

# RCBOs - Residual current circuit breakers with integral overcurrent protection KZS

## Advantages of residual current circuit breakers with integral overcurrent protection KZS - 1M

→ Combining the features of miniature circuit breaker and a residual current circuit breaker, functionally dependent on line voltage (minimum supply voltage 90V)

→ Version with operating temperature down to -35°C also available

→ Real contact position indication for easier identification, whether RCBO is in ON or OFF position

→ Added protection against any pulsating DC component that can be generated from electrical appliances

→ Energy limiting class 3: highest energy limiting performance for optimal protection of cable insulation and maximally reducing risk of fire and other damage

→ Sealing possibility

→ 1-module housing (18 mm), with switched neutral line

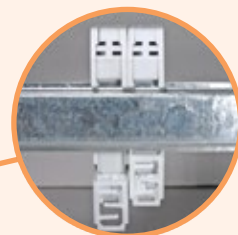
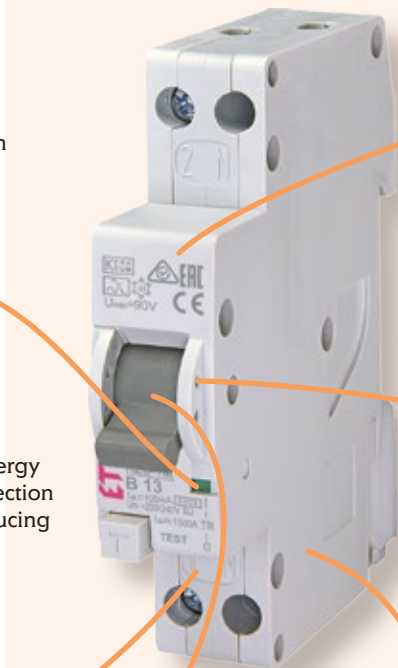
→ Clearly marked terminals to ensure appropriate connection

→ In case of overcurrent or differential current, the button moves to the "trip" (middle) position. In case of manual turn off, the button moves to the "off" (lowest) position.

→ All necessary technical and installation information can be found on the front and side of the device

→ The terminals accept not only wires but also time saving busbars

→ Advanced method of mounting enables an easy removal of single RCBO without disconnecting other units from the busbar



Residual current circuit breakers with integral overcurrent protection

Residual current circuit breaker with integral overcurrent protection KZS -1M

Rated short-circuit capacity  
**6 kA**

Rated current  
**6-25 A**

Tripping characteristic  
**B, C**

Rated residual current  
**0,01 - 0,03 - 0,1 A**

**Recommended for use in installations with high level of additional protection required (bathrooms, hospitals, kindergartens etc).  
Used for fault and additional protection.**

**KZS - 1M (Supply from the bottom)**

I <sub>n</sub> [A]	I <sub>Δn</sub> [A]	Type A		Type AC		Weight [g]	Packaging [pcs]
		Code No. B	Code No. C	Code No. B	Code No. C		
6	0,01	002175411	002175421	002175611	002175621	115	12/72
10	0,01	002175412	002175422	002175612	002175622		
13	0,01	002175413	002175423	002175613	002175623		
16	0,01	002175414	002175424	002175614	002175624		
20	0,01	002175415	002175425	002175615	002175625		
25	0,01	002175416	002175426	002175616	002175626		
6	0,03	002175201	002175221	-	-	115	12/72
10	0,03	002175202	002175222	-	-		
13	0,03	002175203	002175223	-	-		
16	0,03	002175204	002175224	-	-		
20	0,03	002175205	002175225	-	-		
25	0,03	002175206	002175226	-	-		
6	0,1	002175431	002175441	002175631	002175681	115	12/72
10	0,1	002175432	002175442	002175632	002175682		
13	0,1	002175433	002175443	002175633	002175683		
16	0,1	002175434	002175444	002175634	002175684		
20	0,1	002175435	002175445	002175635	002175685		
25	0,1	002175436	002175446	002175636	002175686		



