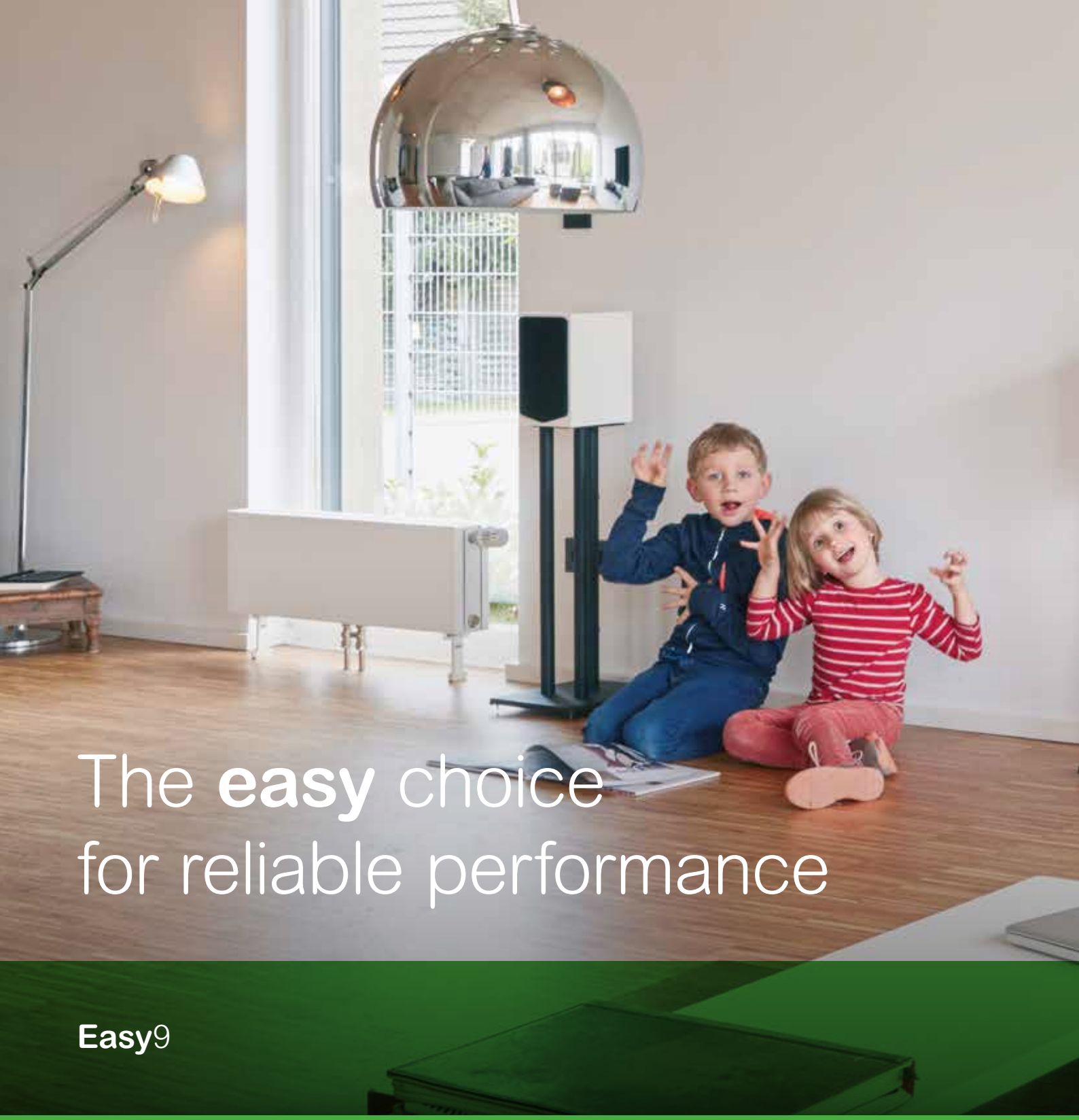
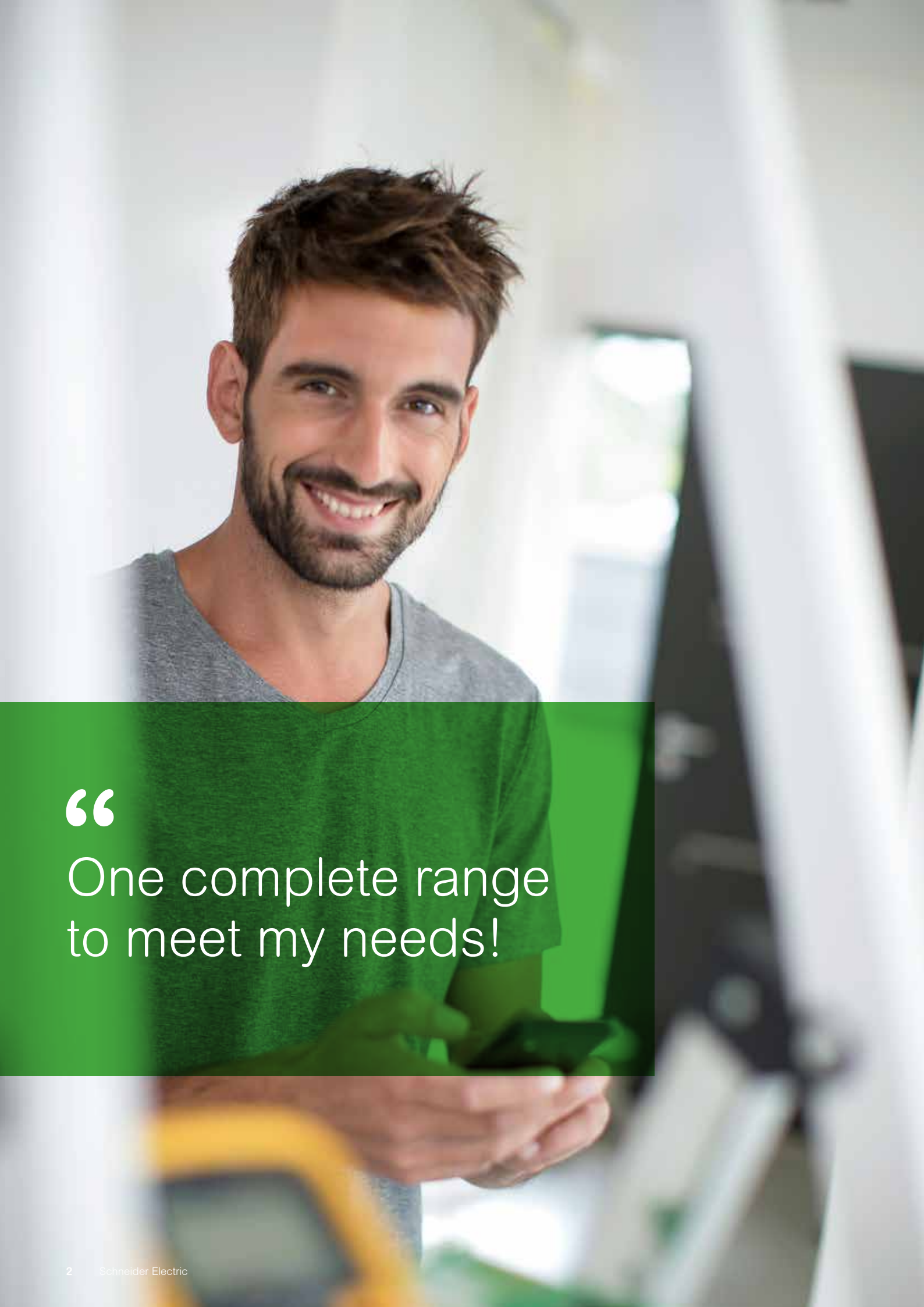


The **easy** choice for reliable performance

Easy9

se.com/easy9

Life Is On Schneider Electric


“
One complete range
to meet my needs!

