

# **CONNECT AND PROTECT**







### **HEATERS FROM 10 W TO 150 W**

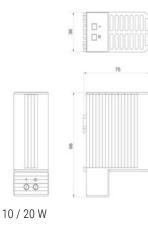


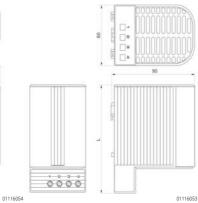


50 / 100 / 150 W

10/20W

Dimension drawing





50 / 100 / 150 W

- · Compact heater without fan
- · Simple and fast assembly with clip-on attachment
- Broad range voltage input AC/DC 120 ... 240 V
- Low surface temperature, protective insulation, and temperature limitation with PTC resistance



#### **DELIVERY INCLUDES** (completely assembled)

Item	Qty	Description
1	1	Heater element, voltage AC/DC 100 240 V; PTC resistor, self- regulating
2	1	Heating body housing, plastic UL94 V-0; type of fixing: Clip for 35 mm DIN rail EN 60715
3	1	Connection: 2-pin (10 W, 20 W) and/or 4-pin (50 W, 100 W, 150 W) terminal, 2.5 mm <sup>2</sup> , torque 0.8 Nm max.

#### **ORDER INFORMATION**

Description	Part no.
10 W	60715-220
20 W	60715-221
50 W	60715-222
100 W	60715-223
150 W	60715-224

#### NOTE

- Thermostat for heating see page 4.65
- Hygrostat see page 4.68

#### **TECHNICAL DATA**

	10 W	20 W	50 W	100 W	150 W	
Heater output in W	10	20	50	100	150	
Max. switch-on current in A	1.0	2.5	2.5	4.5	8.0	
Pre-fuse, delay-action in A	2.0	4.0	4.0	8.0	10.0	
Type of protection	IP 20	IP 20	IP 20	IP 20	IP 20	
Class of protection	II	II	11	ll		
Dimensions H × W × D in mm	98 × 38 × 75	98 × 38 × 75	110 × 60 × 90	110 × 60 × 90	150 × 60 × 90	
Weight in kg	0.2	0.3	0.3	0.3	0.5	
Connection	2-pin terminal, 2.5 mm <sup>2</sup> ,	torque 0.8 Nm	4-pin terminal, 2.5 mm <sup>2</sup>	, torque 0.8 Nm		
Surface temperature in °C	< + 80°C, with exception	of above mesh surface				
Test seal	CE, UL, VDE, EAC, RoHS	CE, UL, VDE, EAC, RoHS				
Mounting	Clip-on attachment for 3	35 mm DIN rail (EN 60715	)			

### HEATERS WITH HEATER FANS FROM 150 W TO 400 W



### Compact heater with fan, small, compact design with high heater output

SCHROFF

- · Simple and fast assembly with clip-on attachment or bolt fixing
- Dynamic heating up and temperature limitation by PTC technology
- Quiet



#### **DELIVERY INCLUDES** (completely assembled)

Item	Qty	Description
1	1	Heater element, voltage 230 V <sub>AC</sub> , resistor (PTC resistance) self- regulating
2	1	Heating body housing, plastic UL94 V-0; type of fixing: Clip for 35 mm DIN rail EN 60715
3	1	Axial fan, airflow from bottom to top
4	1	Connection: 2-pin terminal, 2.5 mm <sup>2</sup> , torque 0.8 Nm max.

#### **ORDER INFORMATION**

Description	Part no.
150 W	60715-225
250 W	60715-226
400 W	60715-227

#### NOTE

- Thermostat for heating see page 4.65
- Hygrostat see page 4.68

## Dimension drawing

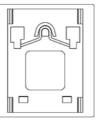




01116050

#### Clip attachment

01116004



TECHNICAL	DATA

	150 W	250 W	400 W
Heater output in W	150	250	400
Max. switch-on current in A	9.0	12	15
Pre-fuse, delay-action in A	10	10	16
Axial fan, free blowing output	13.8 m²/h	45 m²/h	45 m²/h
Type of protection	IP 20	IP 20	IP 20
Class of protection	II	II	I
Dimensions $H \times W \times D$ in mm	75 × 65× 90	90 × 85 × 111	90 × 85 × 111
Weight in kg	0.3	0.5	0.5
Surface temperature in °C	< + 50°C, with exception of a	above mesh surface	< + 65°C, with exception of above mesh surface
Connection	2-pin terminal, 2.5 mm², torc	que 0.8 Nm max.	
Test seal CE, UL, VDE, EAC, RoHS			
Mounting	Clip-on attachment for 35 m	m DIN rail (EN 60715)	