**KZS - 1M LT (Supply from the bottom)**

I <sub>n</sub> [A]	I <sub>Δn</sub> [A]	Type A		Weight [g]	Packaging [pcs]
		Code No. B	Code No. C		
6	0,03	002175291	002175301	115	12/72
10	0,03	002175292	002175302	115	12/72
13	0,03	002175293	002175303	115	12/72
16	0,03	002175294	002175304	115	12/72
20	0,03	002175295	002175305	115	12/72
25	0,03	002175296	002175306	115	12/72

Description - KZS - 1M is a residual current circuit breaker with integral over-current protection, functionally dependent on line voltage.



LT- suitable for temperatures down to -35°C

**KZS - 1M SUP (Supply from the top)**

I <sub>n</sub> [A]	I <sub>Δn</sub> [A]	Type A		Weight [g]	Packaging [pcs]
		Code No. B	Code No. C		
6	0,01	002175811	002175851	115	12/72
10	0,01	002175812	002175852		
13	0,01	002175813	002175853		
16	0,01	002175814	002175854		
20	0,01	002175815	002175855		
25	0,01	002175816	002175856		
6	0,03	002175701	002175721	115	12/72
10	0,03	002175702	002175722		
13	0,03	002175703	002175723		
16	0,03	002175704	002175724		
20	0,03	002175705	002175725		
25	0,03	002175706	002175726		
6	0,1	002175831	002175871	115	12/72
10	0,1	002175832	002175872		
13	0,1	002175833	002175873		
16	0,1	002175834	002175874		
20	0,1	002175835	002175875		
25	0,1	002175836	002175876		



**Description:**

KZS - 1M DN is a residual current circuit breaker with integral overcurrent protection and added overvoltage protection according to EN 50550.

The device is functionally dependent on line voltage and operates at voltages above 90V. KZS 1M-DN also has a sealing possibility.



**KZS - 1M DN**

I <sub>n</sub> [A]	I <sub>Δn</sub> [A]	Type A		Weight [g]	Packaging [pcs]
		Code No. B	Code No. C		
6	0,03	002175141	002175151	115	12/72
10	0,03	002175142	002175152	115	12/72
13	0,03	002175143	002175153	115	12/72
16	0,03	002175144	002175154	115	12/72
20	0,03	002175145	002175155	115	12/72
25	0,03	002175146	002175156	115	12/72

**Description:**

KZS - 1M FN is a residual current circuit breaker with integral overcurrent protection, functionally dependent on line voltage.

It comes in a single pole version that switches the phase pole while the neutral pole stays fixed.

KZS 1M-FN is dependent on voltage and operates at voltages above 85V.

KZS 1M-FN also has a sealing possibility.



**KZS - 1M FN I<sub>Δn</sub> = 30 mA**

I <sub>n</sub> [A]	I <sub>Δn</sub> [A]	Type A		Type AC		Weight [g]	Packaging [pcs]
		Code No. B	Code No. C	Code No. B	Code No. C		
6	230	002175581	002175591	002175501	002175521	168	1/42
10	230	002175582	002175592	002175502	002175522	168	1/42
13	230	002175583	002175593	002175503	002175523	168	1/42
16	230	002175584	002175594	002175504	002175524	168	1/42
20	230	002175585	002175595	002175505	002175525	170	1/42
25	230	002175586	002175596	002175506	002175526	170	1/42
32	230	002175587	002175597	002175507	002175527	180	1/42
40	230	002175588	002175598	002175508	002175528	205	1/42
45	230	002175589	002175599	002175509	002175529	205	1/42