Easy9

The **easy** choice for reliable performance!

The **Easy**9 range provides electrical protection in residential buildings, and gives you peace of mind, ease of installation and reliability.

COMPLETE RANGE

To address wide range of applications in the residential segment

EASY TO SELECT

With a limited number of references and clear marking charter

EASY TO INSTALL

Ergonomic system of installation

RELIABLE

High level of quality from a proven manufacturer

SUSTAINABLE

Green Premium compliant

The **Easy**9 range includes:

- MCBs for short-circuit and overload protection,
- RCCBs to protect people against electric shocks,
- RCBOs combining the functions of MCBs and RCCBs in a compact size,
- MSUs for over-voltage protection,
- Comb busbars and enclosures to simplify the installation of all devices,
- And SPDs for lightning protection.

Made in EU by the leading expert in electrical protection technologies!

COMPLETE RANGE

Easy9

A wide range to address applications in the residential segment

Miniature Circuit Breaker

- Prevent damage to the installation in the event of a short-circuit
- Increased safety for the end user in the event of rearming after a short-circuit

Residual Current Circuit Breaker

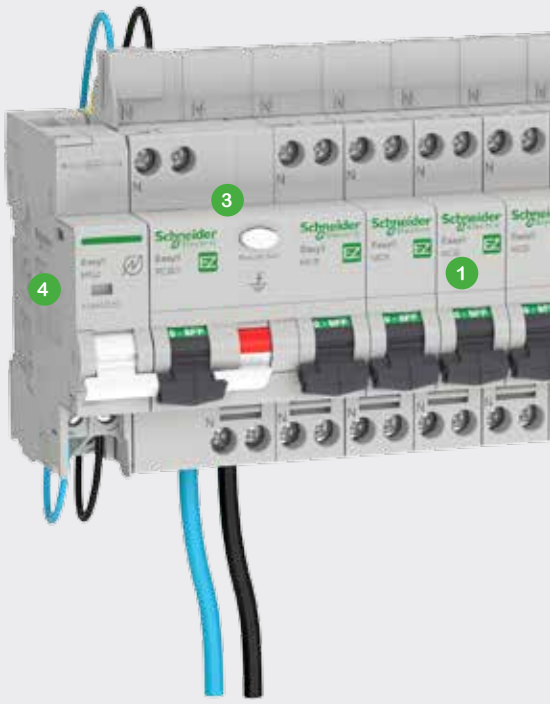
- Offers protection against earth leakage current

Residual Current Breaker with overcurrent protection

- Can be supplied from the bottom for a direct association with an **Easy**9 Comb Busbar
- Compatible with MSU
- Saves time during connection

MSU

- Can be associated directly with MCBs* and RCBOs
- Protects electronic equipment in the installation in the event of a network voltage fluctuation



*Not compatible with MCB 1P+N

Surge Protection Device

- Available in 1P+N and 3P+N
- Maximum discharge capacity of 20 kA

Comb Busbar

- Compatible with all configurations ; horizontal and vertical
- Can be sawn and cut
- Unused teeth can be insulated with tooth covers
- Less connections and cabling errors
- Saves time and space

Enclosures

- Wide range including 1, 2 and 3 rows enclosures
- Fitted with a smoked or a plain reversible door opening to 180°
- Ergonomic design and **easy** installation
- Devices in a harsh environment protected by IP65 enclosures

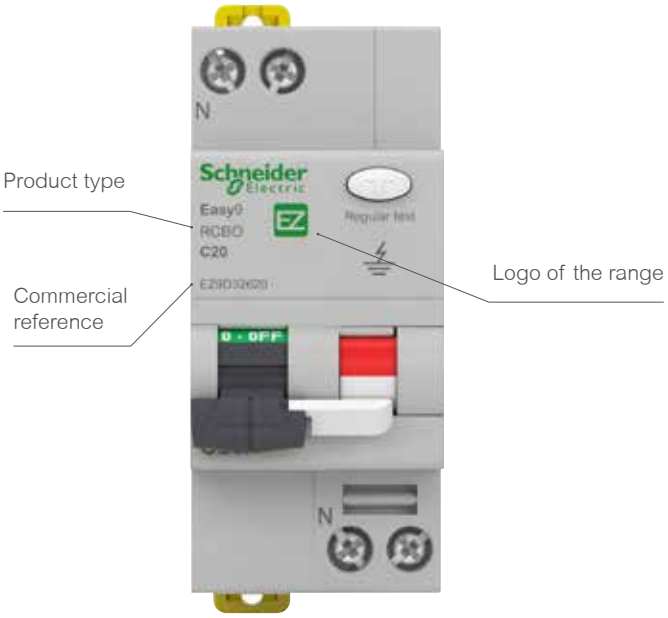
EASY TO SELECT

Easy9

A clear marking charter

With this new marking charter and user-friendly references it's now **easy** to identify the product functions in your local store or even when performing maintenance and other interventions.

All the important information, from product type to reference number, is now visible at a glance, and remains visible even after the device has been installed in the cabinet.



EASY TO INSTALL

And an **ergonomic** system of installation

This installation system saves cabling time and offers an impeccable look of your switchboard thanks to both horizontal and vertical **Easy**9 comb busbar.

Our new ergonomic system offers both top and bottom feeding for the main incomer and improves installation. Especially for multi-row application, connection time between rows can be significantly reduced, thanks to our vertical comb busbar.

RELIABLE

Easy9

High level of quality from a proven manufacturer

Schneider Electric has a history of innovation stretching back for more than 180 years. We are the worldwide leader in electrical distribution, with more than 30 R&D centers and 200 plants worldwide.

Our whole **Easy**9 range is IEC compliant (60670-1 and 24) and has been designed to ensure maximum reliability. From design to components, our range has been through exhaustive testing: breaking, endurance, fire, robustness, environment tests… Every single **Easy**9 device is manufactured in our own facilities in Europe, with standardized quality and control.

SUSTAINABLE

Easy9

An **environmentally** friendly range

We are proud of the fact that our **Easy**9 products are compliant with the RoHS and Reach requirements, and carry our Green Premium ecolabel providing complete environmental information on product life cycle and end of life, and use minimal quantities of hazardous substances.