### HEATERS FROM 30 W TO 150 W

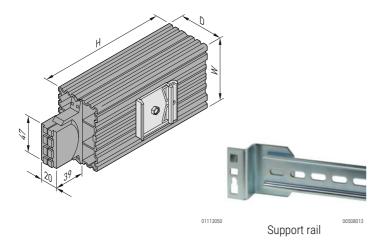


- Radiator heater (without fan)
- Simple and fast assembly with clip-on attachment and press-on terminal connection
- + Wide input voltage range 110 ... 250  $\rm V_{AC}$
- Temperature limiting with PTC resistor



#### **DELIVERY COMPRISES** (completely assembled)

Item	Qty	Description
1	1	Heater element, voltage range 110 250 V <sub>AC</sub> ; resistor (PTC) self- regulating
2	1	Heating body, Al extrusion, anodised Fixing: clip for 35 mm DIN rail EN 50022
3	1	Connection: type 30, with connecting cable (3 x 0.5 mm <sup>2</sup> , 300 mm long, black); type 45, 100, 150 with press-on terminal connection (for stranded/rigid wire 3 x 0.5 2.5 mm <sup>2</sup> )



#### **ORDER INFORMATION**

	30	45	100	150	
Description	Part no.	Part no.	Part no.	Part no.	
Heaters from 30 W to 150 W	60715-020	60715-021	60715-023	60715-030	
Support rail DIN rail EN 50022 (35 mm), length 215 mm, 1 piece					

01102004

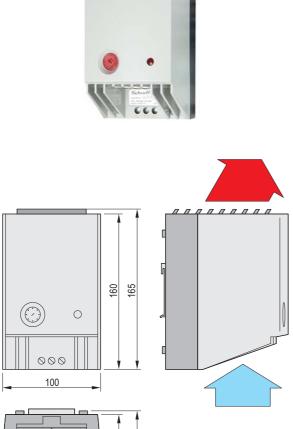
**TECHNICAL DATA** 45 W 150 W 30 W 100 W 150 Heater output in W 30 45 100 approx.140 Surface temperature in °C approx. 100 approx. 105 approx. 130 Max. switch-on current in A 3,5 4.0 9,0 3,0 IP 20 IP 20 Type of protection IP 44 IP 20 Class of protection L L L L Dimensions  $H \times W \times D$  in mm 70 × 25 × 50  $69 \times 70 \times 50$  $144 \times 70 \times 50$  $224\times70\times50$ Weight in kg 0.2 0.3 0.5 0.7 VDE, CE, UL (File E150057) CE, UL (File E150057) CE, UL (File E150057) CE, UL (File E150057) Test seal Clip-on attachment for 35 mm DIN rail (EN 50022) Assembly

#### NOTE

- Thermostat for heating see page 4.65
- Hygrostat see page 4.68



### HEATER FANS 475/550 W



128



- Heater with fan and thermostat
- · Simple and fast assembly with clip-on attachment
- 3-pin terminal clamp, separate heater/fan connection
- Thermostat from 0 ... 60 °C
- Temperature limiting with PTC resistor



#### **DELIVERY COMPRISES** (completely assembled)

Item	Qty	Description
1	1	Plastic housing, polycarbonate (RAL 9002, grey white), clip for 35 mm DIN rail EN 50022
2	1	Heater element, 230 $V_{AC}$ , resistor (PTC) self-regulating
3	1	Thermostat
4	1	230 V <sub>AC</sub> fan

#### ORDER INFORMATION

01108030

01108069

00508013

Description	Part no.
Heater 475 W	60715-017
Heater 550 W	60715-018
Support rail DIN rail EN 50022 (35 mm), length 215 mm, 1 piece	20715-001

