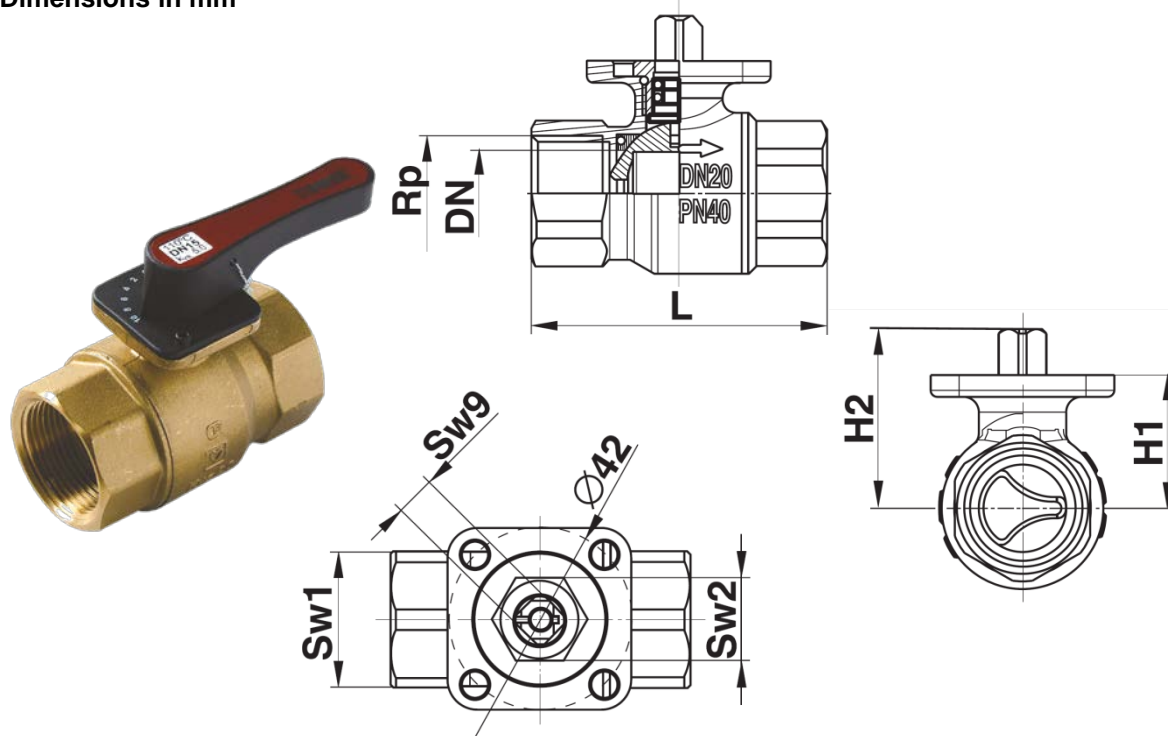


HERZ Control Ball Valve

With linear characteristics

Data sheet for 2117, Issue 0316

Dimensions in mm



Without handle 2117 0x

Order number	DN	PN	Rp	L	H1	H2	SW1	SW2	Kvs	W [kg]
1 2117 01	15	40	1/2	60	27,5	38	25	19	5	0,252
1 2117 02	20	40	3/4	68	30,5	41	31	19	8	0,362
1 2117 03	25	40	1	81	38	48,5	41	20	12,5	0,670
1 2117 04	32	25	5/4	95	41,5	52	51	20	20	1,088
1 2117 05	40	25	6/4	106	47	57,5	55	20	32	1,494
1 2117 06	50	25	2	127	54,8	65,3	70	20	50	2,613

With handle 2117 1x

Order number	DN	PN	Rp	L	H1	H2	SW1	SW2	Kvs	W [kg]
1 2117 11	15	40	1/2	60	27,5	38	25	19	5	0,283
1 2117 12	20	40	3/4	68	30,5	41	31	19	8	0,393
1 2117 13	25	40	1	81	38	48,5	41	20	12,5	0,701
1 2117 14	32	25	5/4	95	41,5	52	51	20	20	1,119
1 2117 15	40	25	6/4	106	47	57,5	55	20	32	1,525
1 2117 16	50	25	2	127	54,8	65,3	70	20	50	2,644

Handle

The handle 1 2100 90 can be ordered separately. It fits to all dimensions from DN15 to DN50. It is used when the valve does not need an actuator.