Easy9

Miniature circuit breaker
6000 A - B &C Curves

CE

1P

Circuit breakers		
Rating (In)	**B Curve**	**C Curve**
6 A	**EZ9F15106**	**EZ9F35106**
10 A	**EZ9F15110**	**EZ9F35110**
16 A	**EZ9F15116**	**EZ9F35116**
20 A	**EZ9F15120**	**EZ9F35120**
25 A	**EZ9F15125**	**EZ9F35125**
32 A	**EZ9F15132**	**EZ9F35132**
40 A	**EZ9F15140**	**EZ9F35140**
50 A	**EZ9F15150**	**EZ9F35150**
63 A	**EZ9F15163**	**EZ9F35163**
Width in 9-mm modules	2	

3P

Circuit breakers		
Rating (In)	**B Curve**	**C Curve**
6 A	-	**EZ9F35306**
10 A	-	**EZ9F35310**
16 A	**EZ9F15316**	**EZ9F35316**
20 A	**EZ9F15320**	**EZ9F35320**
25 A	**EZ9F15325**	**EZ9F35325**
32 A	**EZ9F15332**	**EZ9F35332**
40 A	-	**EZ9F35340**
50 A	-	**EZ9F35350**
63 A	-	**EZ9F35363**
Width in 9-mm modules	6	

4P

Circuit breakers	
Rating (In)	**C Curve**
10 A	**EZ9F35410**
Width in 9-mm modules	8

Certified compliant IEC/EN 60898-1

Additional feature

According to IEC/EN 60898-1

Breaking capacity (Icn)		
Ph/N	230 V AC	**4500 A**
Ph/Ph	400 V AC	**4500 A**

Additional characteristics

Endurance (O-C)	Electrical	4,000 cycles
	Mechanical	10,000 cycles
Hazardous substances		EU RoHS compliant
Operating temperature		-25°C to +60°C
Storage temperature		-40°C to +85°C

Connection

Rigid copper cables

6 to 32 A	1 to 25 mm²	Tightening torque: 2 N.m
40 to 63 A	1 to 35 mm²	Tightening torque: 3.5 N.m

Flexible copper cables

6 to 32 A	1 to 16 mm²	Tightening torque: 2 N.m
40 to 63 A	1 to 25 mm²	Tightening torque: 3.5 N.m

Easy9

Miniature circuit breaker
6000 A - C Curve

CE

1P+N

Circuit breakers	
Rating (In)	**C Curve**
10 A	**EZ9P35610**
16 A	**EZ9P35616**
Width in 9-mm modules	2

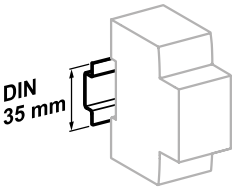
Connection

Rigid copper cables

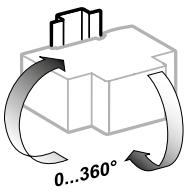
6 to 40A	1 to 16 mm²	Tightening torque: 2 N.m

Flexible copper cables

6 to 40 A	1 to 16 mm²	Tightening torque: 2 N.m



Clip on DIN rail 35 mm.



Indifferent position of installation.

Certified compliant IEC/EN 60898-1

Additional feature

According to IEC/EN 60898-1

Breaking capacity (Icn)		
Ph/N	230 V AC	**6000 A**
Ph/Ph	400 V AC	**6000 A**

Additional characteristics

Endurance (O-C)	Electrical	4,000 cycles
	Mechanical	10,000 cycles
Operating temperature		-25°C to +60°C
Storage temperature		-40°C to +85°C

Characteristics

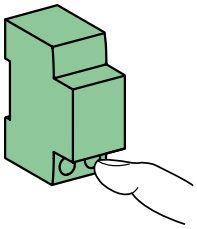
Main characteristics

Voltage rating (Ue)	230/400 V AC
Operating frequency	50 Hz
Electrical feeding	By top or bottom
Rated impulse withstand voltage (Uimp)	4 kV

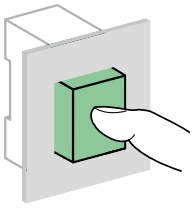
Additional characteristics

Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40
Hazardous substances		EU RoHS compliant
Tropicalisation (IEC 60068-2-30)		Treatment 2 (relative humidity 95 % to 55°C)

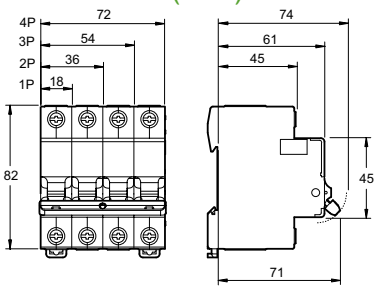
IP20



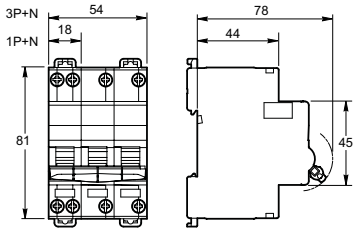
IP40



Dimensions (mm)



MCB 1P, 2P, 3P, 4P



MCB 1P+N, 3P+N

Easy9

RCCB residual current circuit breaker

CE

2P

Residual current circuit breakers AC ~		
Rating (In)	**30 mA**	**300 mA**
25 A	**EZ9R32225**	**EZ9R62225**
40 A	**EZ9R32240**	**EZ9R62240**
63 A	**EZ9R32263**	**EZ9R62263**
Voltage rating (Ue)	230 V, 50 Hz	
Width in 9-mm modules	4	

4P

Residual current circuit breakers AC ~		
Rating (In)	**30 mA**	**300 mA**
25 A	**EZ9R32425**	**EZ9R62425**
40 A	**EZ9R32440**	**EZ9R62440**
63 A	**EZ9R32463**	**EZ9R62463**
Voltage rating (Ue)	400 V, 50 Hz	
Width in 9-mm modules	8	

Certified compliant IEC/EN 61008-1

Additional feature

Endurance (O-C)	Electrical	2000 cycles
	Mechanical	5000 cycles
Conditional rated short circuit current (Inc/IΔc)	With fuse	6000 A
	With Easy9 MCB	6000 A
Operating temperature		-5°C to +60°C
Storage temperature		-40°C to +85°C
Electrical feeding		By top or bottom

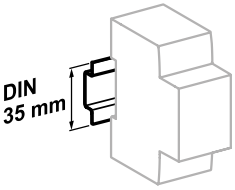
Connection

Rigid copper cables

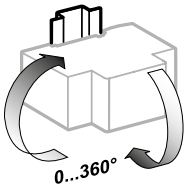
1 to 35 mm²	Tightening torque: 3.5 N.m

Flexible copper cables

1 to 25 mm²	Tightening torque: 3.5 N.m



Clip on DIN rail 35 mm.



Indifferent position of installation.

