



SWITCH CABINET ACCESSORIES 01/21



| Wide product range

| "Made In Germany *since 1995*"
- developed and produced in-house

| Specialists for individual solutions

| Short delivery times

ANYTHING YOUR SWITCH CABINET NEEDS

LED lighting

Switch cabinet lighting

Thermostates

Hygrostates

Fans

Heaters

Wiring plan pockets

Sockets

Predictive earth conductors

Inspection windows

Contents

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wide voltage range 20 - 265 V or 90 - 265 V
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pole light 210 - 240 V
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small and compact
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Technical changes and errors excepted.

The data in this brochure correspond to the technical status as of 2020-01-01.

LED aluminium light LED-A

LED-A

- on/off switch
- socket (capacity 16 A)
- motion sensor (8 min operating time)
- LED control by linear precision constant current source (no EMC interference)
- aluminium profile with LEDs, protective cover made of acrylic glass
- mains connection and through-wiring (applicable for the parallel connection of several lights)

available as 24 V DC and 100-240 V AC with UL approbation!

Technical data

Voltage: 210 - 240 V, 50/60 Hz

Power consumption: see table

Colour of light: 4000 K

Ambient temp.: - 25°C to + 45°C

Material: aluminium

Dimensions: see table

Colour: anodized aluminium

Protection degree/class: IP20 / I

Approbation: CE, EMC tested, corresp. RoHS, (UL on request)

Optional: sockets for various countries, magnetic attachment, door position switch (potential-free exit on request)

Special voltages: 24 V DC, 90-240 V

Mounting:

a) rearward fixing enables assembly from below with bolts (-R version)

b) lateral fixing for vertical and horizontal installation with bolts



Type	Order No.	Power cons.	Luminous flux	Dim. (L/W/H)	Min. cabinet width
rearward fixing (i.a. suitable for TS, SE and VX cabinet types)					
LED-A-325-B-E-R-VX	109257	8 W	850 lm	325 x 60 x 43 mm	500 mm
LED-A-500-B-E-R-VX	109146	14,5 W	1700 lm	500 x 60 x 43 mm	600 mm
LED-A-700-B-E-R-VX	109201	14,5 W	1700 lm	700 x 60 x 43 mm	800 mm
LED-A-1000-B-E-R-VX	109202	29 W	3500 lm	1000 x 60 x 43 mm	1200 mm
mounting brackets for special cabinets ('R'-version only; PU: 2 pc.)					
Brackets for LED-A-VX-Snap-In	110210				
lateral fixing (suitable for all cabinet types)					
LED-A-325-B-E	108157	8 W	850 lm	375 x 60 x 43 mm	500 mm
LED-A-500-B-E	108158	14,5 W	1700 lm	550 x 60 x 43 mm	800 mm
LED-A-700-B-E	108159	14,5 W	1700 lm	750 x 60 x 43 mm	1000 mm
LED-A-1000-B-E	108160	29 W	3500 lm	1050 x 60 x 43 mm	1200 mm

LED lights with wide voltage range

LED-A-WS-500-B-R-VX OR LED-A-WS-500-B-E

- switch (I-O-A)
- motion sensor (8 min operating time)
- socket (capacity 16 A)
- mains connection
- through-wiring (capacity 16 A)

Technical data

Voltage: 90 - 265 V AC/DC
 Power consumption: see table
 Luminous flux: see table
 Colour of light: 4000 K
 Ambient temp.: -25°C bis +45°C
 Weight: 0,9 kg
 Material: anodized aluminium
 Dimensions: see table

Protection degree/class: IP20 / I

Approbationen: CE, corresp. RoHS, EMC tested



Optional: sockets for various countries, magnetic attachment, door position switch (potential-free exit on request)

Type	Order No.	Power cons.	Luminous flux	Dim. (L/W/H)	Min. cabinet width
rearward fixing (i.a. suitable for TS, SE and VX cabinet types)					
LED-A-WS-325-B-E-R-VX	109960	8 W	850 lm	325 x 60 x 43 mm	500 mm
LED-A-WS-500-B-E-R-VX	110002	14,5 W	1700 lm	500 x 60 x 43 mm	600 mm
LED-A-WS-700-B-E-R-VX	110021	14,5 W	1700 lm	700 x 60 x 43 mm	800 mm
LED-A-WS-1000-B-E-R-VX	110125	29 W	3500 lm	1000 x 60 x 43 mm	1200 mm

All lights also available with lateral fixation for horizontal and vertical mounting (on request)

LED-MULTIVOLT-360-B

Protection class II

- button
- optional switching for:
 - motion sensor only
 - 8 h continuous operation (press button for 10 sec. until LEDs start to blink, otherwise motion sensor setting will take over)
- motion sensor (8 min operating time)
- mains connection
- through-wiring (connection of up to 8 lights possible)
- integrated overvoltage protection
- low EMC interference

Technical data

Voltage: 20 - 265 V AC/DC
 Power consumption: 6,4 W
 Luminous flux: 800 lm
 Colour of light: 5000 K
 Ambient temp.: -25°C to +45°C
 Plug system: 2-pole ST15/2
 Weight: 0,14 kg
 Material: PC
 Dimensions: see table

Protection degree/class: IP20 / II

Approbationen: CE, corresp. RoHS, EMC tested, (UL in preparation)



Type	Order No.	Dim. (L/W/H)	Mounting
LED-MULTIVOLT-360-B	108830	360 x 35 x 44 mm	screw fastening
LED-MULTIVOLT-360-B-M	108832	360 x 35 x 44 mm	magnetic attachment
Description			
LED-M-joint	109171	connection (GST1/i2) of two LED-MULTIVOLT-360 without cable	

LED pole lights LEDxx-S and LEDxx-W

POLE LIGHT LED04/08/10-S OR LED04/8/10-S-B

- on/off switch (-S version only)
- motion sensor (-S-B version only)
- LED control by linear precision constant current source (no EMC interference)
- pivotable aluminium profile with LEDs, protective cover made of acrylic glass
- **permanently connected cable (2 m), orange**

also available as 24 V DC and 120 V AC with UL approbation!