Material

Body	forged brass (CW602N) acc. to EN 12420
End connections	forged brass (CW602N) acc. to EN 12420
Ball	pressed brass (CW602N), V-shape bore, machined to a microsmooth finish, chrome plated
Ball seat	Teflon (PTFE) with O-Ring (EPDM)
Spindle	brass (CW614N)
Spindle sealing	O-Ring double (EPDM)
Spindle seat	Teflon (PTFE)
Connections	Female threads acc. to ISO 7-1

Operating Data

Maximum operating pressure	PN 40 from DN15 to DN25, PN25 from DN32 to DN50
Operating temperature	- 10 °C to 110 °C
Medium	cold and hot water, water with max. 50% volume of glycol
Angle of rotation (Spindle)	90° Torque (at nominal voltage): < 8 Nm

Spare parts

- 1 7712 60 Actuator, 2-point
 - 1 7712 61 Actuator, 3-point
 - 1 7712 62 Actuator, modulating
- Spare parts has to be ordered separately.

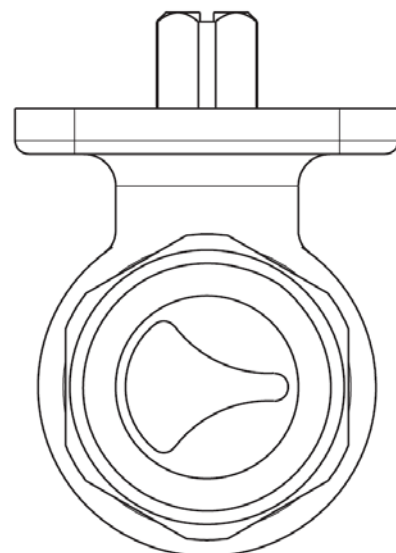
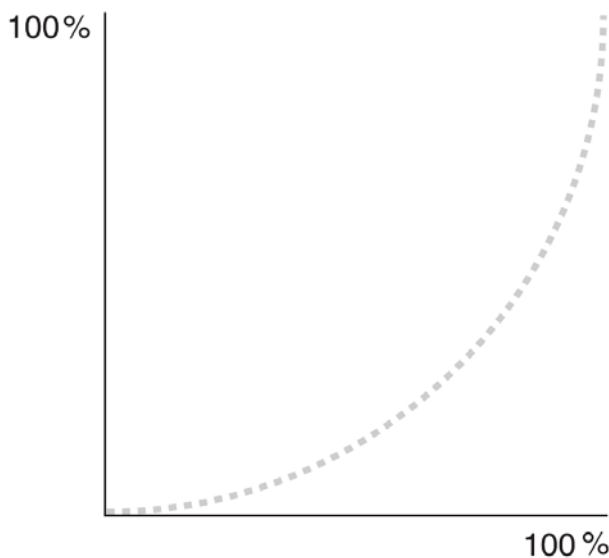
Properties

- HERZ two-port ball valve with internal thread for precise control, without leakage.
- Control ball valve for continuous control of cold water, hot water or air in closed circuits.
- Nominal pressure 40 bar
- Nominal size from DN15 to DN50
- Ball with linear characteristic
- Spindle with large sliding surface and teflon sealing ring
- Highest ratio 500:1
- Low torque due to the collar sealed with O-Ring