**KZS - 1M FN I<sub>Δn</sub> = 100 mA**

I <sub>n</sub> [A]	I <sub>Δn</sub> [A]	Type A		Type AC		Weight [g]	Packaging [pcs]
		Code No. B	Code No. C	Code No. B	Code No. C		
6	230	002175781	002175791	002175511	002175531	168	1/42
10	230	002175782	002175792	002175512	002175532	168	1/42
13	230	002175783	002175793	002175513	002175533	168	1/42
16	230	002175784	002175794	002175514	002175534	168	1/42
20	230	002175785	002175795	002175515	002175535	170	1/42
25	230	002175786	002175796	002175516	002175536	170	1/42
32	230	002175787	002175797	002175517	002175537	180	1/42
40	230	002175788	002175798	002175518	002175538	205	1/42
45	230	002175789	002175799	002175519	002175539	205	1/42

Residual current circuit breakers with integral overcurrent protection

Residual current circuit breaker with integral overcurrent protection KZS-2M

Rated short-circuit capacity <b>10 kA</b>	Rated current <b>6 - 40 A</b>	Tripping characteristic <b>B, C</b>	Rated residual current <b>0,01 - 0,5 A</b>
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Description: KZS (KZS-2M, KZS-4M) is a residual current circuit breaker combining the features of a miniature circuit breaker and a residual current circuit breaker and is functionally independent on line voltage. Used primarily in circuits with an increased requirements regarding touch voltage such as circuits of portable appliances, in kindergartens, schools, hospitals etc.

KZS-2M I <sub>Δn</sub> = 10 mA				
I <sub>n</sub> [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
6	002173211	002173231	225	1/54
10	002173212	002173232	225	1/54
13	002173213	002173233	225	1/54
16	002173214	002173234	225	1/54
20	002173215	002173235	225	1/54
25	002173216	002173236	225	1/54
32	002173217	002173237	225	1/54
40	002173218	002173238	225	1/54

KZS-2M I <sub>Δn</sub> = 30 mA						
I <sub>n</sub> [A]	Type A		Type AC		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C	Code No. B	Code No. C		
6	002173201	002173221	002173101	002173121	225	1/54
10	002173202	002173222	002173102	002173122	225	1/54
13	002173203	002173223	002173103	002173123	225	1/54
16	002173204	002173224	002173104	002173124	225	1/54
20	002173205	002173225	002173105	002173125	225	1/54
25	002173206	002173226	002173106	002173126	225	1/54
32	002173207	002173227	002173107	002173127	225	1/54
40	002173208	002173228	002173108	002173128	225	1/54

KZS-2M I <sub>Δn</sub> = 100 mA				
I <sub>n</sub> [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
6	002173701	002173721	225	1/54
10	002173702	002173722	225	1/54
13	002173703	002173723	225	1/54
16	002173704	002173724	225	1/54
20	002173705	002173725	225	1/54
25	002173706	002173726	225	1/54
32	002173707	002173727	225	1/54
40	002173708	002173728	225	1/54

KZS-2M I <sub>Δn</sub> = 300 mA						
I <sub>n</sub> [A]	Type A		Type AC		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C	Code No. B	Code No. C		
6	002173401	002173421	002173301	002173321	225	1/54
10	002173402	002173422	002173302	002173322	225	1/54
13	002173403	002173423	002173303	002173323	225	1/54
16	002173404	002173424	002173304	002173324	225	1/54
20	002173405	002173425	002173305	002173325	225	1/54
25	002173406	002173426	002173306	002173326	225	1/54
32	002173407	002173427	002173307	002173327	225	1/54
40	002173408	002173428	002173308	002173328	225	1/54





KZS-2M $I_{\Delta n} = 500 \text{ mA}$				
$I_n$ [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
6	002173901	002173921	225	1/54
10	002173902	002173922	225	1/54
13	002173903	002173923	225	1/54
16	002173904	002173924	225	1/54
20	002173905	002173925	225	1/54
25	002173906	002173926	225	1/54
32	002173907	002173927	225	1/54
40	002173908	002173928	225	1/54

