
- Protective circuit testable with Life Control
- High bandwidth to 100 MHz

Application: universal use on 35 mm hat profile rail in any standard distributor housing.



## Portable testing unit for lightning barriers

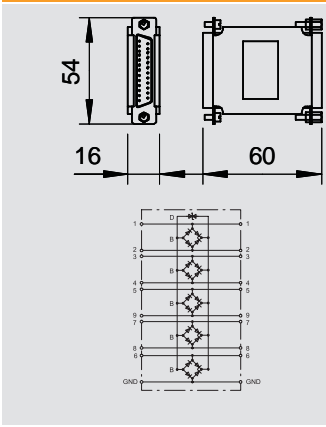
Type	Pack. pcs	Weight kg/100 pcs.	Item No.
<b>LFC</b>	1	164.500	<b>5096 78 6</b>

/pc.

OBO Life Control allows function control of the MDP lightning barriers. The lightning barriers can be checked while installed. Life Control will not have any influence on the measuring signal. Life Control possesses an integrated OLED with visual and acoustic defect signalling. A separate LED inside the testing pin is also integrated. Life Control is delivered in a case, complete with a CD and instructions.



# Surge protection for measuring, control and regulation systems



## Protection devices for serial interfaces

Type	Highest continuous voltage V	Version	Pack.	Weight	Item No.
			pcs	kg/100 pcs.	
<b>SD09-V24 9</b>	18	SUB-D-9; V24 RS232	1	6.000	<b>5080 05 3</b>
<b>SD15-V24 15</b>	18	SUB-D-15; V24 RS232	1	7.000	<b>5080 15 0</b>
<b>SD25-V24 25</b>	18	SUB-D-25; V24 RS232	1	8.000	<b>5080 27 4</b>
<b>SD09-V11 9</b>	7.5	SUB-D-9; V11 RS485	1	6.000	<b>5080 06 1</b>
<b>SD25-V11 25</b>	7.5	SUB-D-25; V11 RS485	1	8.000	<b>5080 28 2</b>



/pc.

Data cable protection devices, serial interface

- Different connection systems available
- Low protection level

Application: PLC, alarm systems, controllers





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