



Product manual Z0516

Z0516 Increased safety control transformer

INDEX ELEKTRO BV
Harregatplein 15
3214 VP Zuidland
Netherlands

T. +31(0)181 452120
<http://www.indexelektro.nl>
email Sales@indexelektro.nl



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Purpose of these instructions

- Working in hazardous areas, the safety of personnel and plant depends on complying with all relevant safety regulations.
- Assembly and maintenance staff working on installations therefore have a particular responsibility. They require precise knowledge of the applicable standards and regulations.
- These instructions give a brief summary of the most important safety measures. It supplements the corresponding regulations which the staff must study.



SAFETY INSTRUCTIONS

- Use the explosion-proof component only for its intended purpose.
- Explosion-proof transformers are not suitable for Zone 0 hazardous areas!
- Incorrect or impermissible use or non-compliance with these instructions invalidates our warranty provision.
- No changes to the device impairing its explosion protection are permitted.
- Use the components only if they are clean and undamaged.
- Any damage can invalidate the Ex-protection.
- Observe the following during installation and operation:
 - National safety regulations;
 - National accident prevention regulations;
 - National installation regulations (e.g. IEC 60079-14);
 - Generally recognized technical regulations;
 - Safety guidelines in these operating instructions;
 - Characteristic values given on the components.

Conformity to standards

The explosion-proof transformers are designed and manufactured according to standard of ISO 9001.

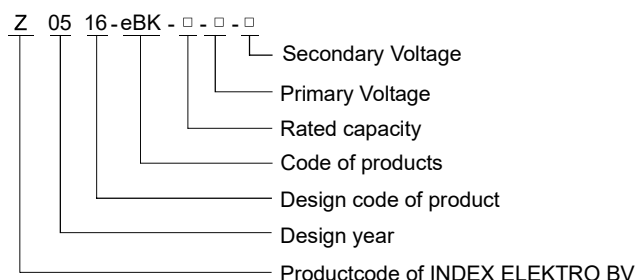
The explosion-proof transformers are conformity to the directive 94/9/EC, ATEX and the following standards:

IEC60079-0 : 2011	EN60079-0 : 2012
IEC60079-7 : 2015	EN60079-7 : 2015

Applicable scope

The series transformers can be used in the explosive gas atmospher zone 1 and zone 2

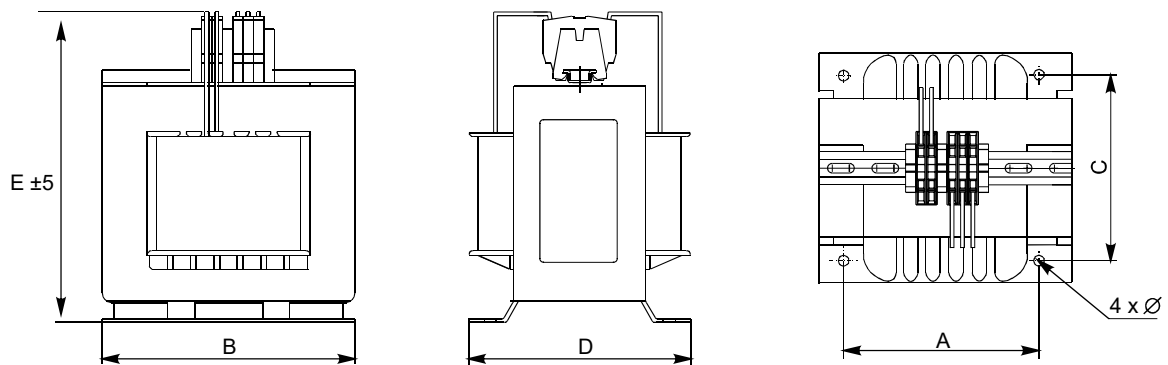
Model and implication



Technical date

- Ex mark: Ex II 2 G Ex eb IIC Gb
- Certificate : CML 16ATEX3133U // IECEx CML 16.0055U
- Ambient temperature : -55°C to $+55^{\circ}\text{C}$ / $+70^{\circ}\text{C}$
- Rated capacity: 100 VA, 200VA, 400VA, 550VA, 750VA, 1200VA, 1600VA
- Primary voltage: AC 110V, 115V, 118V, 120V, 127V, 220V, 230V, 240V, 250V, 254V, 280V, 380V, 400V, 415V, 440V, 460V, 480V, 500V, 525V, 600V, 660V, 690V.
- Secondary voltage: AC 12V, 20V, 24V, 25V, 27V, 28V, 30V, 32V, 34V, 36V, 42V, 48V, 50V, 55V, 60V, 110V, 115V, 120V, 220V, 230V, 240V, 250V, 400V.
- Frequency: 50/60 Hz
- The rated power depece on the ambient temperature and maximum temperature of the insulated windings
 - Ta. $^{\circ}\text{C}$ - 55°C = Insulated windings = 100%
 - Ta. $^{\circ}\text{C}$ - 70°C = Insulated windings = 90%

Dimensions



Type	B	D	E			A	C	Ø
			UT2,5/UT4/UT6/UT10 o.e.	UT16	UK50			
eBK-100	96	90	144			84±0.5	73.5±0.5	5.8
eBK-200	96	104	144			84±0.5	90±0.5	7
eBK-400	150	110	194			122±0.5	90±0.5	7
eBK-550	150	110	194			122±0.5	90±0.5	7
eBK-750	150	150	194	201		122±0.5	130±0.5	7
eBK-1200	168	145	212	219	242	138±0.5	116±0.5	7
eBK-1600	180	155	220	227	250	150±0.5	130±0.5	7

Operation/installation

Transport and storage in original packaging only. National safety and installations regulations and the generally accepted rules of engineering practice must be observed when mounting and operating this equipment.