KZS-2M G/KV $I_{\Delta n} = 30 \text{ mA}$				
$I_n$ [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
4	002174100	002174120	225	1/54
6	002174101	002174121	225	1/54
10	002174102	002174122	225	1/54
13	002174103	002174123	225	1/54
16	002174104	002174124	225	1/54
20	002174105	002174125	225	1/54
25	002174106	002174126	225	1/54
32	002174107	002174127	225	1/54
40	002174108	002174128	225	1/54

Residual current circuit breaker with integral overcurrent protection KZS-R

Rated short-circuit capacity **10 kA**    Rated current **6 - 32 A**    Tripping characteristic **B, C**    Rated residual current **0,01-0,03 A**



In case of overcurrent or differential current, the button moves to the "trip" (middle) position. In case of manual turn off, the button moves to the "off" (lowest) position.

KZS-R					
$I_n$ [A]	$I_{\Delta n}$ [A]	Type A		Weight [g]	Packaging [pcs]
		Code No. B	Code No. C		
6	0,01	740610107	740611108	290	1/10
10	0,01	741010100	741011101	290	1/10
13	0,01	741310109	741311100	290	1/10
16	0,01	741610108	741611109	290	1/10
6	0,03	740615102	740616103	290	1/10
10	0,03	741015105	741016106	290	1/10
13	0,03	741315104	741316105	290	1/10
16	0,03	741615103	741616104	290	1/10
20	0,03	742015106	742016107	290	1/10
25	0,03	742515101	742516102	290	1/10
32	0,03	743215103	743216104	290	1/10



Auxiliary switch PS/SS KZS-R				
Type	Code No.	contacts	Weight [g]	Packaging [pcs]
PS/SS KZS-R	769900102	1xNC, 1xNC/NO	40	1/10

Residual current circuit breakers with integral overcurrent protection

Residual current circuit breaker with integral overcurrent protection KZS-2M 2p

Rated short-circuit capacity **10 kA**      Rated current **6 - 25 A**      Tripping characteristic **B, C**      Rated residual current **0,03 A**

KZS-2M 2p I <sub>Δn</sub> = 30 mA				
I <sub>n</sub> [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
6	002172501	002172521	210	1/54
10	002172502	002172522	210	1/54
13	002172503	002172523	210	1/54
15	002172504	002172524	210	1/54
16	002172505	002172525	210	1/54
20	002172506	002172526	210	1/54
25	002172507	002172527	210	1/54

KZS-2M 2p I <sub>Δn</sub> = 100 mA				
I <sub>n</sub> [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
6	002172471	002172481	210	1/54
10	002172472	002172482	210	1/54
13	002172473	002172483	210	1/54
15	002172474	002172484	210	1/54
16	002172475	002172485	210	1/54
20	002172476	002172486	210	1/54
25	002172477	002172487	210	1/54



Residual current circuit breaker with integral overcurrent protection with LED status signalisation KZS 2M2p EDI

Rated short-circuit capacity **10 kA**      Rated current **6 - 25 A**      Tripping characteristic **B, C**      Rated residual current **0,03 A**

KZS-2M 2p EDI I <sub>Δn</sub> = 30 mA				
I <sub>n</sub> [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
6	002172401	002172411	205	1/54
10	002172402	002172412	205	1/54
13	002172403	002172413	205	1/54
15	002172404	002172414	205	1/54
16	002172406	002172416	205	1/54
20	002172407	002172417	205	1/54
25	002172408	002172418	205	1/54





Residual current circuit breaker with integral overcurrent protection KZS-4M 3p

Rated short-circuit capacity  
**10 kA**

Rated current  
**6 - 32 A**

Tripping characteristic  
**B, C**

Rated residual current  
**0,03 A - 0,5 A**



**KZS-4M 3p I<sub>Δn</sub> = 30 mA**

I <sub>n</sub> [A]	Type A		Type AC		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C	Code No. B	Code No. C		
6	002174701	002174721	002174801	002174821	482	1/27
10	002174702	002174722	002174802	002174822	482	1/27
13	002174703	002174723	002174803	002174823	482	1/27
16	002174704	002174724	002174804	002174824	482	1/27
20	002174705	002174725	002174805	002174825	482	1/27
25	002174706	002174726	002174806	002174826	482	1/27
32	002174707	002174727	002174807	002174827	482	1/27