#### **TECHNICAL DATA**

Voltage range	230 VAC				
Frequency	50 Hz	60 Hz	50 Hz	60 Hz	
Heater output	475 W	550 W	550 W	650 W	
Air capacity of axial fan	35 m <sup>3</sup> /h	39 m <sup>3</sup> /h	45 m <sup>3</sup> /h	50 m <sup>3</sup> /h	
Current at switch-on approx.	11 A		13 A		
Weight	0.9 kg		1.1 kg		
Heater element	Resistor (P	TC), self-reg	ulating		
Connection	3-pin connecting terminal, 2.5 mm <sup>2</sup> , separate connection heating/fan				
Thermostat	Adjustmen	Adjustment range 0 60 °C			
Control lamp of control system	Glow lamp				
Temperature control	In the even	t of fan failu	re		
Type of protection	IP 20				
Class of protection	II				
Assembly	Clip-on attachment for 35 mm DIN rail (EN 50022)				
Dimensions	Height 165 mm, width 100 mm, depth 128 mm				

Support rail



### HEATER FAN 400 W, MODULAR



Example of a complete heater unit: 1: heater, 2: fan, 3: protective grille, 4: connection cable



Heater element



Support rail

- Modular system consisting of: heater element, fan, protective grille and connecting cable
- Fan not included in delivery extent; please order fan with desired air capacity separately
- · Simple and fast assembly with clip-on attachment
- Overheating protection through thermal switch



#### **DELIVERY COMPRISES** (completely assembled)

Item	Qty	Description
1	1	Heater element, high-performance cartridge
2	1	Connecting cable fan - heating distributor, length 0.3 m
3	1	GND/earth cable, ring tag - open end, length 0.3 m
4	1	Clip-on attachment for DIN rail with assembly kit

#### **ORDER INFORMATION**

Description	230 V <sub>AC</sub>
	Part no.
Heater fan 400 W, modular	60715-029
Support rail DIN rail EN 50022 (35 mm), length 215 mm, 1 piece	20715-001

#### **TECHNICAL DATA**

Voltage range	230 V <sub>AC</sub>
Current at switch-on	1.8 A
Heater output	400 W
Air capacity m <sup>3</sup> /h	Please choose desired fan
Surface temperature with fan	Approx. 140 °C
Type of protection	IP 20
Class of protection	I, with GND/earthing
Dimensions:	22 x 120 x 160
height x width x depth in mm	
Assembly	Clip for 35 mm DIN rail EN 50022

#### NOTE

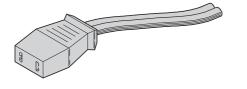
- Attention: Danger of overheating, never use heater without fan
- Fan see page 4.63
- Thermostat for heating see page 4.65
- Hygrostat see page 4.68

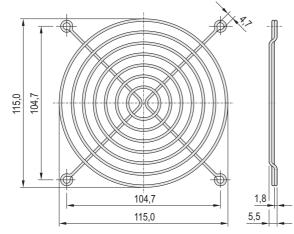


### AC FANS FOR HEATING 400 W



Connecting cable





Protective grille

• The fan is screwed below the heater and the cable is connected to the heater (please order connecting cable and protective grille separately)

#### **DELIVERY COMPRISES**

Item	Qty	Description
1	1	Fan (width 119 mm, depth 119 mm)

#### **ORDER INFORMATION**

	Height mm	Airflow volume m <sup>3</sup> /h	115 V <sub>AC</sub> Part no.	230 V <sub>AC</sub> Part no.
Туре А	25	84	20713-146	20713-142
Туре В	25	108	20713-147	20700-001
Туре С	38	162	20713-244	20713-243
PVC (2 x 0.75 mm <sup>2</sup> ), 1 m long with 2 Faston connectors 2.8 x 0.5 mm to DIN 46343 T1, 1 piece <b>21101-246</b>				
Protective	60197-019			

#### **DIMENSIONS** AC fans

Туре	Туре	e A	Туре	В	Туре	С
Frequency in Hz	50	60	50	60	50	60
Airflow volume in m <sup>3</sup> /h	84	90	108	120	162	192
Noise level per fan in dB(A)	29	30	34	38	37	41
Max. static pressure in Pa	23	21	41	41	73	88
Max. ambient temperature in °C	70	70	70	70	70	70
Power consumption in W	8	7	14	11	15	14
Dimensions: height in mm (width 119 mm × depth 119 mm)	25		25		38	

#### NOTE

0110800

KTA43091

01108055

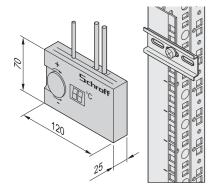
• Please order connection cable and protective grille separately



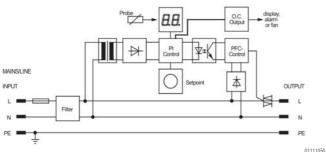
### **SPEED CONTROL FOR FANS WITH C13 PLUG**