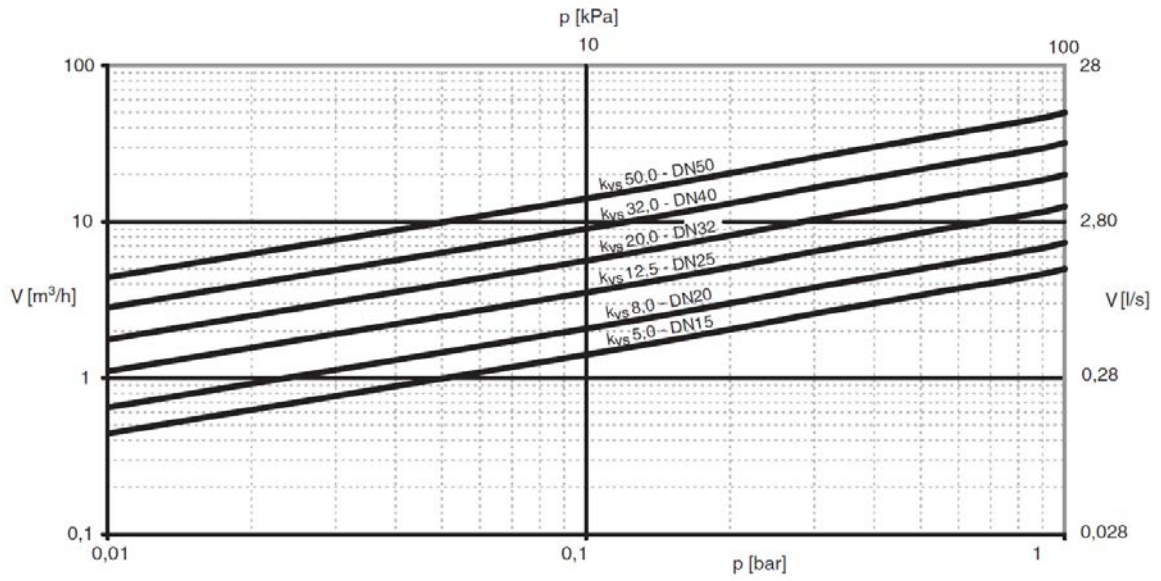
Description

The HERZ-control valve is characterized with high reliability and precision. The spindle of the ball valve is connected to the axle of the drive automatically. The ball is made of forged brass and regulates a linear flow in the control. This is realized by means of a profiled orifice in the ball. The seat seal is provided by a teflon collar sleeve insert. EPDM O-Rings are inserted behind these two sleeves. These O-Rings allow the ball and both collars a small axial movement, which realizes a high density and low torques. The spindle is sealed by two O-Rings. O-Rings can not be replaced.