Technical data

Voltage: 210 - 240 V, 50/60 Hz
 Power consumption: see table
 Colour of light: 5000 K
 Ambient temp.: - 25°C to + 45°C
 Material: aluminium / PC
 Dimensions: see table
Colour: anodized aluminium / RAL 7035
Protection degree/class: IP20 / I
Approbation: CE, EMC tested, corresp. RoHS

Optional:

- magnetic attachment
- colour of cable: yellow or grey
- 24 V DC-Version (protection class II)
- **24 V DC or 120 V AC with UL Approbation**



Mounting: screw fastening for vertical and horizontal installation



Type	Order No.	Power cons.	Luminous flux	Dim. (L/W/H)	Hole cut-out	Min. cabinet width
with on/off switch						
LED04-S	102087	5,2 W	600 lm	310 x 30 x 50 mm	300 mm	400 mm
LED08-S	106460	10,2 W	1100 lm	485 x 30 x 50 mm	475 mm	600 mm
LED10-S	106462	11 W	1100 lm	660 x 30 x 50 mm	650 mm	800 mm
with motion sensor						
LED04-S-B	107123	5,2 W	600 lm	310 x 30 x 50 mm	300 mm	400 mm
LED08-S-B	106841	10,2 W	1100 lm	485 x 30 x 50 mm	475 mm	600 mm
LED10-S-B	107134	11 W	1100 lm	660 x 30 x 50 mm	650 mm	800 mm

Machine light and diffuser luminaire

MACHINE LIGHTS LED04/08/10-W

- LED control by linear precision constant current source (no EMC interference)
- protective cover made of acrylic glass
- **permanently connected cable (2 m), orange**
- dust and jet proof

Technical data

Voltage: 210 - 240 V, 50/60 Hz

Power consumption: see table

Colour of light: 5000 K

Ambient temp.: - 25°C to + 45°C

Material: polycarbonate, transparent

Dimensions: see table

Colour: RAL 7035

Protection degree/class: IP65 / I

Approbation: CE, EMC tested, corresp. RoHS



Optional:

- **24 V DC version (Protection class II) and 120 V AC with UL certification**
- Mount for LED-W



Type	Order No.	Power cons.	Luminous flux	Dim. (L/B/H)	Min. cabinet width
LED04-W	104970	5,2 W	550 lm	283 x 38 x 63 mm	400 mm
LED08-W	106534	10,2 W	1100 lm	460 x 38 x 63 mm	600 mm
LED10-W	106543	11 W	1100 lm	660 x 38 x 63 mm	800 mm

Accessory (PU: 2 pcs.)

Mount for LED-W	107835	attachement option for LED-W			
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DIFFUSER LUMINAIRE LED-FL-625-B-E-IP65

- motion sensor
- on/off switch
- opal covered cover
- screw connection with spring clip and strain relief
- 2 mounting clips
- dust and jet proof

Technical data

Voltage: 220 - 240 V, 50/60 Hz

Power consumption: see table

Colour of light: 5000 K

Ambient temp.: -25°C to +45°C

Material: ABS

Dim.: see table

Colour: grey

Protection degree/class: IP65 / I

Approbation: CE, EMC tested, corresp. RoHS



Type	Order No.	Power cons.	Luminous flux	Dim. (L/B/H)	Min. cabinet width
LED-FL-625-B-E-IP65	110071	16 W	1500 lm	625 x 48 x 43 mm	800 mm

LED lights LS15 and LS07

LED SWITCH CABINET LIGHT LS15

- on/off switch
- socket (capacity 16 A)
- LED lamp with ballast
- mains connection
- suitable for switch cabinets as from 500 mm width

Technical data

Voltage: 210 - 240 V, 50/60 Hz
 Power consumption: see table
 Colour of light: 5000 K
 Ambient temp.: -25°C to +45°C
 Material: PC
 Dimensions: see table

Colour: RAL 7035

Protection degree/class: IP20 / I

Approbation: CE, EMC tested, corresp. RoHS

Optional: sockets for Switzerland or France (on request)

Mounting: Snap-In (suitable for TS/VX cabinets)



Type	Order No.	Power cons.	Luminous flux	Dim. (L/W/H)
LS15-LED	104401	8 W	800 lm	302 x 62 x 54 mm
with door position switch				
LS15-SK-LED	106113	8 W	800 lm	302 x 62 x 48 mm
through-wiring only				
LS15-D-LED	101731	8 W	800 lm	302 x 62 x 54 mm
with motion sensor				
LS15-B-LED	100143	8 W	800 lm	302 x 62 x 58 mm
lateral fixing for LS15				
M48 Adapter	100833	for vertical and horizontal installation		



All lights also available with magnetic attachment (add order term: -M20)

LED SWITCH CABINET LIGHT LS07

- on/off switch
- **permanently connected cable (2 m, 2 x 0,75 mm²), orange**
- suitable for switch cabinets as from 400 mm width

Protection class II

**available with 24 V DC
on request**

Technical data

Voltage: 220 - 240 V, 50/60 Hz
 Power consumption: 3 W
 Dimensions: see table
 Colour of light: 5000 K
 Ambient temp.: - 25°C to + 45°C
 Material: PC

Colour: RAL 7035

Protection degree/class: IP20 / II

Approbation: CE, EMC tested, corresp. RoHS

Mounting: adhesive strips for mounting in plastic and metal cabinets; additional mounting hole in 25 mm grid



Type	Order No.	Luminous flux	Dim. (L/W/H)	Features
LS07-K-LED	103948	360 lm	146 x 85 x 36 mm	
LS07-K-SK-LED-M1	106457	360 lm	146 x 85 x 67 mm	roller lever switch
LS07-K-SK-LED-M40	102827	360 lm	146 x 85 x 67 mm	roller lever switch, incl. magnetic attachment
LS07-K-B-LED	102245	360 lm	146 x 85 x 46 mm	motion sensor



All lights also available with magnetic attachment (add order term: -M20)

Energy saving lights LS20 and LS24

ENERGIESPARLEUCHTE LS24

- on/off switch
- socket (capacity 16 A)
- electronic ballast
- mains connection and through-wiring (applicable for the parallel connection of several lights), potential-free exit on both sides (NO, capacity 4 A), e.g. for fan control, AC units and door surveillance
- suitable for switch cabinets as from 600 mm width (also suitable for VX cabinets)

Technical data

Voltage: 220 - 240 V, 50/60 Hz

Power consumption: see table

Colour of light: 4000 K

Ambient temp.: -25°C bis +45°C

Material: sheet steel

Dimensions: see table

Colour: RAL 7035

Protection degree/class: IP20 / I

Approbation: CE, EMC tested, corresp. RoHS, (UL on request)

Optional: sockets for various countries (on request)

Special voltages: 12 V, 24 V DC, 48 V DC, 60 V DC, 100 - 240 V with ballast or 120 V 60 Hz

Mounting: fixing enables assembly from below with bolts by aid of a cordless power drill



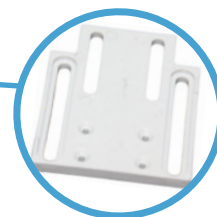
Type	Order No.	Power cons.	Luminous flux	Dim. (L/W/H)
with door position switch				
LS24-SK-E	108391	24 W	900 lm	322 x 163 x 74,5 mm
with door position switch on 15 mm adapter plate				
LS24-SK-E-E198	108393	24 W	900 lm	322 x 163 x 89 mm
with double-sided plug connection for door position switch				
LS24-ST-E	108390	24 W	900 lm	322 x 163 x 41 mm
through-wiring only				
LS24-D-E	108389	24 W	900 lm	322 x 163 x 41 mm

Sheet steel lights LLxx-(SK/ST/D)-R-E

SHEET STEEL LIGHT LL14/18/30-SK/ST/D-(R)-E

also available with UL approbation!