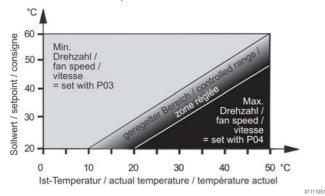
#### Speed controller with connecting cables



Block diagram



Speed varies in relation to temperature



- Suitable for all AC fans and fan units (up to 300 W) with IEC 60320 C13 plug (plug & play)
- · Simple to mount on the support rail provided
- Simple adjustment of switch-on temperature (with knob and digital display)
- · External sensor can be fitted at a desired measurement point
- . Open-collector output (parametrisable)

Description

- Alarm output (active/passive) DC fans (PWM output)
- Remote display (via optional digital display with front panel)

#### **DELIVERY COMPRISES**

Otv

1



		Technical Data
2	1	Temperature sensor, cable length 1.5 m
3	1	Fan cable, 2 m, with IEC 60320 socket
4	1	Mains cable, 3 m, with connecting plug
5	1	Support rail, St, zinc-plated (EN 50022)
6	1	Assembly kit

#### **ORDER INFORMATION**

Speed control for fans with C13 plug	Part no.
Mains cable SCHUKO/UTE plug	60715-005
Mains cable IEC 60320 C13 plug	60715-006
Accessories	
Thermostat with digital display 230 VAC , 1 piece	Page 4.67
Thermostat with digital display 115 VAC, 1 piece	Page 4.67
Connecting cable for DC fans or alarm output Length 2 m, 2-wire (0.34 mm <sup>2</sup> ), 1 piece	60715-007

#### **TECHNICAL DATA**

01105055

Voltage range	115 240 V <sub>AC</sub> (90 264 V <sub>AC</sub> )		
Frequency	48 62 Hz		
Power consumption	max. 4 VA		
Display	LCD display, height 13 mm, red		
Max. connection power	300 W (230 V <sub>AC</sub> ), 150 W (115 V <sub>AC</sub> )		
Max. continuous current	1.3 A		
Adjustment range	+20 +60 °C with potentiometer		
Fan speed frequency	25 100 %		
Sensor	External NTC resistor		
Sensor connection	AMP plug contact and cable, 1.5 m, 2 x 0.22 mm		
In case of sensor failure	Max. speed		
Fan connection	Cable 2 m with C13 IEC 60320 socket		
Open-collector output	AMP plug contact, programmable function, $V_{max.}$ 30 $V_{DC}$ , $I_{max.}$ 30 mA		
Mains connection	Cable 3 m with plug		
Mechanics	Case, IP 30, plastic, weight 0.5 kg, mounts on horizontal rail with lip DIN EN 50022		
Dimensions	Width 120 mm, height 70 mm, depth 25 mm		
Environmental conditions	0 60°C, max. 85 % rel. humidity, non-condensing		

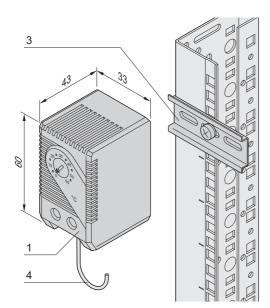
#### NOTE

Thermostat with digital display, see page 4.67



### THERMOSTAT WITH INTEGRATED TEMPERATURE SENSOR







Connection cable: 2-pin, ferrules - IEC socket



Connection cable: 2-pin, ferrules - 3-pin, ferrules

- To control fans or heaters
- Adjustment range 5 ... 60 °C
- Individual adaptation with three separate components: thermostat (for cooling or heating), assembly material, connecting cable (IEC connector or ferrules)
- 2 versions

01108004

- for heating
- for cooling

# ( E 91)

#### **DELIVERY COMPRISES**

Item	Qty	Description
1	1	Thermostat, width 33 mm, height 60 mm, depth 43 mm; clip-on attachment for 35 mm DIN rail EN 50022, switched voltage 120 250 V <sub>AC</sub>
2	1	User manual

#### **ORDER INFORMATION**

Description	Part no. for cooling	Part no. for heating
Thermostat with integrated temperature sensor	60715-136	60715-137
Accessories		
Item 3 DIN rail (EN 50022) 35 mm; length 75 mm materials kit, PU 1 set	n; with fixing	21120-178
Item 4 Connection cable, SCHUKO/UTE connect length 1.5 m; connection on thermostat/hygrosta connection on fan IEC socket; 1 piece	,	62150-201
Item 4 Connection cable, SCHUKO/UTE connect cable length 1.5 m; connection on thermostat/hy ferrules; connection on fan/heater, 3-pin, ferrules	grostat, 2-pin,	62150-264