Characteristics

Main characteristics

Rated impulse withstand voltage (Uimp)		4 kV

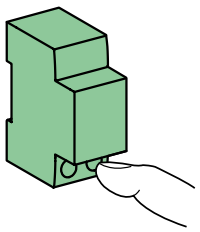
According to IEC 61008-1

Making and breaking capacity (Im/IΔm)	25 A , 40 A	500 A
	63 A	10 In

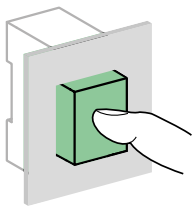
Additional characteristics

Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40
Hazardous substances		EU RoHS compliant
Tropicalisation (IEC 60068-2-30)		Treatment 2 (relative humidity 95 % to 55°C)

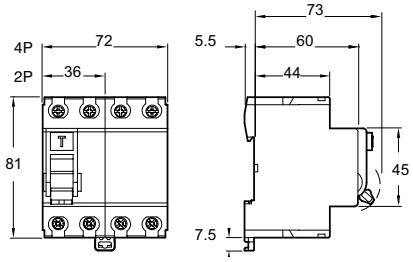
IP20



IP40



Dimensions (mm)



Easy9

RCBO residual current device
6000 A - AC type - C curve

CE

IEC 61009-1
As per the above standard:

Functions
- Protection against short-circuits;
- Protection of cable against overloads;
- Protection of persons against electric shocks;
- Protection against fire hazards due to persistent earth fault current;
- Can be fitted instead of a MCB for complete protection of one circuit.

1P+N

RCBO AC type ~ - C curve	
Rating (In)	**30 mA**
6 A	**EZ9D35606**
10 A	**EZ9D35610**
16 A	**EZ9D35616**
20 A	**EZ9D35620**
25 A	**EZ9D35625**
32 A	**EZ9D35632**
40 A	**EZ9D35640**
Voltage rating (Ue)	230 V AC, 50 Hz
Width in 9-mm modules	4

Certified compliant IEC/EN 61009-1

Additional feature

Rated impulse withstand voltage (Uimp)		4 kV
Rated breaking capacity (Icn)		6000 A
Rated residual breaking and making capacity (I∆m)		3000 A
Endurance (O-C)	Electrical	4000 cycles
	Mechanical	10000 cycles
Degree of protection	Device only	IP20
	Device in modular enclosure	IP40 Insulation class II
Operating temperature		-5°C to +60°C
Storage temperature		-40°C to +85°C
Hazardous substances		EU RoHS compliant
Tropicalisation (IEC 60068-2-30)		Treatment 2 (relative humidity 95 % to 55°C)
Electrical feeding		By top or bottom

Connection

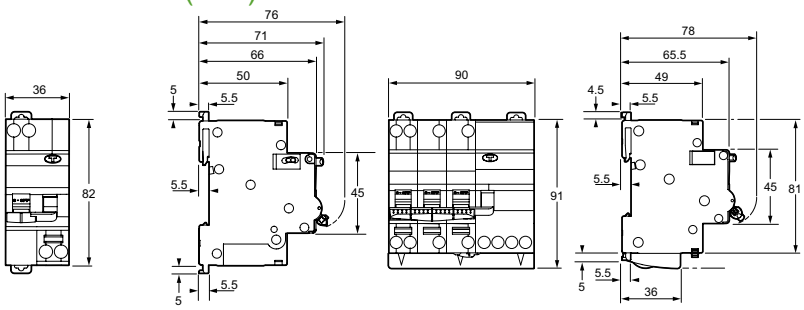
Rigid copper cables

L and N	1 to 16 mm²	Tightening torque: 2 N.m

Flexible copper cables

L and N	1 to 16 mm²	Tightening torque: 2 N.m

Dimensions (mm)



Surge protection devices

CE

IEC 61 643-11 type 2

As per the above standard:

Functions

Each surge arrester in the range has a specific application:
- ■ Incoming protection (type 2):
- □ the 20 kA is recommended for a medium risk level.

1P+N

Easy9 surge arrester			
Maximum discharge current (Imax)	**Nominal discharge current (In)**	**Voltage protection level (Up)**	
20 kA	10 kA	1.3 kV	**EZ9L33620**
Width in 9-mm modules	4		

3P+N

Easy9 surge arrester			
Maximum discharge current (Imax)	**Nominal discharge current (In)**	**Voltage protection level (Up)**	
20 kA	10 kA	1.3 kV	**EZ9L33720**
Width in 9-mm modules	8		

Certified compliant with IEC 61 643-11 type 2

Characteristics

Network maximum voltage	Ph / Ph	400 V, 50/60 Hz
	Ph / N	230 V, 50/60 Hz
Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40
Hazardous substances		EU RoHS compliant
Storage temperature		-5°C to +70°C
Operating temperature		-5°C to +60°C

Connection

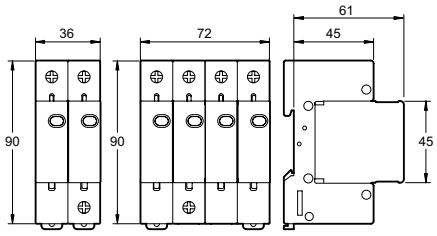
Rigid copper cables

5 to 35 mm²	Tightening torque: 2.5 N.m

Flexible copper cables

5 to 25 mm²	Tightening torque: 2.5 N.m

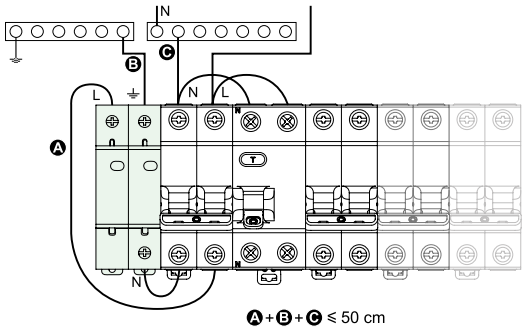
Dimensions (mm)



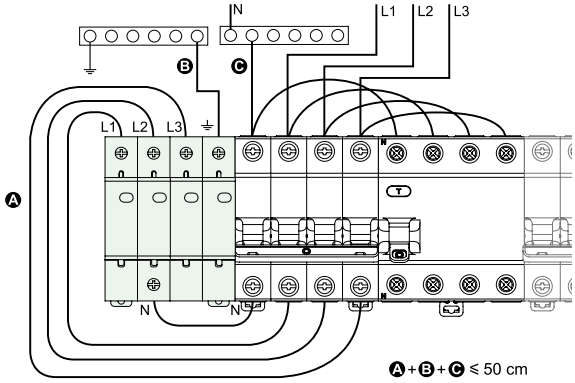
1P+N 3P+N

Connection

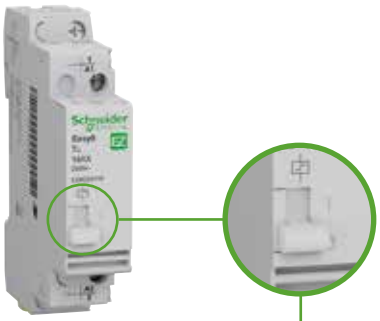
Network: single phase
Earthing system: TT or TN-S



Network: three phases
Earthing system: TT or TN-S



Impulse relay



Manual controls on front face: direct and priority manual control by O-I toggle

Position indication on front face: by O-I toggle

IEC 60669-2-2

As per the above standard:

Functions

Easy9 TL impulse relay allow remote control of single-phase circuits.