- on/off switch
- socket (capacity 16 A)
- door position switch (on adapter plate)
- electronic ballast
- mains connection and through-wiring (applicable for the parallel connection of several lights)
- potential-free exit on both sides (NO, capacity 3 A), e.g. for fan control, AC units and door surveillance



Technical data

Voltage: 220 - 240 V, 50/60 Hz

Power consumption: see table

Colour of light: 4000 K

Ambient temp.: - 25°C to + 45°C

Material: sheet steel

Dimensions: see table

Colour: RAL 7035 structure

Protection degree/class: IP20 / I

Approbation: CE, EMC tested, corresp. RoHS, (UL on request - unavailable for 'SK-D-(R)-E' version)

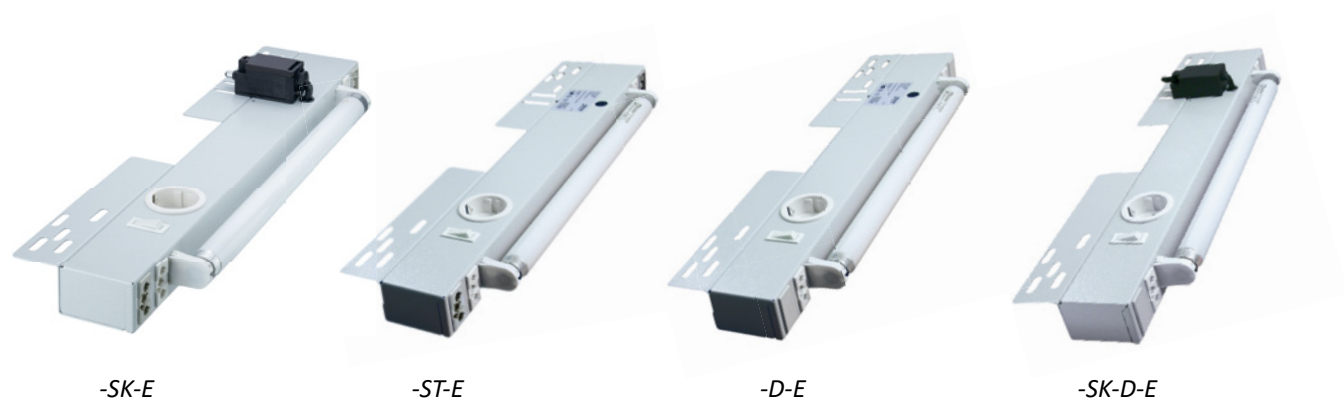
Optional: sockets for various countries (on request)

Special voltages: 12 V, 24 V DC, 48 V DC, 60 V DC, 100 - 240 V with ballast, 120 V 60 Hz

Mounting:

a) rearward fixing enables assembly from below with bolts by aid of a cordless power drill (-R version)

b) lateral fixing for vertical and horizontal installation with bolts (see page 8)



Type	Order No.	Power cons.	Luminous flux	Dim. (L/W/H)	Min. cabinet width
rearward fixing (i.a. suitable for TS, SE and VX types)					
with door position switch					
LL14-SK-R-E	108217	14 W	800 lm	500 x 140 x 76 mm	600 mm
LL18-SK-R-E	108218	18 W	1150 lm	700 x 140 x 76 mm	800 mm
LL30-SK-R-E	108219	30 W	2200 lm	1050 x 140 x 76 mm	1200 mm
with double-sided plug connection for door position switch					
LL14-ST-R-E	108222	14 W	800 lm	500 x 140 x 43 mm	600 mm
LL18-ST-R-E	108221	18 W	1150 lm	700 x 140 x 43 mm	800 mm
LL30-ST-R-E	108220	30 W	2200 lm	1050 x 140 x 43 mm	1200 mm

Note: Production will be discontinued by the end of 2021 in accordance with EU directive 2019/2015 / EU

Sheet steel lights LLxx-(SK/ST/D)-E

Type	Order No.	Power cons.	Luminous flux	Dim. (L/W/H)	Min. cabinet width
through-wiring only					
LL14-D-R-E	108223	14 W	800 lm	500 x 140 x 43 mm	600 mm
LL18-D-R-E	108224	18 W	1150 lm	700 x 140 x 43 mm	800 mm
LL30-D-R-E	108225	30 W	2200 lm	1050 x 140 x 43 mm	1200 mm
with door position switch and potential-free exit					
LL14-SK-D-R-E	108263	14 W	800 lm	500 x 140 x 70 mm	600 mm
LL18-SK-D-R-E	108264	18 W	1150 lm	700 x 140 x 70 mm	800 mm
LL30-SK-D-R-E	108265	30 W	2200 lm	1050 x 140 x 70 mm	1200 mm



-SK-E



-ST-E



-D-E



-SK-D-E

Type	Order No.	Power cons.	Luminous flux	Dim. (L/W/H)	Min. cabinet width
lateral fixing (suitable for all cabinet types)					
with door position switch					
LL14-SK-E	108229	14 W	800 lm	450 x 96 x 76 mm	800 mm
LL18-SK-E	108230	18 W	1150 lm	675 x 96 x 76 mm	1000 mm
LL30-SK-E	108232	30 W	2200 lm	1000 x 96 x 76 mm	1200 mm
with double-sided plug connection for door position switch					
LL14-ST-E	108242	14 W	800 lm	450 x 96 x 43 mm	800 mm
LL18-ST-E	108243	18 W	1150 lm	675 x 96 x 43 mm	1000 mm
LL30-ST-E	108233	30 W	2200 lm	1000 x 96 x 43 mm	1200 mm
through-wiring only					
LL14-D-E	108257	14 W	800 lm	450 x 96 x 43 mm	800 mm
LL18-D-E	108258	18 W	1150 lm	675 x 96 x 43 mm	1000 mm
LL30-D-E	108236	30 W	2200 lm	1000 x 96 x 43 mm	1200 mm
with door position switch and potential-free exit					
LL14-SK-D-E	108319	14 W	800 lm	450 x 96 x 70 mm	800 mm
LL18-SK-D-E	108320	18 W	1150 lm	675 x 96 x 70 mm	1000 mm
LL30-SK-D-E	108348	30 W	2200 lm	1000 x 96 x 70 mm	1200 mm

Note: Production will be discontinued by the end of 2021 in accordance with EU directive 2019/2015 / EU

Connection cable

MAINS CONNECTION AND CONNECTOR CABLE FOR SWITCH CABINET LIGHTS

colour of cable: orange (also available in grey, white, black and yellow)

available also in grey
with UL approbation!