For the sake of the normal operation and the safety of increased safety controll transformer, the user shall observe the following provisions:

The transformer is suitable for use in hazardous areas, zones 1 and 2.

The transformer should be used under the following atmospheric condition:

- The pressure is 80kPa (0.8bar)~110kPa (1.1bar)
- The volume ratio of standard oxygen content is 21% air.
- The ambient air relative humidity is less then 95%
- There is no obvious shake and impact vibration place

The series products which are Ex components can't be used separately but with the explosion-proof enclosure suitable for the environment.

Primary current (Ampère)									Secondary current (Ampère)								
Power VA Primary voltages V	100	200	400	550	750	1200	1600		Power VA Secondary voltages V	100	200	400	550	750	1200	1600	
110	1.05	2.04	4.00	5.00	7.33	11.62	14.98		12	8.33	16.67	33.33	45.83	62.50	100.0	133.3	
115	1.00	1.95	3.83	4.78	7.01	11.11	14.33		20	5.00	10.00	20.00	27.50	37.50	60.00	80.00	
118	0.97	1.90	3.73	4.66	6.72	10.83	13.97		24	4.17	8.33	16.67	22.92	31.25	50.00	66.67	
120	0.96	1.87	3.67	4.58	6.72	10.65	13.73		25	4.00	8.00	16.00	22.00	30.00	48.00	64.00	
127	0.93	1.76	3.46	4.33	6.35	10.06	12.98		27	3.70	7.41	14.81	20.37	27.78	44.44	59.26	
220	0.52	1.02	2.00	2.50	3.66	5.81	7.49		28	3.57	7.14	14.29	19.64	26.79	42.86	57.14	
230	0.50	0.97	1.91	2.39	3.51	5.56	7.17		30	3.33	6.67	13.33	18.33	25.00	40.00	53.33	
240	0.48	0.93	1.83	2.29	3.36	5.33	6.87		32	3.13	6.25	12.50	17.19	23.44	37.50	50.00	
250	0.46	0.90	1.76	2.20	3.23	5.11	6.59		34	2.94	5.88	11.76	16.18	22.06	35.29	47.06	
254	0.45	0.88	1.73	2.17	3.17	5.03	6.49		36	2.78	5.56	11.11	15.28	20.83	33.33	44.44	
280	0.41	0.80	1.57	1.96	2.88	4.56	5.89		42	2.38	4.76	9.52	13.10	17.86	28.57	38.10	
380	0.31	0.59	1.16	1.45	2.12	3.36	4.34		48	2.08	4.17	8.33	11.46	15.63	25.00	33.33	
400	0.29	0.56	1.10	1.38	2.02	3.20	4.12		50	2.00	4.00	8.00	11.00	15.00	24.00	32.00	
415	0.28	0.54	1.06	1.33	1.94	3.08	3.97		55	1.82	3.64	7.27	10.00	13.64	21.82	29.09	
440	0.26	0.51	1.00	1.25	1.83	2.90	3.75		60	1.67	3.33	6.67	9.17	12.50	20.00	26.67	
460	0.25	0.49	0.96	1.20	1.75	2.78	3.58		110	0.91	1.82	3.64	5.00	6.82	10.91	14.55	
480	0.24	0.47	0.92	1.15	1.68	2.66	3.43		115	0.87	1.74	3.48	4.78	6.52	10.43	13.91	
500	0.23	0.45	0.88	1.10	1.61	2.56	3.30		120	0.83	1.67	3.33	4.58	6.25	10.00	13.33	
525	0.22	0.43	0.84	1.05	1.54	2.43	3.14		220	0.45	0.91	1.82	2.50	3.41	5.45	7.27	
600	0.19	0.37	0.73	0.92	1.34	2.13	2.75		230	0.43	0.87	1.74	2.39	3.26	5.22	6.96	
660	0.17	0.34	0.67	0.83	1.22	1.94	2.50		240	0.42	0.83	1.67	2.29	3.13	5.00	6.67	
690	0.17	0.32	0.64	0.80	1.17	1.85	2.39		250	0.40	0.80	1.60	2.20	3.00	4.80	6.40	

Maximum torque values to be used on the terminal must be in accordance with the permitted values

Terminal Phoenix	Torque
UT2,5	UK3N 0.6 ~ 0.8 Nm
UT4	UK5N 0.6 ~ 0.8 Nm
UT6	UK6N 1.5 ~ 1.8 Nm
UT10	UT10N 1.5 ~ 1.8 Nm
UT16	UT16N 1.5 ~ 1.8 Nm

- Cables must be connected with due care, e.g.
- Crimped joint for wires should be done (such as soldered crimped with cable lug or bushings and so on) to prevent multi-conductor slipping from stipulated position or not to be compressed.
- Insulation must come up to the terminal
- Virtued electrical wire is not permitted must not be damaged electrical wire
- All screws on the connection terminals, including unused ones, must be fully tightened. A check must be carried out on correct installation before the devices go into service.



When using, over tightening the screws will damage to the Increased safety control transformer.

Repairs / Maintenance

- Observe the relevant national regulations for your country!
- Only parts from our company that can be used to replace or maintain, and the operation should be carried out by professional electrician!
- The following points must be checked during maintenance:
 - * Compliance with permitted temperatures;
 - * Check if there is any crack in the components.
 - * Check if the component has been fixed reliably.
 - * Check if the wiring is not loose or fixed.
 - * Check if the flame-proof joints is damaged.

Recycling / Disposal

- The respective valid national regulations for waste disposal shall be observed when disposing of apparatus!
- We are pleased to answer any questions. In this case you can contact INDEX ELEKTRO BV.