The impulse relays are used to control, by means of pushbuttons, lighting circuits consisting of:

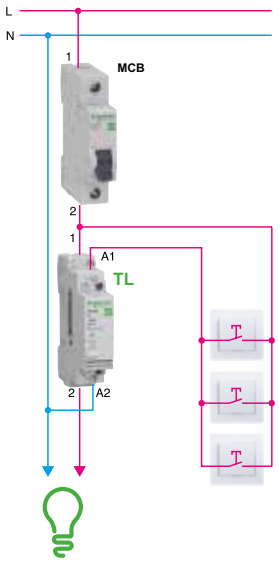
- Incandescent lamps, low-voltage halogen lamps, etc. (resistive loads).
- Fluorescent lamps, discharge lamps, etc. (inductive loads).
- LED luminaires.

1P

Impulse relay			
Rating (In)	**Contact**	**Control voltage (Uc)**	
16 A	1NO	230 V AC, 50 Hz	**EZ9C33116**
Width in 9-mm modules			2

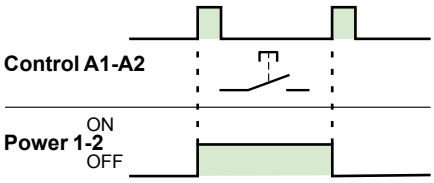
How to connect and how to use an impulse relay?

Lighting for a large room with 3 pushbuttons

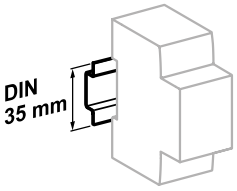


Impulse relay

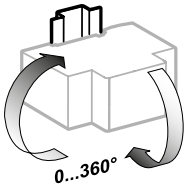
Impulse signal



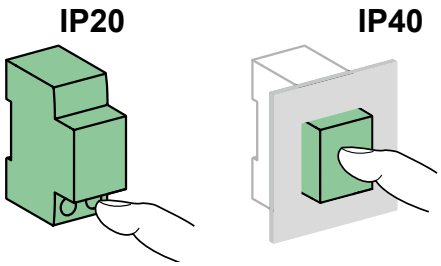
Impulse relay



Clip on DIN rail 35 mm.



Indifferent position of installation.



Characteristics

Main characteristics

Number of switching operations	Per day	100
	Total	200,000
Maximum switching frequency		5 switching operations per minute
Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40
Operating temperature		-20°C to +60°C
Storage temperature		-40°C to +70°C
Hazardous substances		EU RoHS Compliant

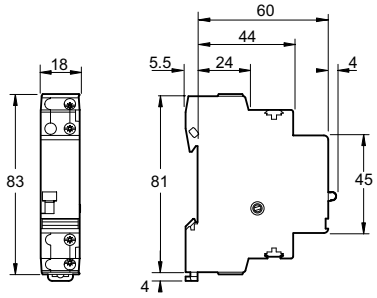
Control circuit (coil) characteristics

Coil rated voltage	230 V AC ± 10 %
Rated frequency	50 Hz
Coil inrush consumption (at 20°C)	19 VA
Impulse duration	50 to 200 ms
Manual control	By O-I toggle on front face

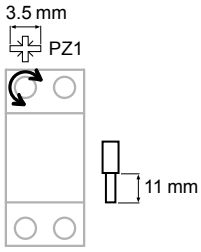
Power circuit (contact) characteristics

Number	1 NO
Rating	16 A
Voltage rating	250 V AC

Dimensions (mm)



Connection



Control

Rigid copper cables	1 to 6 mm² 2 x 1.5 mm²	Tightening torque: 1 N.m
Flexible copper cables	1 to 4 mm² 2 x 1.5 mm²	

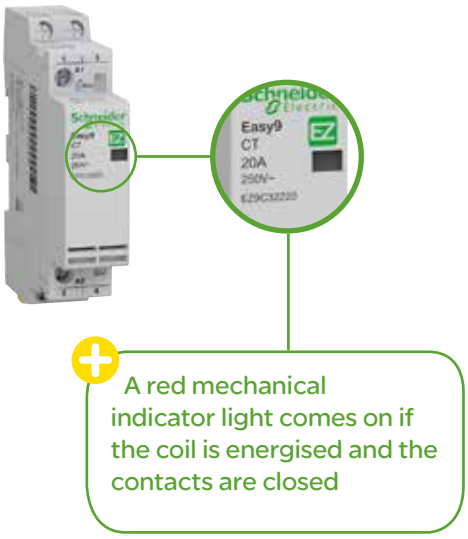
Power

Rigid copper cables	1 to 6 mm² 2 x 1.5 to 2.5 mm²	Tightening torque: 1 N.m
Flexible copper cables	1 to 4 mm² 2 x 1.5 mm²	

Weight (g)

Type	
Easy9 TL	105

Contactor



IEC 61095

As per the above standard:

Functions

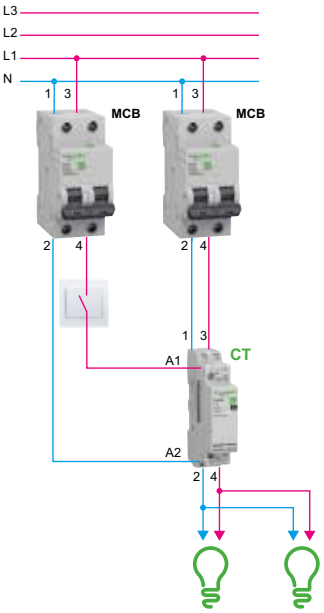
Easy9 CT contactor combined with single-phase circuit breakers or residual current devices, allow remote control of single-phase or three-phase circuits.

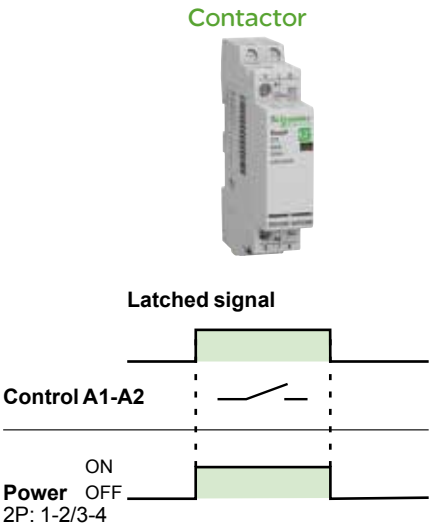
The contactor can be used to remote control applications in alternative networks:
- Lighting, heating, ventilation, roller blinds, sanitary hot water.
- Mechanical ventilation systems, etc.
- Load-shedding of non-priority circuits.

2P

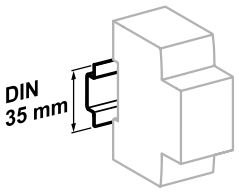
Contactor				
Rating (In) AC7a	AC7b	Contact	Control voltage (Uc)	
20 A	7 A	2NO	230 V AC, 50 Hz	**EZ9C32220**
40 A	15 A	2NO	230 V AC, 50 Hz	**EZ9C32240**
Width in 9-mm modules				2 (20 A) 4 (40 A)

How to connect and how to use a contactor?

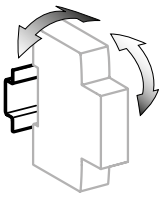




Contactor

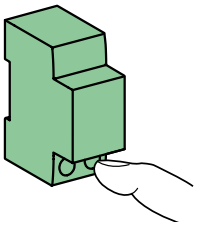


Clip on DIN rail 35 mm.