Type	Order No.	Length	Suitable for
mains connection with 3 -pole jack (white)			
LL-N-30 (standard)	101906	3 m	Standard- and LED lights
LL-N-40	101604	4 m	Standard- and LED lights
LED-N-30	108963	3 m	LED-MULTIVOLT
connector cable with 3 -pole jack and plug (white)			
LL-V-04	101665	0,4 m	Standard- and LED lights
LL-V-06 (standard)	102027	0,6 m	Standard- and LED lights
LL-V-08	101700	0,8 m	Standard- and LED lights
LL-V-10	101757	1 m	Standard- and LED lights
LED-V-08	108955	0,8 m	LED-MULTIVOLT



MAINS AND CONNECTOR CABLE FOR AC UNITS

colour of cable: grey; for potential-free contact

Type	Order No.
fan mains connection with 3 -pole jack (grey)	
LL-L-30	101426
LL-L-40	101427
fan connector cable with 3 -pole jack and plug (grey)	
LL-L-V-04	101499
LL-L-V-06	101510
LL-L-V-08	101521
LL-L-V-10	101529

Special lengths only available in 5 m and 7 m !

DOOR POSITION SWITCH

with 3 -pole plug (grey), fixing material for vertical and horizontal installation (suitable for almost all standard cabinets), colour of cable: orange (available also in grey, white, black and yellow as well as a halogen-free version in orange and yellow)

Type	Order No.	Length
door switch (without cable) and VX mount		
S-K-VX	109210	
door switch with cable and VX mount		
S-K-K-04-VX	109265	0,4 m
S-K-K-06-VX	109266	0,6 m
S-K-K-08-VX	109267	0,8 m
S-K-K-10-VX	109268	1 m



OIL FLEX CABLE

100 m Ring, strands: 3 x 1,5 mm²

Type	Order No.	Colour
ÖZ-J 3X1,5-OR	103025	orange
ÖZ-J 3X1,5-GE	103024	yellow
halogen- and silicone-free		
ÖLFLEX 500P-OR	103020	orange
ÖLFLEX 540P-GE	103021	yellow

Temperature control



SMALL COMPACT THERMOSTAT

KTS 1141 with normally open contact
for fan, heat exchanger or switching device control

KTO 1140 with normally closed contact for heater control
Setting range: 0 to 60°C, switch temperature difference: 7 k (± 4 K tolerance),
snap-action contact, switching capacity: 10 A, 250 V AC,
connection: 2-pole terminal 2,5 mm²

Protection type: IP20

Approbation: CE, VDE, EAC, CSA, corresp. RoHS

also available with UL approbation!



DUAL THERMOSTAT ZR011

with normally open and closed contact,
switch temperature difference: 7 k (± 4 K tolerance),
sensor element: thermostatic bimetal,
snap-action contact, switching capacity: 10 A, 250 V AC / 15 A, 120 V AC,
connection: 4-pole terminal 2,5 mm²

Protection type: IP20

Approbation: CE, VDE, EAC, CSA, UL (File No. E164102), corresp. RoHS



HYGROSTAT HYW 90

with changeover contact for controlling fans and heaters
Setting range 40 - 90% relative humidity,
switching difference approx. 5% ($\pm 4\%$ at 50% RH),
sensor element: polyamide tape, change-over switch,
switching capacity: 24 - 250 V AC / 2 A (min. 100 mA), connection: 3 -pole

Protection type: IP20

Approbation: CE, VDE, UL



HYGROTHERM WITH EXTERNAL SENSOR ETF 012

with changeover contact for controlling fans and heaters,
Setting range: 40-90% relative humidity,
switching difference (humidity): 4% RH, switching difference (temp.): 2 k (± 1 K tolerance)
sensor element: made of polyamide tape, snap-action contact,
operating temperature :: 0-60 ° C, max. switching capacity: 10 A, 240 V AC,
voltage: 100 - 240 V AC, 50/60 Hz, connection: 5 -pole terminal 2.5 mm²,
Snap-in technology (for top-hat rail mounting), LED operating display

Protection type: IP20

Approbation: CE, VDE, EAC, UL (File No. E164102), corresp. RoHS



ELECTRONIC HYGROSTAT EFR 012

with changeover contact for controlling fans and heaters,
Setting range: 40-90% relative humidity,
switching difference approx. 5% RH ($\pm 3\%$ RH tolerance),
sensor element: polyamide tape, snap-action contact,
operating temperature: 0-60 ° C, switching capacity: 8 A, 240 V AC
voltage: 230 V AC, 50/60 Hz, connection: 5-pole terminal 2.5 mm²,
Snap-in technology (for top-hat rail mounting), LED power indicator

Protection type: IP20

Approbation: CE, VDE, EAC, UL (File No. E164102), corresp. RoHS

Type	Order No.	Dimensions (H/W/L)	Description
KTS 1141	101059	43 x 33x 60 mm	small compact thermostat/NO
KTO 1140	101056	43 x 33x 60 mm	small compact thermostat/NC
ZR 011	104835	67 x 50 x 46 mm	dual thermostat
HYW 90	103940	64 x 37 x 46 mm	hygrostat
ETF 012	100370	77 x 60 x 43 mm	hygrotherm with external sensor
EFR 012	102847	64,5 x 42 x 38 mm	electronic hygrostat

Fans



QUICK-ASSEMBLY FAN WITH EBM-PAPST MOTOR

230 V, 50/60 Hz (other voltages on request)

Mounting without screws with filter mat P15 / 350S
(for GV 100: filter mat P15 / 150S) for dust particles from 10µm

The fan can be switched from blowing to suction by turning the motor.
For the following models suction version must be ordered separately:
GV 500 and GV 700

Protection degree/class: IP20 / I

Colour: RAL 7035 (other colours on request)

Approbation fan: CE, UL, CSA

Sonderspannung: 24 V, 120 V, 380 V

Type	Order No.	Power cons.	Air flow, free air	Dimensions (L/W/D)	Hole cut-out
GV 100	100635	12 W	25 m ³ /h	105 x 105 x 55 mm	92 x 92 mm
GV 200	100684	19 W	58 m ³ /h	130 x 130 x 72 mm	116 x 116 mm
GV 260	100716	19 W	63 m ³ /h	148 x 148 x 65 mm	125 x 125 mm
GV 300	103768	19 W	115 m ³ /h	204 x 204 x 90 mm	177 x 177 mm
GV 410	101644	18 W	250 m ³ /h	250 x 250 x 102 mm	223 x 223 mm
GV 500	100728	50 W	315 m ³ /h	250 x 250 x 132 mm	223 x 223 mm
GV 600	100661	64 W	580 m ³ /h	323 x 323 x 148 mm	292 x 292 mm
GV 700	100668	115 W	730 m ³ /h	323 x 323 x 156 mm	292 x 292 mm
GV 800	102223	135 W	930 m ³ /h	323 x 323 x 156 mm	292 x 292 mm