**KZS-4M 3p I<sub>Δn</sub> = 100 mA**

I <sub>n</sub> [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
6	002173001	002173021	482	1/27
10	002173002	002173022	482	1/27
13	002173003	002173023	482	1/27
16	002173004	002173024	482	1/27
20	002173005	002173025	482	1/27
25	002173006	002173026	482	1/27
32	002173007	002173027	482	1/27

**KZS-4M 3p I<sub>Δn</sub> = 300 mA**

I <sub>n</sub> [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
6	002174201	002174221	482	1/27
10	002174202	002174222	482	1/27
13	002174203	002174223	482	1/27
16	002174204	002174224	482	1/27
20	002174205	002174225	482	1/27
25	002174206	002174226	482	1/27
32	002174207	002174227	482	1/27

**KZS-4M 3p I<sub>Δn</sub> = 500 mA**

I <sub>n</sub> [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
6	002174301	002174321	482	1/27
10	002174302	002174322	482	1/27
13	002174303	002174323	482	1/27
16	002174304	002174324	482	1/27
20	002174305	002174325	482	1/27
25	002174306	002174326	482	1/27
32	002174307	002174327	482	1/27

**Residual current circuit breaker with integral overcurrent protection KZS-4M 3p+N**

 Rated short-circuit capacity  
**6 kA**

 Rated current  
**6 - 32 A**

 Tripping characteristic  
**B, C**

 Rated residual current  
**0,03 A - 0,5 A**
**KZS-4M 3p+N I<sub>Δn</sub> = 30 mA**

I <sub>n</sub> [A]	Type A		Type AC		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C	Code No. B	Code No. C		
6	002174901	002174921	002174001	002174021	515	1/27
10	002174902	002174922	002174002	002174022	515	1/27
13	002174903	002174923	002174003	002174023	515	1/27
16	002174904	002174924	002174004	002174024	515	1/27
20	002174905	002174925	002174005	002174025	515	1/27
25	002174906	002174926	002174006	002174026	515	1/27
32	002174907	002174927	002174007	002174027	515	1/27

**KZS-4M 3p+N I<sub>Δn</sub> = 100 mA**

I <sub>n</sub> [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
6	002174401	002174421	515	1/27
10	002174402	002174422	515	1/27
13	002174403	002174423	515	1/27
16	002174404	002174424	515	1/27
20	002174405	002174425	515	1/27
25	002174406	002174426	515	1/27
32	002174407	002174427	515	1/27

**KZS-4M 3p+N I<sub>Δn</sub> = 300 mA**

I <sub>n</sub> [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
6	002174501	002174521	515	1/27
10	002174502	002174522	515	1/27
13	002174503	002174523	515	1/27
16	002174504	002174524	515	1/27
20	002174505	002174525	515	1/27
25	002174506	002174526	515	1/27
32	002174507	002174527	515	1/27

**KZS-4M 3p+N I<sub>Δn</sub> = 500 mA**

I <sub>n</sub> [A]	Type A		Weight [g]	Packaging [pcs]
	Code No. B	Code No. C		
6	002174601	002174621	515	1/27
10	002174602	002174622	515	1/27
13	002174603	002174623	515	1/27
16	002174604	002174624	515	1/27
20	002174605	002174625	515	1/27
25	002174606	002174626	515	1/27
32	002174607	002174627	515	1/27





Residual current circuit breaker with integral overcurrent protection KZS-4M 2p B