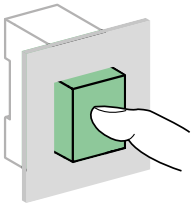


± 30° vertical.

IP20



IP40



Characteristics

Main characteristics

Number of switching operations	Per day	100
	Total	200,000
Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40
Operating temperature		-5°C to +60°C
Storage temperature		-40°C to +70°C
Hazardous substances		RoHS Compliant

Control circuit (coil) characteristics

Coil rated voltage			230 V AC ± 10 %
Rated frequency			50 Hz
Coil consumption (at 20°C)	Inrush	2P - 20 A	9.2 VA
		2P - 40 A	34 VA
	Holding	2P - 20 A	2.7 VA
		2P - 40 A	4.6 VA

Power circuit (contacts) characteristics

Voltage rating	250 V AC

Connection

3.5 mm
PZ1

Control 20A, 40A
Power 20 A

11 mm

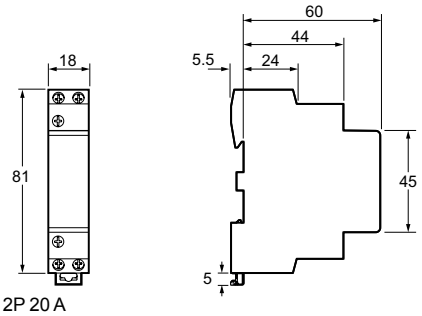
6 mm
PZ2

Power 40 A

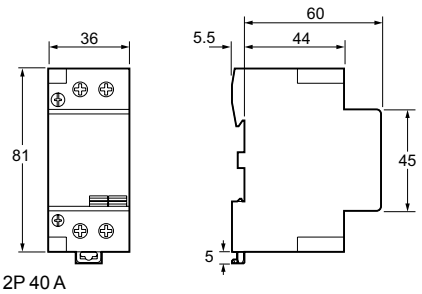
14 mm

Control			
Rigid copper cables		1 to 6 mm² 2 x 1.5 mm²	Tightening torque: 0.8 N.m
Flexible copper cables		1 to 4 mm² 2 x 1.5 mm²	
Power			
20A	Rigid copper cables	1 to 6 mm² 2 x 1.5 to 2.5 mm²	Tightening torque: 1 N.m
	Flexible copper cables	1 to 4 mm² 2 x 1.5 mm²	
40 A	Rigid copper cables	6 to 25 mm² 2 x 6 to 10 mm²	Tightening torque: 2 N.m
	Flexible copper cables	6 to 16 mm² 2 x 6 to 10 mm²	

Dimensions (mm)



2P 20 A



2P 40 A

Weight (g)

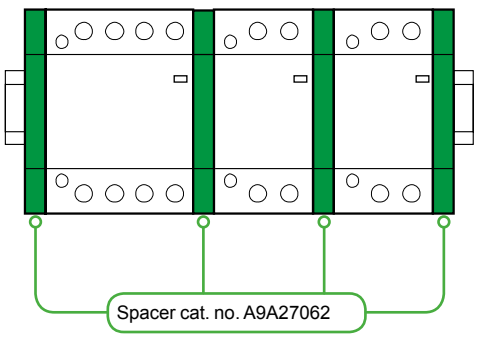
Type	2P 20 A	2P 40 A
Easy9 CT	117	225

Derating conditions for contactors

Derating of contactors mounted in modular enclosure if inside temperature is > 40°C.

Easy9 CT	Ambient temperature (°C)		
Rating (A)	40	50	60
40	40	38	32
20	20	17.6	16

If multiple iCTs side by side: install spacer and apply 0.8 cœfficient on upper current values.



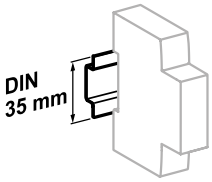
Bell

CE

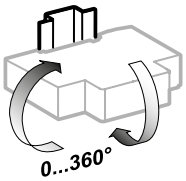
Functions

■ Audible indication in housing and tertiary sector.

Bell	
	**EZ9A34223**
Voltage rating (Ue)	230 V AC, 50/60 Hz
Width in 9-mm modules	2



Clip on DIN rail 35 mm.



Indifferent position of installation.

Characteristics

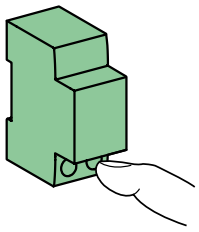
Main characteristics

Consumption	3.6 VA

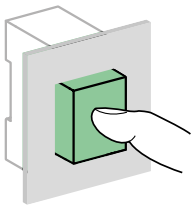
Additional characteristics

Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40
Hazardous substances		RoHS compliant
Operating temperature		-10°C to +40°C
Storage temperature		-25°C to +60°C
Sound level (at a distance of 60 cm)		80 dBA

IP20



IP40



Connection

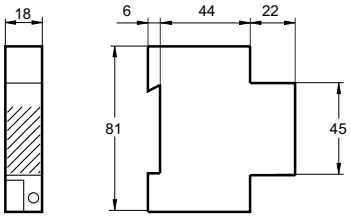
Rigid copper cables

1 to 2.5 mm²	Tightening torque: 1 N.m

Flexible copper cables or with ferrule

1 to 2.5 mm²	Tightening torque: 1 N.m

Dimensions (mm)



Impulse relay and contactor

General comments

Modular contactors and impulse relays do not use the same technologies.
Their rating is determined according to different standards and does not correspond to the rated current of the circuit.

Dimensioning rules for control devices

The accumulation of lamps on a single circuit increases the inrush current. For this reason, the number of luminaires is limited.

- These values are given for a 230 V circuit with two active conductors (single-phase phase/neutral or two-phase phase/phase). For 110 V circuits, divide the values in the table by 2.
- To obtain the equivalent values for the entire 230 V three-phase circuit, multiply the number of lamps and the maximum power output:
  - by $\sqrt{3}$ (1.73) for circuits with 230 V between phases without neutral,
  - by $\sqrt{3}$ for circuits with 230 V between phase and neutral or 400 V between phases.

Note: the lamp power ratings most commonly used are shown in bold.
For power ratings not mentioned, use a proportional rule with the nearest values.