EXHAUST FILTER

with the same hole size as the fan, temperature range: -20 ... + 65 ° C,
protection degree / class: IP54 (with extended IP55 filter mat)

Color: RAL 7035 (other colours on request)

Approbation: CE, UL

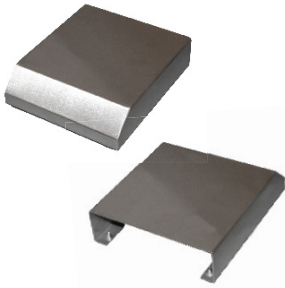
Optional:

- UV resistant (on request)
- various colours

Type	Order No.	Suitable for fan
GF 100K	100613	GV 100
GF 200K	100614	GV 200
GF 250K	100616	GV 260
GF 300K	100617	GV 300
GF 400K	100623	GV 400, 405 and 500
GF 700K	100626	GV 600, 700 and 800



Cover hoods and roof fans



FILTER FAN COVER HOODS AV

- Cover hood to increase the degree of protection of Filter Fans and Exhaust filters up to IP 55
- For outdoor use and food industry
- Protection for hose water and extreme stormy rainfall
- With seal and mounting accessories
- Material: stainless steel, with mounting accessories and gasket

Type	Order No.	Dimensions (L/B/H/	suitable for fans; exhaust filters
AV 200	106270	165 x 176 x 55 mm	GV 200; GF 200K
AV 260	106127	225 x 196 x 55 mm	GV 260; GF 250K
AV 300	106160	300 x 252 x 55 mm	GV 300; GF 300K
AV 400/500	106161	375 x 298 x 80 mm	GV 405/410/500; GF 400K
AV 600/700/800	106164	480 x 374 x 100 mm	GV 600/700/800; GF 700K



ROOF FAN DL

- Sucks warm air out of the top of the cabinet
- Optimal air conduction inside the cabinet
- Low depth when mounted, low noise level
- EMC versions are available
- Painted housing made of sheet steel

Colour: RAL 7035

Protection degree/class: IP54 (IP 44 without exhaust filter) / I



ROOF FAN DLV

- Optimum airflow inside the cabinet
- Mounting and filter change without tools
- Same mounting cut-outs like filter fans GV
- Low depth inside the cabinet
- Combination possibilities with all filter fans types GV 400 – 800
- Housings consist of high quality ABS plastic

Colour: RAL 7035

Protection degree/class: IP54 / I

Type	Order No.	Voltage	Power input	Air flow	Dimensions (L/W/D)
DL 400-230V	100248	230 V, 50/60 Hz	40/45 W	405/475 m³/h	420 x 340 x 108 mm
DLV 410-230V	106621	230 V, 50/60 Hz	45/39 W	240 m³/h	223 x 223 mm
DLV 440-230V	107326	230 V, 50/60 Hz	40/32 W	120 m³/h	223 x 223 mm
DLV 600-230V	103792	230 V, 50/60 Hz	64/80 W	550 m³/h	292 x 292 mm

suitable thermostats see page 11

Wiring plan pockets

Z-SCHALTPL-K...

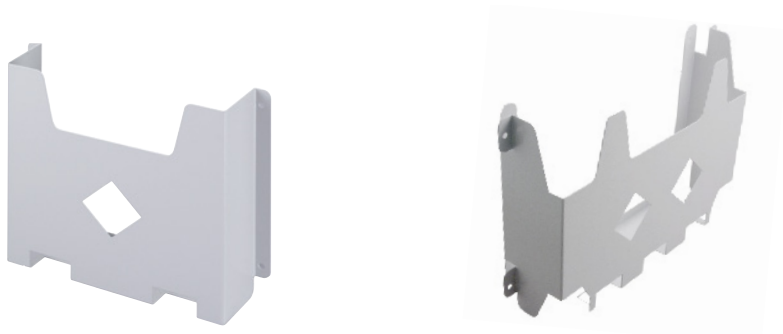
- Material: plastic
- Colour: RAL 7035
- Self-adhesive



Type	Order No.	Dimensions (B/H/T)	Mounting	PU
Z-Schaltpl-K3	103618	320 x 180 x 18 mm	3 adhesive surfaces	
Z-Schaltpl-K4	101675	220 x 235 x 30 mm	3 adhesive surfaces	25 pieces
Z-Schaltpl-K5	101673	156 x 228 x 17,5 mm	3 adhesive surfaces	
Z-Schaltpl-K6	101669	115 x 158 x 5 mm	3 adhesive surfaces	
Z-Schaltpl-K8	101668	86 x 118 x 5 mm	3 adhesive surfaces	

Z-SCHALTPL-B...

- Material: sheet steel
- Colour: RAL 7035
- Installation via screwing and/or glueing



Type	Order No.	External dimensions (W/H/D)	Mounting
Z-Schaltpl-B4 suitable for cabinet doors with a width of 400 mm	103602	298 x 235 x 90 mm	screw fastening
Z-Schaltpl-B5 suitable for cabinet doors with a width of 600 mm	101919	365 x 260 x 90 mm	screw fastening / adhesive tape
Z-Schaltpl-B6 suitable for cabinet doors with a width of 600 mm	103606	498 x 260 x 90 mm	screw fastening
Z-Schaltpl-B8 suitable for cabinet doors with a width of 800 mm	103616	692 x 260 x 90 mm	screw fastening
Z-Schaltpl-B5-393 suitable for cabinet doors of 500 mm width (universally suitable)	105369	396 x 260 x 90 mm	adhesive tape

Inspection windows (in-house production)



SERIES SR - MADE OF ANODIZED ALUMINIUM

Window: 2.5 mm acrylic glass
 Frame: 50 mm depth, 35 mm width (inside dimension 42 mm)
 Material: frame profile anodized aluminum
 Profile seal: EPDM
 Hinge rod stainless steel
 Opening angle: 90 °
 Protection type: IP42 (*IP54 for an additional charge*)
 Closures:
 - Toggle lock with lock (standard) incl. 2 keys (optionally also without lock)
 - Cylinder rotary latch
 - Swivel lever
 Further closures on request

Production dimensions according to customer requirements:
 Available in approx. 1 CW (from 220 x 170 mm to 1000 x 1600 mm)

SR special version with swivel lever

Inspection window with swivel lever installed on the side, ideal for the inclusion of customer-specific profile half cylinders (*standard mounting for swivel lever*)

Optional:
 - With stand
 - Stainless steel hinges and plastic lock for use in the food industry

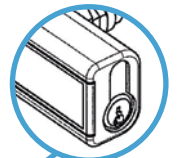


SERIES SRA - MADE OF ACRYLIC GLASS

Frame depth: 56 mm (inside dimension 42 mm)
 Material: acrylic glass XP
 Wall thickness: 8 mm
 Hinge rod: stainless steel
 Opening angle: 90 °
 Protection type: IP43 (*IP54 for an additional charge*)
 Locks: Turnbuckle with lock and 2 keys

Windows also available in special sizes (on request)

Optional:
 - Customer-specific profile half cylinder according to DIN 18252 (EN 1303), Length: 40 mm (30/10)
 - Stainless steel hinges and plastic lock for use in the food industry



Type
(Dim. in mm W/H/D)

Order No.