Rated short-circuit capacity  
**10 kA**

Rated current  
**6 - 40 A**

Tripping characteristic  
**B, C**

Rated residual current  
**0,03 A - 0,3 A**



KZS-4M 2p B $I_{\Delta n} = 30 \text{ mA}$				
$I_n$ [A]	Code No. B	Code No. C	Weight [g]	Packaging [pcs]
6	002174511	002174531	369	1/27
10	002174512	002174532	369	1/27
13	002174513	002174533	369	1/27
16	002174514	002174534	369	1/27
20	002174515	002174535	369	1/27
25	002174516	002174536	369	1/27
32	002174517	002174537	369	1/27
40	002174518	002174538	390	1/27

KZS-4M 2p B $I_{\Delta n} = 100 \text{ mA}$				
$I_n$ [A]	Code No. B	Code No. C	Weight [g]	Packaging [pcs]
6	002174611	002174631	369	1/27
10	002174612	002174632	369	1/27
13	002174613	002174633	369	1/27
16	002174614	002174634	369	1/27
20	002174615	002174635	369	1/27
25	002174616	002174636	369	1/27
32	002174617	002174637	369	1/27
40	002174618	002174638	390	1/27

KZS-4M 2p B $I_{\Delta n} = 300 \text{ mA}$				
$I_n$ [A]	Code No. B	Code No. C	Weight [g]	Packaging [pcs]
6	002174811	002174831	369	1/27
10	002174812	002174832	369	1/27
13	002174813	002174833	369	1/27
16	002174814	002174834	369	1/27
20	002174815	002174835	369	1/27
25	002174816	002174836	369	1/27
32	002174817	002174837	369	1/27
40	002174818	002174838	390	1/27

Accessories for KZS



PS KZS-2M/4M is an auxiliary switch used for remote signalling of the RCBO to which it is fixed on the right side. PS KZS-2M/4M may also be fixed later of the state. Clamps are safe to touch. External dimensions comply with RCBO, built-in width is 0,5 module (9 mm). During fitting, the RCBO must be switched off.

The auxiliary switch can be used in combination with RCBOs manufactured after 1. 10. 2018. The production date is visible on the bottom of the product or above the test button. The number must be greater than 18401.

Auxiliary switch PS KZS-2M/4M				
Type	Code No.	contacts	Weight [g]	Packaging [pcs]
PS KZS-2M/4M	002159500	1xNC, 1xNC/NO	53	1/12

## Residual current circuit breaker with integral overcurrent protection DIFO

DIFO module is add-on element which contains residual current protection. It could be assembled with miniature circuit breaker ETIMAT 6 or ETIMAT 10 and together it is residual current operated circuit breaker with integrated overcurrent protection (RCBO). It is the product like LIMAT2-SD or LIMAT4-SD but it could be finalized or changed later on.

### Add-on block for residual current protection DIFO2

DIFO2					
Type	rated current [A]	Code No. Type A	Code No. Type AC	Weight [g]	Packaging [pcs]
DIFO2 30 mA	6 – 32	002058001	002058006	165	1/16
	40 – 50	002058201	002058206	165	1/16
DIFO2 100 mA	6 – 32	002058002	002058007	165	1/16
	40 – 50	002058202	002058207	165	1/16
DIFO2 300 mA	6 – 32	002058003	002058008	165	1/16
	40 – 50	002058203	002058208	165	1/16



DIFO2 can be assembled with standard 2p and 1p+N miniature circuit breaker ETIMAT 6 and ETIMAT 10. Width of product: 2 modules.

### Add-on block for residual current protection DIFO4

DIFO4					
Type	rated current [A]	Code No. Type A	Code No. Type AC	Weight [g]	Packaging [pcs]
DIFO4 30 mA	6 – 32	002058021	002058026	230	1/14
	40 – 50	002058221	002058226	230	1/14
DIFO4 100 mA	6 – 32	002058022	002058027	230	1/14
	40 – 50	002058222	002058227	230	1/14
DIFO4 300 mA	6 – 32	002058023	002058028	230	1/14
	40 – 50	002058223	002058228	230	1/14



DIFO4 can be assembled with standard 4p or 3p+N miniature circuit breakers ETIMAT 6 and ETIMAT 10. Width of product: 3,5 modules.