#### DIMENSIONS

01108050	Thermostat	for cooling (make contact), blue control button	for heating (break contact), red control button
	Adjustment range	0 60 °C	
	Switching temperature difference	7 K (± 4 K tolerance)	
	Sensing element	Thermobimetal (snap-action	n contact)
	Contact resistance	<10 m?	
	Lifespan	>100000 cycles	
	Max. switch performance	10 A at 250 V <sub>AC</sub> , 15 A at 120 30 W at DC voltage	) V <sub>AC</sub> ;
	Connection	2-pin clamp, up to 2.5 mm <sup>2</sup> , torque max. 0.5 Nm	
01108009	Case	Plastic, in accordance with	UL 94 V-0, light grey
	Dimensions	Height 60 mm, width 33 mm	n, depth 43 mm
	Assembly	Clip for 35 mm DIN rail, EN	50022
	Weight	40 g	
	Operating/storage temperature	-20 +80 °C/-45 +80 °C	
	Protection class	IP 20	



### THERMOSTAT WITH INTEGRATED TEMPERATURE SENSOR



- To control heaters or fans
- Adjustment range 5 ... 60 °C

#### **DELIVERY COMPRISES**

Item	Qty	Description
1	1	Thermostat with clip-on attachment for 35 mm DIN rail EN 50022, voltage 200 250 $V_{AC}$ and 100 130 $V_{AC}$
2	1	Support rail, length 200 mm
3	1	Connection cable, length 1.5 m
4	1	Strain relief
5	1	Assembly kit for cabinet assembly

#### **ORDER INFORMATION**

Description	Part no.
Thermostat with integrated temperature sensor	20715-002

#### **TECHNICAL DATA**

01102008

Dimensions	Height: 75 mm, width: 75 mm, depth: 25 mm	
Adjustment range	5 60 °C	
Switch difference	0,5 K	
Supply voltage	200 250 V <sub>AC</sub>	
Contact load (ohmic load/inductive load)	Heat (terminals 1 - 2) 10 A / 4 A Cool (terminals 1 - 3) 5 A / 2 A	
Contacts	Changeover contact, single pole	
Type of assembly	Bolt-on, snap mounting for slide rail	

#### THERMOSTAT WITH EXTERNAL TEMPERATURE SENSOR



- To control heaters or fans
- External sensor can be positioned near the critical sub-assembly
- Adjustment range 20 ... 60 °C, switch difference 3 ... 10 K

# CE

01102007

#### **DELIVERY COMPRISES**

Item	Qty	Description
1	1	Thermostat with external temperature sensor, sensor length approx. 1.7 m
2	1	Mounting plate for cabinet assembly, Al, 2.5 mm
3	1	Assembly kit

#### **ORDER INFORMATION**

Description	Part no.
Thermostat with external temperature sensor	20715-003

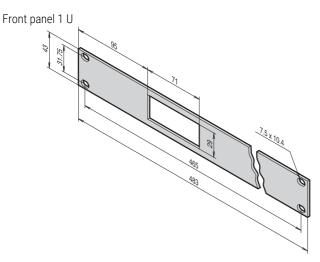
#### **TECHNICAL DATA**

Dimension (height x width x depth)	93 mm x 68 mm x 44 mm
Adjustment range	20 60 °C
Switching difference	3 10 K
Mains/line voltage	90 260 V <sub>AC</sub>
Contact load (ohmic load/inductive load)	24 A/10 A
Contacts	Change-over, single pin
Assembly	Screw-fixed



### THERMOSTAT WITH DIGITAL DISPLAY





- Adjustment range from -50 to +100 °C (switch difference 0 ... 10 °C)
- Display switchable from °C to °F
- Programmable (secured against unauthorised operation)
- 3-character red segment display



#### **ORDER INFORMATION**

Description	Part no.
Thermostat with digital display, 230 V <sub>AC</sub>	60715-132
Thermostat with digital display, 115 V <sub>AC</sub>	60715-133
Front panel 1 U, RAL 7035 with cut-out for thermostat	30118-315
Front panel 1 U, anodised with cut-out for thermostat	30118-267
Front panel 1 U, RAL 7021 with cut-out for thermostat	30118-360