SRA 250 x 200 x 56	106123
SRA 400 x 200 x 56	106053
SRA 400 x 400 x 56	106054
SRA 400 x 600 x 56	103046
SRA 600 x 400 x 56	104139
SRA 600 x 600 x 56	105193
SRA 600 x 800 x 56	105260
SRA 800 x 800 x 56	106059

All windows also available with magnetic lock on request

Heaters



SMALL SEMICONDUCTOR HEATER HGK

Heating element: PTC resistor - temperature limiting
 Voltage: 120 - 240 V AC/DC
 Heater body: aluminum profile, anodized
 Mounting: clip for 35 mm DIN rail (EN 60715)
 Operating/Storage temperature: -45 to +70 °C (-49 to +158 ° F)
 Connection: 3 x 0.5 mm² x 300 mm cable (silicone)
 Fitting position: vertical airflow (air outlet up, connection on bottom)
Protection degree/class: IP44 / I (earthed)
Approval: CE, VDE, EAC, corresp. RoHS, (UL on request)



SEMICONDUCTOR HEATER HG140 (Heaters up to 1200 W on request!)

Heating element: PTC resistor - temperature limiting
 Voltage: 120 - 240 V AC/DC
 Heater body: aluminum profile, anodized
 Mounting: clip for 35 mm DIN rail (EN 60715)
 Operating/Storage temperature: -45 to +70 °C (-49 to +158 ° F)
 Connection: 3 x pressure clamps for stranded wire 0.5 - 1.5 mm² (with wire end ferrule) and rigid wire 0.5 - 2.5 mm²
 Fitting position: vertical airflow (air outlet up)
Protection degree/class: IP20 / I (earthed)
Approval: CE, VDE, EAC, corresp. RoHS, UL (File No. E150057)



SEMICONDUCTOR HEATER CS 060 (touch-safe)

Heating element: PTC resistor - temperature limiting
 Voltage: 120 - 240 V AC/DC
 Heater body: aluminum profile, anodized
 Mounting: clip for 35 mm DIN rail (EN 60715)
 Operating/Storage temperature: -45 to +70 °C (-49 to +158 ° F)
 Connection: 4-pole terminal 2.5 mm², tightening torque 0.8 Nm
 Fitting position: vertical airflow (air outlet up)
Protection degree/class: IP20 / II (double insulated)
Approval: CE, VDE, EAC, corresp. RoHS, UL (File No. E150057)

Type	Order No.	Power cons.	Inrush current max.	Rec. pre-fuse T (time-lag)	Dimensions (L/W/D)
Small semiconductor heater					
HGK 010	100886	10 W	1 A	2 A	52 x 50 x 25 mm
HGK 020	100902	20 W	2,5 A	4 A	60 x 50 x 25 mm
HGK 030	100906	30 W	3 A	4 A	70 x 50 x 25 mm
Semiconductor heater					
HG140-30W	100869	30 W	3 A	4 A	109 x 70 x 50 mm
HG140-45W	100873	45 W	3,5 A	4 A	109 x 70 x 50 mm
HG140-60W	100877	60 W	2,5 A	4 A	184 x 70 x 50 mm
HG140-75W	100882	75 W	4 A	6,3 A	184 x 70 x 50 mm
HG140-100W	100851	100 W	4,5 A	8 A	184 x 70 x 50 mm
HG140-150W	100855	150 W	9 A	10 A	264 x 70 x 50 mm
CS 060-50W	103185	50 W	2,5 A	4 A	110 x 60 x 90 mm
CS 060-100W	103198	100 W	4,5 A	8 A	110 x 60 x 90 mm
CS 060-150W	103546	150 W	8 A	10 A	150 x 60 x 90 mm

suitable thermostats see page 11

Fan heaters



COMPACT SEMICONDUCTOR FAN HEATER CS 028 / CSL 028

Heating element: PTC thermistor - temperature limiting

Voltage: 230 V, 50/60 Hz

Airflow, free flow: CS 028: 13.8 m³/h; CSL 028: 45 m³/h

Mounting: clip for 35 mm DIN rail, EN 60715 or screw fastening (∅ 5.3 mm)

Connection: 2-pole clamp max. 2.5 mm² (CSL 028 with strain relief), clamping screw torque 0.8 Nm max.

Fitting position: vertical airflow (air outlet up)

Protection degree/class: IP20 / II

Approval: CE, VDE, EAC, corresp. RoHS, UL

Type	Order No.	Power cons.	Inrush current max.	Rec. pre-fuse T (time-lag)	Dimensions (L/W/D)
CS 028 with clip fixing					
CS 028-150	104287	150 W	12 A	10 A	75 x 65 x 90 mm
CSL 028-250	106299	250 W	9 A	10 A	90 x 85 x 111 mm
CSL 028-400	102160	400 W	15 A	16 A	90 x 85 x 111 mm
CS 028 with screw fixing					
CS 028-150	107610	150 W	12 A	10 A	75 x 65 x 90 mm
CSL 028-250	105831	250 W	9 A	10 A	90 x 85 x 111 mm
CSL 028-400	107615	400 W	15 A	16 A	90 x 85 x 111 mm



SMALL SEMICONDUCTOR FAN HEATER CR 027

Heating element: PTC resistor - temperature limiting

Temperature safety cut-out: to protect against overheating in case of fan failure, automatic reset

Voltage: 220 - 240 V AC, 50/60 Hz

Airflow, free flow: 475 W = 35 m³/h; 550 W = 45 m³/h

Mounting: clip for 35 mm DIN rail (EN 60715)

Connection: 2-pole clamp 2.5 mm², clamping torque 0.8 Nm

Fitting position: vertical airflow (air outlet up)

Protection degree/class: IP20 / II (double insulated)

Approval: CE, VDE, EAC, corresp. RoHS, UL (File No. E

COMPACT FAN HEATER HGL 046

Heating element: resistance heating

Voltage: 230 V AC, 50/60 Hz (Power consumption: see table)

Airflow, free flow: 45 m³/h (50 Hz) or 54 m³/h (60 Hz)

Heater body: aluminum profile, anodized

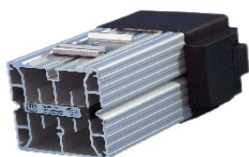
Mounting: clip for 35 mm DIN rail (EN 60715)

Connection: internal connection terminal 1.5 mm² with strain relief, clamping torque 0.8 Nm max.