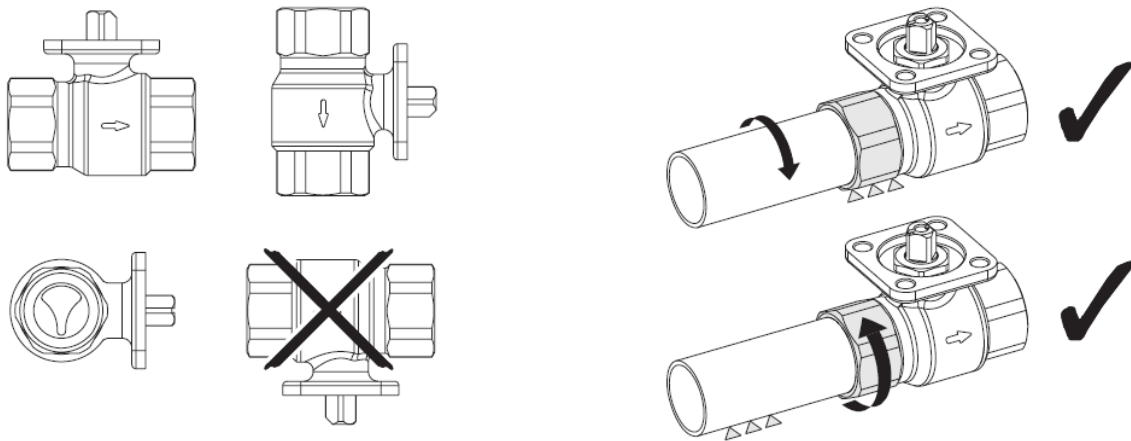
Characteristics



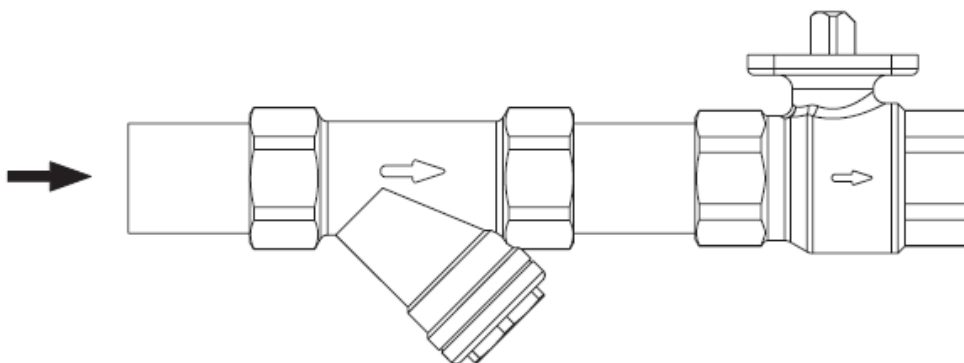
☑ Flow diagram



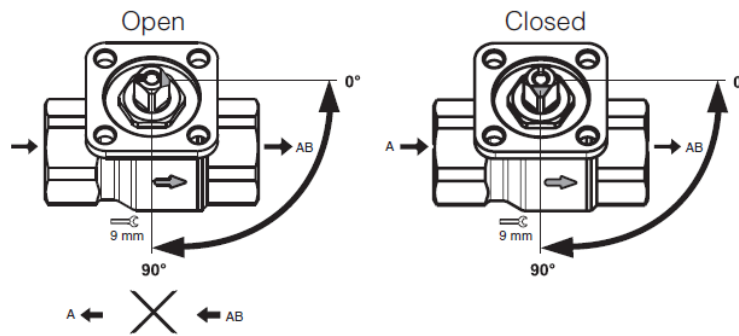
☑ Installation



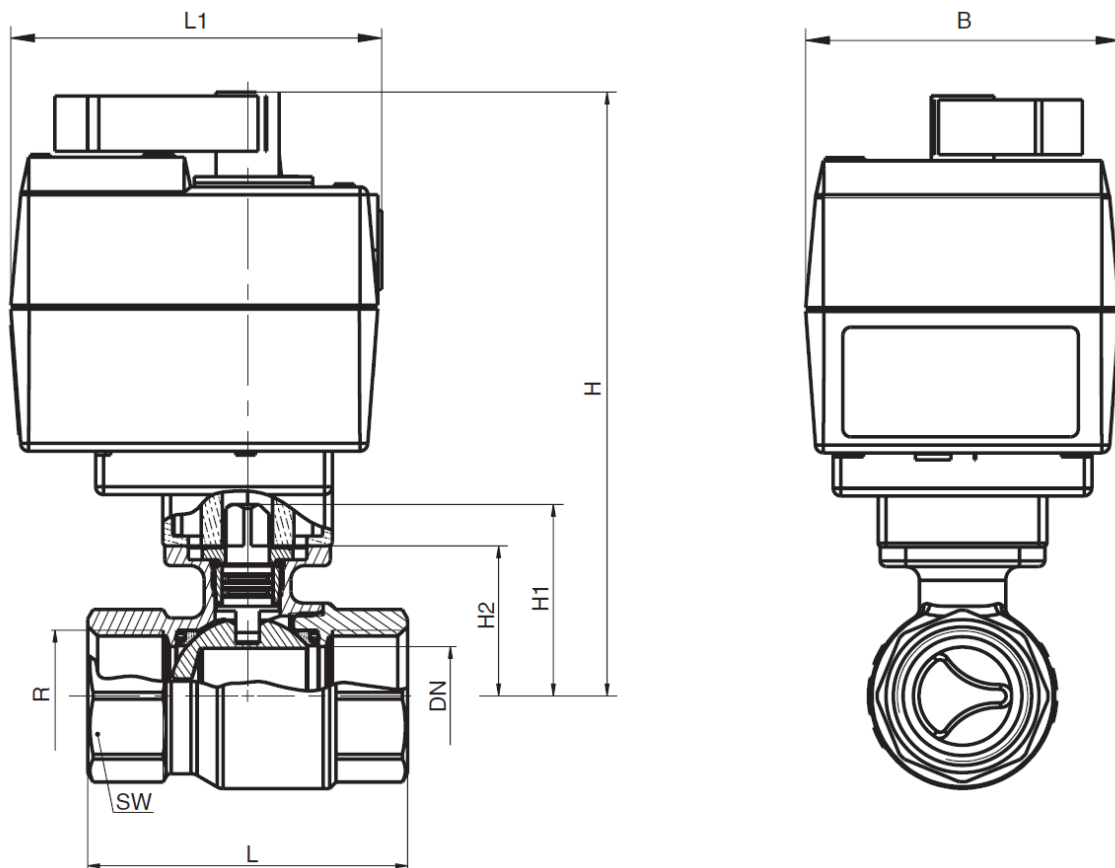
It is advised to install a HERZ strainer before the ball valve.



To measure the flow orifice plates from Herz are available. There the inflow and outflow directions have to be recognised.