#### **TECHNICAL DATA**

01197001

SZA45550

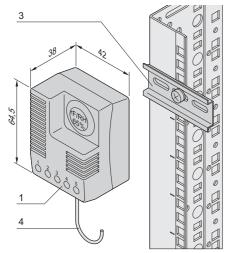
Operating voltage	115 V <sub>AC</sub> or 230 V <sub>AC</sub>
Power consumption	Approx. 3.5 W
Dimensions	Height: 35 mm, width: 76 mm, depth: 59 mm
Assembly cut-out	28.8 × 70.5 mm
Adjustment range	-50 +100 °C
Switch difference	0 10 K selectable
Data safeguarding at power failure	Non-volatile memory
Contact load (ohmic load/inductive load)	8 A/3 A (ohmic/inductive load)
Input/sensor	PTC resistance, -55 +120 °C, cable length 3 m
Contacts	Relay, changeover contact, single pin
Protection class to front	IP 54
Connection	Screw-on terminals, 2.5 mm <sup>2</sup>
Fixing	With clamping bracket
Type of assembly	Can be screwed on



### HYGROSTAT



Hygrostat with adjustable and permanently set relative humidity





connecting cable, connection cable, 2-pole, ferrule - IEC-(female) connector; input jack; bush; socket



connecting cable, connection cable, 2-pole, ferrules - ferrules

- · Adjustable or fixed relative air humidity
- · Switches fan or heaters when the set value is reached
- Visual display

01116006

01108051

- Integrated LED lights up when the connected consumer is switched on
- Individual adaptation with three separate components: Hygrostat, assembly material, connecting cable (input with SCHUKO/UTE connector; output with IEC connector or open end) please order separately



#### **DELIVERY INCLUDES** (assembled)

Item	Qty	Description
1	1	Hygrostat, width 42 mm, height 64.5 mm, depth 38 mm; clip-on attachment for 35 mm DIN rail EN 50022
2	1	User manual

#### **ORDER INFORMATION**

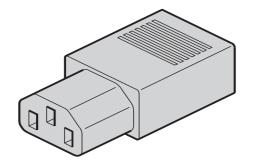
Description	Part no.
Hygrostat, fixed, 65 % air humidity	60715-138
Hygrostat, adjustable, 40 90 % air humidity	60715-213
Accessories	
DIN rail (EN 50022) Item 3 35 mm; length 75 mm; with fixing materials kit, PU 1 set	21120-178
Connection cable Item 4 SCHUKO/UTE connector, cable length 1.5 m; connection on thermostat/hygrostat, 2-pin, ferrules; connection on fan IEC socket; 1 piece	62150-201
Connection cable Item 4 SCHUKO/UTE connector, cable length 1.5 m; connection on thermostat/hygrostat, 2-pin, ferrules; connection on fan/heater, 3-pin, ferrules, 1 piece	62150-264

#### **TECHNICAL DATA**

Supply voltage	230 V <sub>AC</sub> , 50/60 Hz			
Default setting for relative air humidity	65 % fixed	40 90% adjustable		
Switch difference	5 % air humidity (w 1 % a 25 °C)	ir humidity tolerance at		
Switch contact	Changeover contact (rela	Changeover contact (relay)		
Lifespan	> 50,000 cycles			
Max. switching capacity	8 A (16 A for 10 s)			
Mains supply	2-pin terminal, up to 2.5 mm <sup>2</sup> , torque max. 0.5 Nm			
Output change-over relay	3-pin terminal, up to 2.5 mm <sup>2</sup> , torque max. 0.5 Nm			
Case	Plastic, in accordance with UL 94 V-0, light gray			
Dimensions	Height 64.5 mm, width 42 mm, depth 38 mm			
Type of assembly	Clip for 35 mm DIN rail, EN 50022			
Weight	65 g			
Operating/storage temperature	0 +60 °C/-20 +70 °C			
Max. storage humidity	90 % air humidity (non-condensing)			
Type of protection	IP 20			



## **IEC INPUT PLUG**



- For connection of fans
- Bolted housing made of heat-resistant plastic (UL 94 V-0)
- + 10 A/250  $V_{AC}$ , protection class I

#### **ORDER INFORMATION**

Description	Part no.
IEC input plug	60715-046

KTA45246

#### **North America**

**Warwick, RI, USA** Tel +1.401.738.1722 **San Diego, CA, USA** Tel +1.858.740.2400

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