Fitting position: vertical airflow (air outlet up)

Protection degree/class: IP20 / I (earthed)

Approval: CE, VDE, EAC, corresp. RoHS, UL (File No. E150057)



Type	Order No.	Power cons.	Inrush current max.	Rec. pre-fuse T (time-lag)	Dimensions (L/W/D)
CR 027-475	102307	475 W	11 A	10 A	165 x 100 x 128 mm
CR 027-550	100213	550 W	13 A	10 A	165 x 100 x 128 mm
HGL046-250	101916	250 W	1,5 A	2 A	182 x 100 x 85 mm
HGL046-400	105422	400 W	2 A	4 A	222 x 100 x 85 mm

suitable thermostats see page 11

Mass storage device, sockets



DIGITAL MASS STORAGE DEVICE DD FOR TOP HAT RAIL TS 35

Type	Order No.	Description
DD-08	106274	Mass storage, 8 GB with USB 2.0 connection
DD-VK-18	103838	USB extension cable

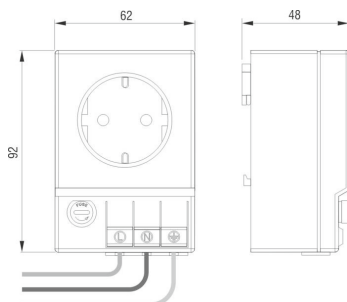
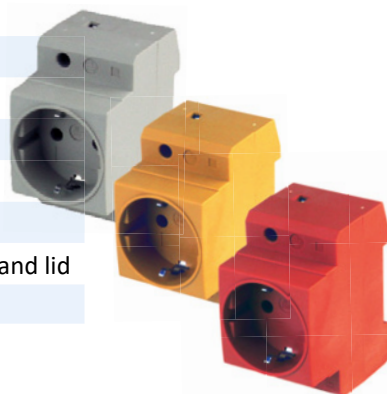


ST SOCKETS FOR TOP-HATRIL MOUNTING

Rated voltage: 250 V AC, 16 A, DIN 49440, installation height 60 mm, **Approbation: VDE**

Type	Order No.	Colour	Features
ST-01. *	101984	grey	
ST-01.-YE *	101265	yellow	
ST-01.-YE-LED	104475	yellow	with LED
ST-01.-RED*	101893	red	
ST-02	103340	grey	with ground pin
ST-03	103341	grey	with wire protection and lid

* PU: 10 pieces



SD SOCKETS

with fine wire fuse ($\varnothing 5 \times 20$ mm) and terminal connection ($3 \times 2,5$ mm²), Dimensions: 92 x 62 x 48 mm

Type	Order No.	Rated voltage	Rated current	Fine wire fuse	Country	Approbation
SD 035-D	103170	250 V	6,3 A	with fuse	Germany, Russia	CE, EAC
SD 035-D-O	100941		16 A	without fuse		
SD 035-F	103173	250 V	6,3 A	with fuse	France, Poland, Czech Republic, Slovakia	CE
SD 035-F-O	101028		16 A	without fuse		
SD 035-I	101923	250 V	6,3 A	with fuse	Italy	CE
SD 035-I-O	101087		16 A	without fuse		
SD035-CH	103167	250 V	6,3 A	with fuse	Switzerland	CE
SD 035-CH-O	100835		10 A	without fuse		
SD 035-GB	103176	250 V	6,3 A	with fuse	Great Britain, Ireland	CE
SD 035-GB-O	101043		13 A	without fuse		
SD 035-USA	103179	125 V	6,3 A	with fuse	USA, Canada	CE, UL, c-UL
SD 035-USA-O	101180		15 A	without fuse		
SD 035-AU/CN-O	100667	240 V	10 A	without fuse	Australia, China	CE

Protective conductors, earthing tapes

PROTECTIVE CONDUCTORS WITH M8 RING TERMINAL

Wire thickness: 0,2mm, Material: galvanized copper; connection: ends pressed into copper sleeves

Approbation: CE



Type	Order No.	Cross section	Length
EK 17004	100308	4 mm ²	170 mm
EK 17006	100311	6 mm ²	170 mm
EK 17016	100318	16 mm ²	170 mm
EK 17025	100319	25 mm ²	170 mm
EK 30004	100341	4 mm ²	300 mm
EK 30006	100344	6 mm ²	300 mm
EK 30016	101161	16 mm ²	300 mm
EK 30025	100352	25 mm ²	300 mm

EARTHING TAPES FOR EMC EQUITABLE GROUNDING

Material: tinned copper with contacts pressed on both sides

Type	Order No.	Cross section	Bore	Dimensions (LxW)
FB 200-10-7	100411	10 mm ²	7 mm	200 x 17 mm
FB 200-16-9	100425	16 mm ²	9 mm	200 x 23 mm
FB 200-25-9	100430	25 mm ²	9 mm	200 x 23 mm
FB 300-10-7	100438	10 mm ²	7 mm	300 x 23 mm
FB 300-16-9	100444	16 mm ²	9 mm	300 x 23 mm
FB 300-25-9	100446	25 mm ²	9 mm	300 x 23 mm



WE ARE AT YOUR DISPOSAL FOR ANY QUESTIONS OR INFORMATION:

Tel: 0 27 43 / 9 10 66-0

Fax: 0 27 43 / 9 10 66-23

E-Mail: info@richter-elektrotechnik.de

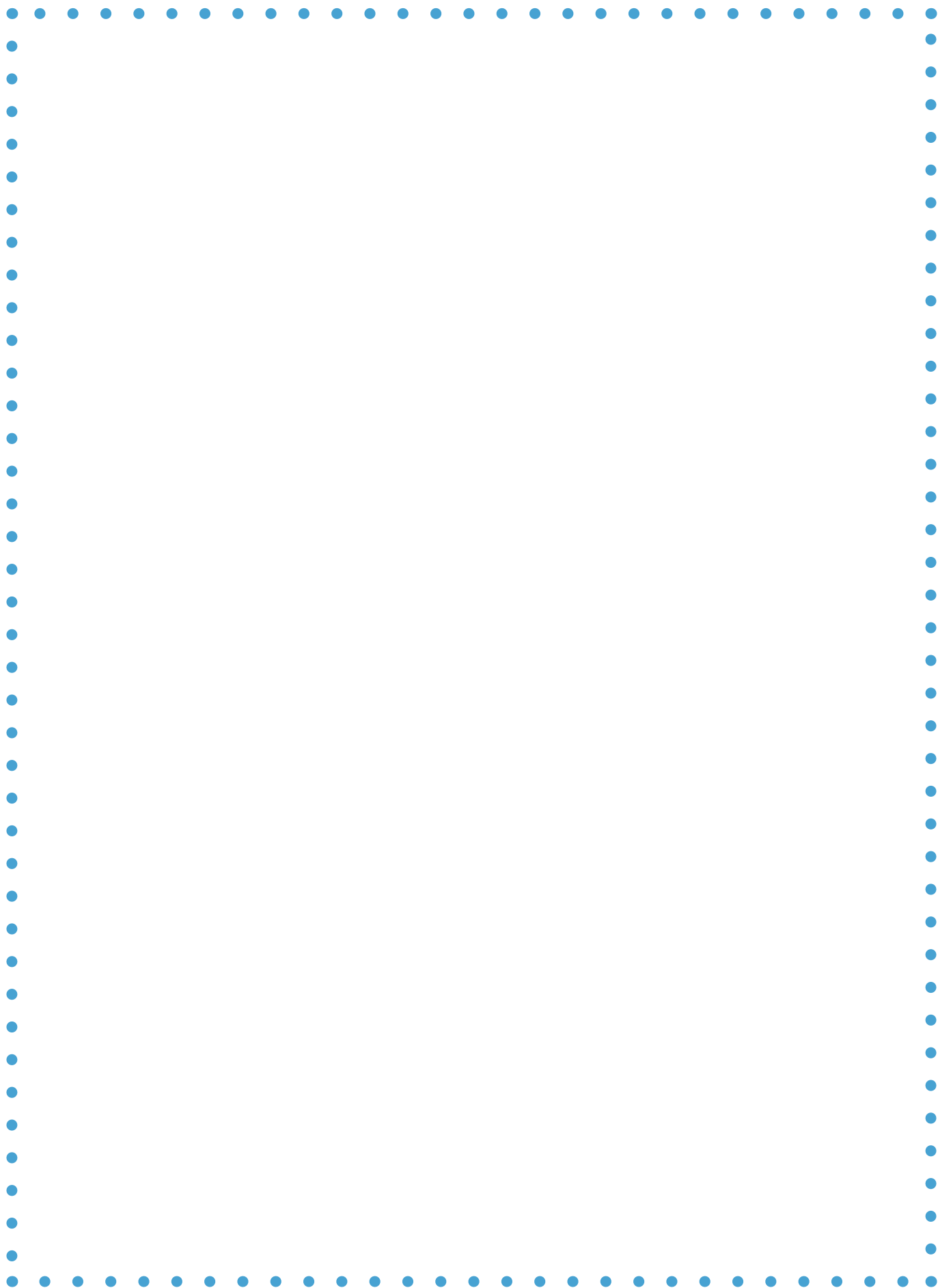
Inquiries: anfrage@richter-elektrotechnik.de

Purchase orders: bestellung@richter-elektrotechnik.de

Take notes

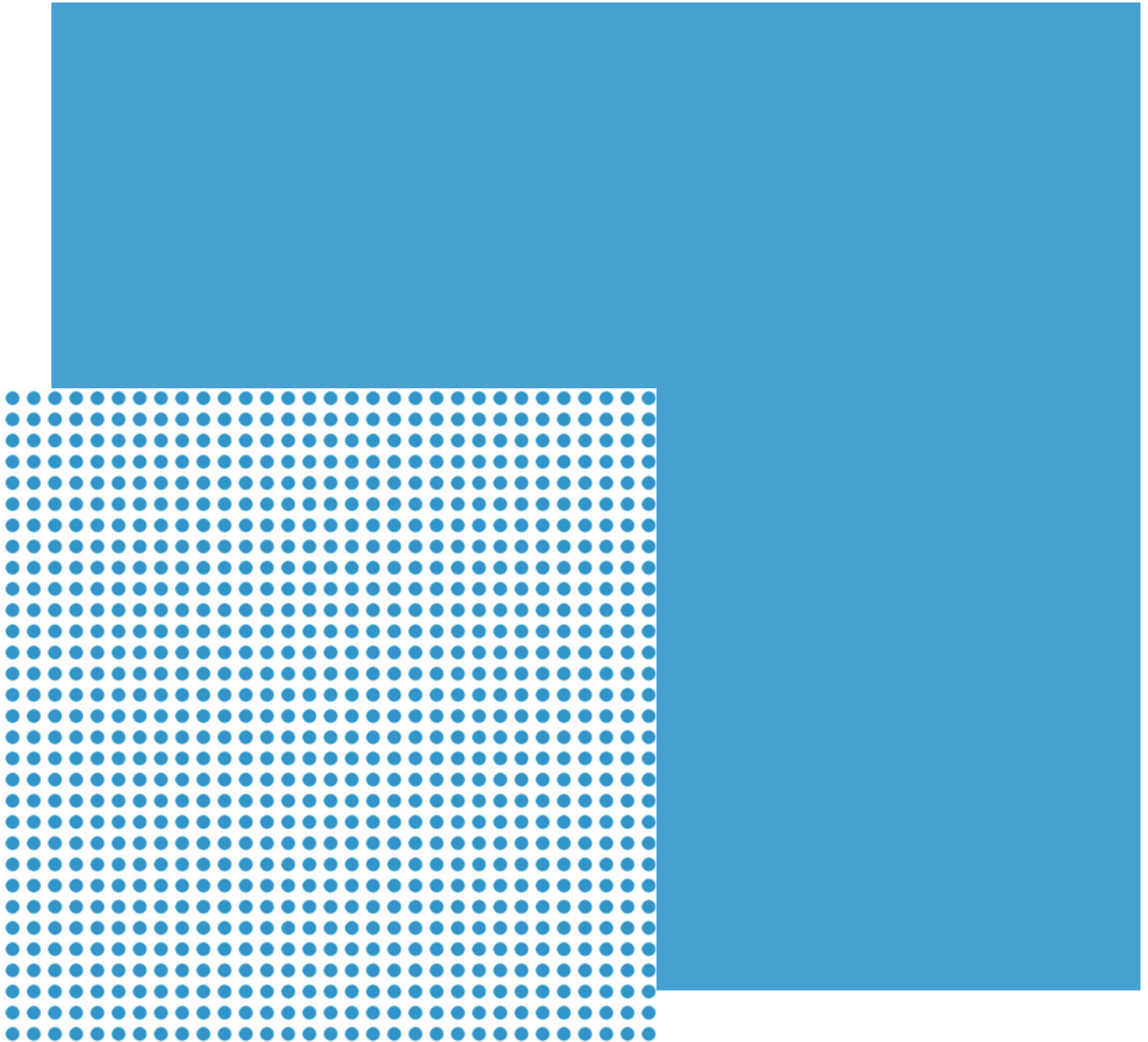
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Take notes





SWITCH CABINET ACCESSORIES 01/21



Richter Elektrotechnik GmbH & Co. KG
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