Installation



1 7712 60, 1 7712 61 and 1 7712 62 have the same dimensions. The installation dimensions depend on the DN of the used ball valve.

DN	R	L	L1	H	H1	H2	B	SW
15	1/2	60	93	137	38	28	80	25
20	3/4	68	93	140	41	31	80	31
25	1	81	93	147	49	38	80	41
32	1 1/4	95	93	151	52	42	80	50
40	1 1/2	106	93	156	58	47	80	55
50	2	127	93	164	65	55	80	70

☑ 2-Point Actuator 1 7712 60

The unit is controlled by a normally open contact. The mounting position in relation to the ball valve can be selected in 90° steps. The actuator is automatically disconnected when the end stops are reached.

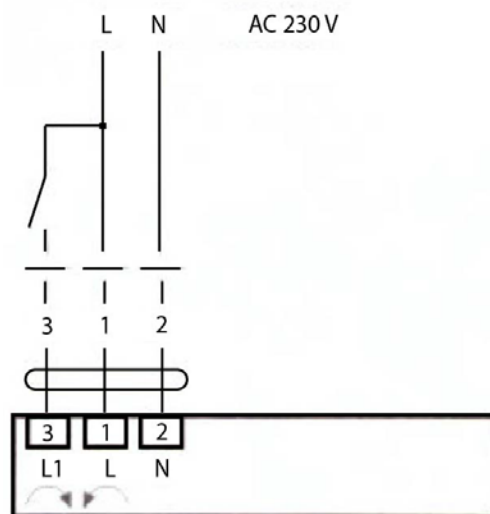
Manual operation possible by lever

Press for temporary disengagement, permanent gearing disengagement by rotary switch on the housing cover to the manual position.

Safety note

The actuator may only be opened at the factory. It contains no components which can be replaced or repaired by the user.

☑ Wiring diagram 1 7712 60



☑ Technical data 1 7712 60

Nominal voltage	AC 230 V 50 / 60 Hz
Power supply range	AC 198 ... 264 V
Dimensioning	3,5 VA
Power consumption	3,5 W
Manual operation	Temporary and permanent disengagement of the gearing latch
Torque	min. 10 Nm (at nominal voltage)
Angle of rotation	90°
Running time	140 s
Sound power level	max. 35 dB(A)
Position indication	Scale 0...1
Protection class	II (totally insulated)
Degree of protection	IP40
Ambient temperature range	0 ... + 50 °C (duty cycle 140/35 s)
Media temperature	+ 5 ... + 120 °C (ball valve)
Non-operating temperature	- 30 ... + 80 °C
Humidity test	according to EN 60730-1
EMC	CE according to 89/336/EWG
LV directive	CE according to 73/23/EWG
Mode of operation	Typ 1.B (EN 60730-1)
Maintenance	Maintenance-free

3-Point Actuator 1 7712 61

The actuator can be operated by 3-point and open-close control (see diagram). The mounting position in relation to the ball valve can be selected in 90° steps. The actuator is automatically disconnected when the end stops are reached.

Manual operation possible by lever

Press for temporary disengagement, permanent gearing disengagement by rotary switch on the housing cover to the manual position.

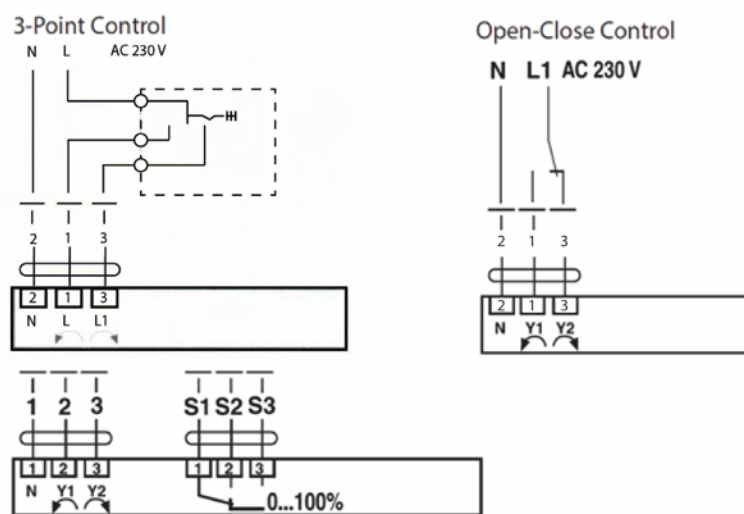
Signaling

The 3-point actuator has an adjustable auxiliary switch. This allows signalling of rotation angle of 0...100%.