Selection table

Products			Easy9 CT contactors				Easy9 TL impulse relays	
Type of lamp			Maximum number of lamps for a single-phase circuit and maximum power output per circuit					
			20 A		40 A		16 A	
Standard incandescent lamps, LV halogen lamps, replacement mercury vapor lamps (without ballast)								
	40 W		46	1850 W	115	4600 W	40	1600 W
	60 W		36	2160 W	85	5100 W	25	1500 W
	75 W		30	2250 W	70	5250 W	20	1500 W
	100 W		22	2200 W	50	5000 W	16	1600 W
ELV 12 or 24 V halogen lamps								
Ferromagnetic transformer	**20 W**		18	360 W	42	840 W	70	1400 W
	50 W		12	600 W	27	1350 W	28	1400 W
	75 W		10	750 W	23	1725 W	19	1425 W
	100 W		6	600 W	18	1800 W	14	1400 W
Electronic transformer	**20 W**		72	1440 W	182	3640 W	60	1200 W
	50 W		31	1550 W	76	3800 W	25	1250 W
	75 W		22	1650 W	53	3975 W	18	1350 W
	100 W		18	1800 W	42	4200 W	14	1800 W
Fluorescent tubes with starter and ferromagnetic ballast								
1 tube without compensation [1]	15 W		24	360 W	70	1050 W	83	1245 W
	18 W		24	432 W	70	1260 W	70	1260 W
	20 W		24	480 W	70	1400 W	62	1240 W
	36 W		22	792 W	60	2160 W	35	1260 W
	40 W		22	880 W	60	2400 W	31	1240 W
	58 W		14	812 W	35	2030 W	21	1218 W
	65 W		14	910 W	35	2275 W	20	1300 W
	80 W		12	960 W	30	2400 W	16	1280 W
	115 W		8	920 W	20	2300 W	11	1265 W
1 tube with parallel compensation [2]	15 W	5 µF	16	240 W	40	600 W	60	900 W
	18 W	5 µF	16	288 W	40	720 W	50	900 W
	20 W	5 µF	16	320 W	40	800 W	45	900 W
	36 W	5 µF	16	576 W	40	1440 W	25	900 W
	40 W	5 µF	16	640 W	40	1600 W	22	880 W
	58 W	7 µF	12	696 W	30	1740 W	16	928 W
	65 W	7 µF	12	780 W	30	1950 W	13	845 W
	80 W	7 µF	12	960 W	30	2400 W	11	880 W
	115 W	16 µF	6	690 W	14	1610 W	7	805 W
2 or 4 tubes with series compensation	2 x **18 W**		37	1332 W	80	2880 W	56	2016 W
	4 x **18 W**		19	1368 W	44	3168 W	28	2016 W
	2 x **36 W**		19	1368 W	44	3168 W	28	2016 W
	2 x **58 W**		13	1508 W	27	3132 W	17	1972 W
	2 x 65 W		13	1690 W	27	3510 W	15	1950 W
	2 x 80 W		10	1600 W	22	3520 W	12	1920 W
	2 x 115 W		8	1840 W	16	3680 W	8	1840 W

Impulse relay and contactor

Selection table (cont.)

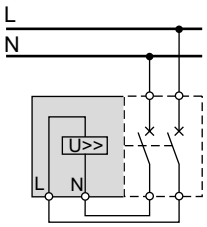
Products			Easy9 CT contactors				Easy9 TL impulse relays	
Type of lamp			Maximum number of lamps for a single-phase circuit and maximum power output per circuit					
			20 A		40 A		16 A	
Fluorescent tubes with electronic ballast								
1 or 2 tubes	**18 W**		89	1602 W	222	3996 W	80	1440 W
	36 W		46	1656 W	117	4212 W	40	1440 W
	58 W		30	1740 W	74	4292 W	26	1508 W
	2 x **18 W**		44	1584 W	111	3996 W	40	1440 W
	2 x 36 W		24	1728 W	60	4320 W	20	1440 W
	2 x **58 W**		15	1740 W	38	4408 W	13	1508 W
Compact fluorescent lamps								
External electronic ballast	**5 W**		264	1320 W	670	3350 W	240	1200 W
	7 W		178	1246 W	478	3346 W	171	1197 W
	9 W		155	1395 W	383	3447 W	138	1242 W
	11 W		130	1430 W	327	3597 W	118	1298 W
	18 W		84	1512 W	216	3888 W	77	1386 W
	26 W		61	1586 W	153	3978 W	55	1430 W
Integral electronic ballast (replacing incandescent lamps)	**5 W**		184	920 W	470	2350 W	170	850 W
	7 W		131	917 W	335	2345 W	121	847 W
	9 W		106	954 W	266	2394 W	100	900 W
	11 W		87	957 W	222	2442 W	86	946 W
	18 W		55	990 W	138	2484 W	55	990 W
	26 W		40	1040 W	100	2600 W	40	1040 W
Low-pressure sodium vapor lamps with ferromagnetic ballast and external ignitor								
Without compensation (1)	**35 W**		7	245 W	14	490 W	Not tested, infrequently used	
	55 W		7	385 W	14	770 W		
	90 W		5	450 W	9	810 W		
	135 W		3	405 W	6	810 W		
	180 W		3	540 W	6	1080 W		
With parallel compensation (2)	**35 W**	20 µF	4	140 W	10	350 W	38	1330 W
	55 W	20 µF	4	220 W	10	550 W	24	1320 W
	90 W	26 µF	3	270 W	8	720 W	15	1350 W
	135 W	40 µF	2	270 W	5	675 W	10	1350 W
	180 W	45 µF	2	360 W	4	720 W	7	1260 W
High-pressure sodium vapor lamps **Metal-iodide lamps**								
Ferromagnetic ballast with external ignitor, without compensation (1)	35 W		19	665 W	42	1470 W	Not tested, infrequently used	
	70 W		10	700 W	20	1400 W		
	150 W		6	900 W	13	1950 W		
	250 W		3	750 W	8	2000 W		
	400 W		2	800 W	5	2000 W		
	1000 W		1	1000 W	2	2000 W		
Ferromagnetic ballast and external ignitor, with parallel compensation (2)	35 W	6 µF	14	490 W	31	1085 W	34	1190 W
	70 W	12 µF	7	490 W	16	1120 W	17	1190 W
	150 W	20 µF	5	750 W	10	1500 W	8	1200 W
	250 W	32 µF	3	750 W	7	1750 W	5	1250 W
	400 W	45 µF	2	800 W	5	2000 W	3	1200 W
	1000 W	60 µF	2	2000 W	3	3000 W	1	1000 W
	2000 W	85 µF	1	2000 W	2	4000 W	0	805 W
Electronic ballast	35 W		30	1050 W	68	2380 W	38	1330 W
	70 W		23	1610 W	51	3570 W	29	2030 W
	150 W		11	1650 W	26	3900 W	14	2100 W
LED lamps								
With driver 	**10 W**		69	690 W	98	980 W	69	690 W
	30 W		54	1620 W	77	2310 W	44	1320 W
	50 W		39	1950 W	56	2800 W	26	1300 W
	75 W		25	1875 W	36	2700 W	18	1350 W
	150 W		12	1800 W	18	2700 W	9	1350 W
	200 W		9	1800 W	15	3000 W	7	1400 W

(1) Circuits with non-compensated ferromagnetic ballasts consume twice as much current for a given power output. This explains the small number of lamps in this configuration.
(2) The total capacitance of the power factor capacitors in parallel on a circuit limits the number of lamps that can be controlled by a contactor. The total downstream capacitance of a modular contactor of rating 16, 25, 40 or 63 A should not exceed 75, 100, 200 or 300 µF respectively.
Allow for these limits to calculate the maximum acceptable number of lamps if the capacitance values are different from those in the table.