Safety note

The actuator may only be opened at the factory. It contains no components which can be replaced or repaired by the user.

☑ Wiring diagram 1 7712 61



☑ Technical Data 1 7712 61

Nominal voltage	AC 230 V 50 / 60 Hz
Power supply range	AC 198 ... 264 V
Dimensioning	3,5 VA
Power consumption	3,5 W
Auxiliary switch	1 x EPU 5 (1) A, AC 250 V
Switching point adjustable	0 ... 100%
Manual operation	Temporary and permanent disengagement of the gearing latch
Torque	min. 10 Nm (at nominal voltage)
Angle of rotation	90°
Running time	140 s
Sound power level	max. 35 dB(A)
Position indication Scale	0 ... 1
Protection class	II (totally insulated)
Degree of protection	IP40
Ambient temperature range	0 ... + 50 °C (duty cycle 140/35 s)
Media temperature	+ 5 ... + 120 °C (ball valve)
Non-operating temperature	- 30 ... + 80 °C
Humidity test	according to EN 60730-1
EMC	CE according to 89/336/EWG
LV directive	CE according to 73/23/EWG
Mode of operation	Typ 1.B (EN 60730-1)
Maintenance	Maintenance-free

☑ Static Acuator 1 7712 62

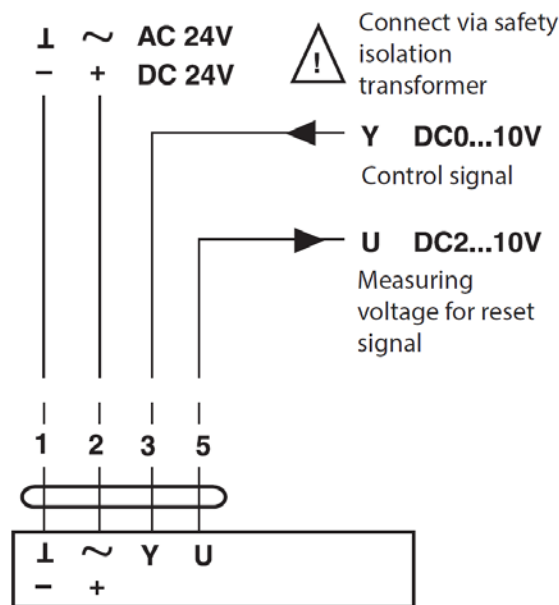
A mixing actuator is mounted on the mixing ball valve using only one screw. The screw is supplied with the actuator. The mounting position in relation to the ball valve can be selected in 90° steps. Due to its compact and small size the actuator fits in most sections of the valves isolations. The angle of rotation is limited to 90°. The actuator is automatically disconnected when the end stops are reached.

In case of any disturbances of the regulating system, the actuating drive can be set to manual operation by means of a knob on the housing. The gearing latch remains disengaged and the mixer tap can be accommodated by turning the handle on the mixer drive to any position. The position is displayed at a reversible scale.

Safety note

The actuator may only be opened at the factory. It contains no components which can be replaced or repaired by the user.

☑ Wiring diagram 1 7712 62



☑ Technical data 1 7712 62

Nominal voltage	AC 24 V 50 / 60 Hz, DC 24 V
Power supply range	AC 19,2 ... 28,8 V, DC 21,6...26,4 V
Dimensioning	3 VA
Power consumption	1,5 W
Control Signal Y	DC 0 ... 10 V @ typical input impedance 100 k
Operating range	DC 2 ... 10 V (for 0 ... 100%)
Measuring voltage U	DC 2 ... 10 V @ 0,5 mA (for 0 ... 100%)
Synchronisation	± 5%
Manual operation	Temporary and permanent disengagement of the gearing latch
Torque	10 Nm 5 Nm
Running time	140 s
Sound power level	max. 35 dB(A)
Position indication Scale	0 ... 1
Protection class	III (safety low voltage)
Degree of protection	IP42
Ambient temperature range	0 ... + 50 °C
Non-operating temperature	- 30 ... + 80 °C
Humidity test	according to EN 60730-1
EMC	CE according to 89/336/EWG and 93/68/EWG
Maintenance	Maintenance-free
Weight	600 g

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