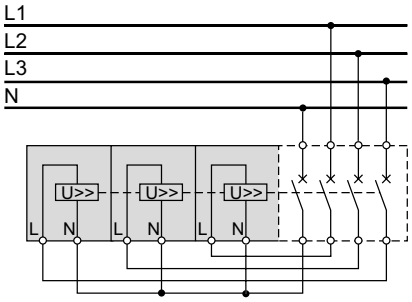
Easy9

MSU overvoltage release unit

CE



Single-phase power supply monitoring



Three-phase power supply monitoring

Functions

- Tripping of the associated protective device when the voltage across its terminals exceeds its nominal value.
- This auxiliary can protect sensitive loads from mains voltage fluctuations, in particular those due to breakage of the neutral conductor.
- Resetting of the protective device is possible only when the voltage across the terminals of the auxiliary has returned to its nominal value. Resetting will be done manually.

Auxiliary trip units

MSU	
Catalog number	**EZ9A32223**
Voltage rating (Ue)	230 V AC, 50/60 Hz
Width in 9-mm modules	2

Characteristics

Main characteristics

Power consumption (at Un)		0.002 A
Power consumption	Holding	0.046 VA
	Inrush	128 VÂ
Insulation voltage (Ui)		400 V
Degree of pollution		3
Rated impulse withstand voltage (Uimp)		4 kV (6 kV relative to the associated protective device)

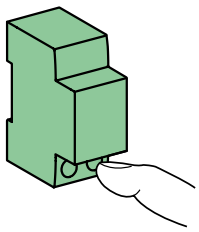
Additional characteristics

Endurance	20,000 operations
Hazardous substances	EU RoHS compliant
Operating temperature	-35°C to +70°C
Storage temperature	-40°C to +85°C

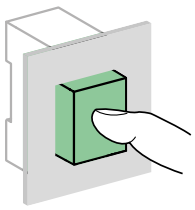
Standardised operating and non-response to voltage (Ua) times					
	255 V AC	275 V AC	300 V AC	350 V AC	400 V AC
Maximum operating time	No tripping	15 s	5 s	0.75 s	0.20 s
Minimum non-response time		3 s	1 s	0.25 s	0.07 s

(Ua)
Voltages measured between the phase and the neutral conductor, at which the MSU device must control the associated protective device.

IP20



IP40



Connection

Rigid copper cables

≤ 2.5 mm²	Tightening torque: 1 N.m

Flexible copper cables or with ferrule

≤ 1.5 mm²	Tightening torque: 1 N.m

Not compatible with:

MCB 1P+N:
see CE901007E
for catalog numb

RCCB:
see CE902006E
for catalog numbers

Compatible with:

MCB 1P, 2P, 3P:
see CE901006E
for catalog numbers

MCB 3P+N:
see CE901007E
for catalog numbers

RCBO:
see CE902005E
for catalog numbers

Enclosures 8 to 12 modules

IEC 60670-1-24

Description

Easy9 enclosures are designed for installing modular "DIN" devices in residential environments.
They are used indoors and are available in 8 and 12 modules of 18 mm.
- Ergonomic design and easy installation.
- Fitted with a smoked or a plain reversible door opening to 180°.
- Precut cable passthroughs on 4 sides.

1 to 3 DIN rails, chassis allows the cabling outside the back box.
- Two earth and neutral terminal blocks.1 to 3 DIN rails, chassis allows the cabling outside the back box.
- Rated current In = 63 A

Flush mounting enclosure

The flush mounting enclosure consists of:
- a symmetrical back box:
  - robust,
  - depth adapted to the walls of reduced thickness,
  - with pre-holes for entry tubes on the 4 sides.

Flush mounting enclosures			
Number of rows	Number of 18 mm modules per row	Panel + Smoked door	Panel + Plain door
1	8	EZ9E108S2F	EZ9E108P2F
1	12	EZ9E112S2F	EZ9E112P2F
1	18	EZ9E118S2F	EZ9E118P2F
2	12	EZ9E212S2F	EZ9E212P2F
3	12	EZ9E312S2F	EZ9E312P2F

Surface mounting enclosure

The surface mounting enclosure consists of:
- a back with:
  - a centered slot to facilitate installation,
  - fixing holes for vertical adjustment,
- the necessitate for entry cables:
  - punch-outs,
  - a large area for drilling (crown saw, punches).

Surface mounting enclosures			
Number of rows	Number of 18 mm modules per row	Panel + Smoked door	Panel + Plain door
1	8	EZ9E108S2S	EZ9E108P2S
1	12	EZ9E112S2S	EZ9E112P2S
1	18	EZ9E118S2S	EZ9E118P2S
2	12	EZ9E212S2S	EZ9E212P2S
3	12	EZ9E312S2S	EZ9E312P2S

Comb busbars

IEC 60439-1

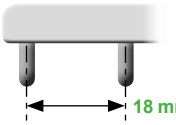
As per the above standards:

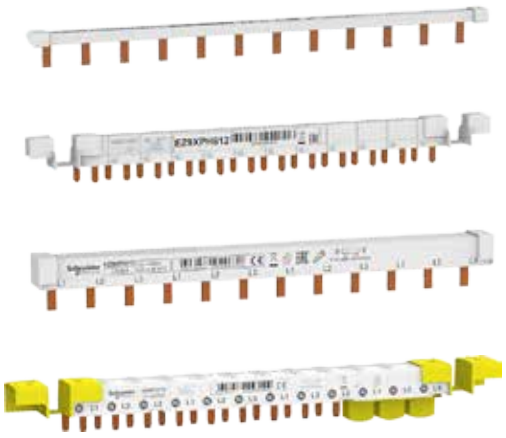
Functions

The comb busbars:

- Ensure easy and reliable connection of devices together without cables.
- Can be sawn and cut.
- Supplied with two IP20 lateral end-pieces, the end-pieces are mandatory.
- Unused teeth can be insulated with tooth covers available as accessories.
- Rating current In = 63 A
- Rating voltage Un = 230 V AC P/N and 400 V AC P/P
- Ui = 440 V AC

Quick assembly and disassembly of the devices connected





Comb busbars

Horizontal comb busbars 1P, 2P, 3P

Type	Width in modules of 18 mm	Description	Catalog number
1P L1, ...  L1	12	12 modules	**EZ9XPH112**
	57	57 modules	**EZ9XPH157**
1P+N	12	12 modules	**EZ9XPH612**
	24	24 modules	**EZ9XPH624**
	48	48 modules	**EZ9XPH648**
3P L1L2L3, ...  L1 L2 L3	12	12 modules	**EZ9XPH312**
	57	57 modules	**EZ9XPH357**
3 (P+N)	12	12 modules	**A9XPC712**
	24	24 modules	**A9XPC724**
	48	48 modules	**A9XPC748**
ID+MCB 1P+N	5	5 modules	**R9PXH205**
ID+MCB 1P+N	8	8 modules	**R9PXH208**

End-pieces
- insulate end of comb busbar

Tooth covers
- insulate teeth that have been left free

Accessories

Number of poles	1P	3P	1P+N	3P+N			
							
	End-pieces		End-pieces		Tooth covers	Tooth covers, 1P+N & 3P+N, set of 12	35 mm² connectors
Set of	10	10	40	40	20	12	4
Catalog numbers	**EZ9XPE110**	**EZ9XPE310**	**EZ9XPE640**	**A9X21095**	**A9XPT920**	**A9X21096**	**EZ9XPC04**

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