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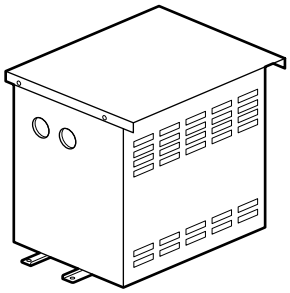
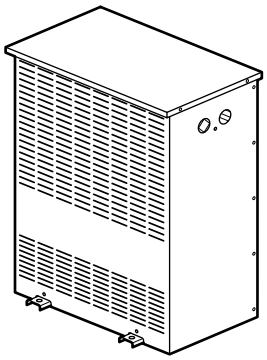
Isolating single phase transformer

Cat. Nos.: 0 425 17/18/55/56/57/58
1 425 59/60/61/62/63





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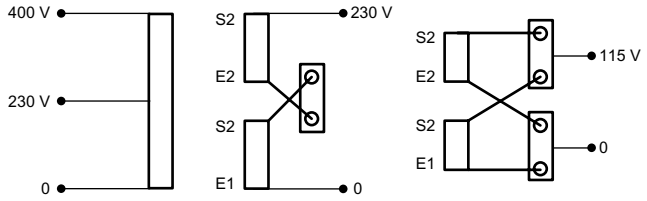
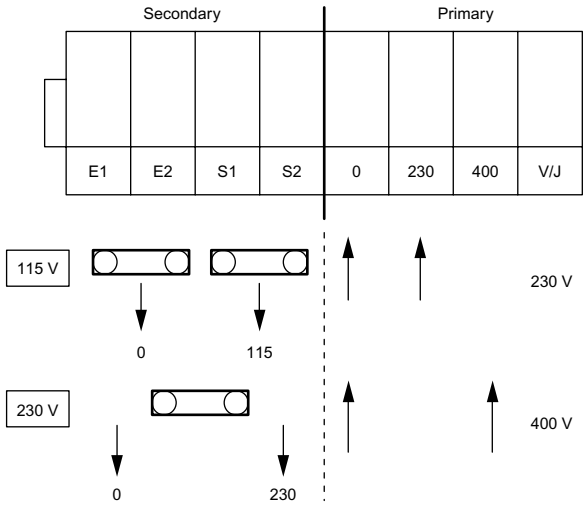
1. OPERATING PRINCIPLE

Transformer designed to supply equiments where safetyagainst indirect electrical chocs is required, industrial socketssupply, tiny conductives areas supply…



Sample connection

Secondary 115 or 230 V, serial - parallel connectionby coupling barrals supplied with:



2. MAIN CHARACTERISTICS

Dry type air cooled transformer.
Single phase 50 - 60 Hz frequency - Class 1.
Insulation and heating:
- Class B up to 2.5 KVA,
- Class H from 4 to 25 KVA.

Insulation voltage values:
- 4500 V between windings,
- 2250 V between windings and earth,
- 1800 V between secondary and earth.

Ambiant temperature: 25°C.

2.1 Conformities

Compliance with IEC 61558-2-4 standard.
CE marking.
CEM compatibility.

2.2 Transformers protection

Transformers can be protected by aM type fuse or D type mcb on primary side.
Transformers can be protected by gG type fuse or C type mcb on secondary side.

2.3 Casing

2.3.1 Enclosure IP 21 - IK08
RAL 7035.
Information: name-plaque on cover with:
- reference number,
- voltages,
- protection caliber device (fuse or Mcb),
- currents,
- rating,
- standard,
- frequency,
- Ucc.

Secondary coupling diagram on magnetic core.

2.3.2 Magnetic core
In silicon magnetic steel sheet.
0W6 core quality from 10 KVA to 25 KVA.

2.3.3 Connection
Terminal blocs (cage system) or busbar and eyelet.

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3. RANGE / ELECTRICAL CHARACTERISTICS

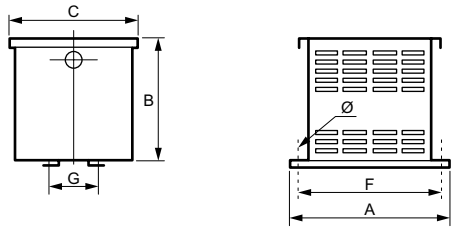
Primary: 230 V - 400 V.
Secondary: 115 V - 230 V by serial parallel coupling, connection strips supplied.

Cats. Nos.	Rating	Losses		Voltage drop	Efficiency at reference T°	Ucc	Primary terminals	Secondary terminals
	(VA)	No load losses (W)	Due to load losses at reference T° (W)	cos fi = 1 (%)		(%)	(mm²)	(mm²)
042517	1600	60.2	32	1.62	94.6	1.6	6	6
042518	2500	88.8	47	1.67	94.9	2.2	10	10
042555	4000	95	102	2.15	95.3	1.8	10	16
042556	5000	149	130	2.06	93.9	1.7	10	16
042557	6300	149	177	2.22	95.1	1.9	10	16
042558	8000	158	194	2.00	95.7	1.8	16	35
142559	10000	135	318	2.91	95.7	2.2	16	35
142560	12500	135	353	2.59	96.2	2.1	16	35
142561	16000	135	373	2.13	96.9	2.2	35	10(2)
142562	20000	148	690	3.45	96	4	8(1)	10(2)
142563	25000	189	736	2.95	96.4	3.4	8(1)	10(2)

(1) Screw Ø 8 / section 35 mm².
(2) Screw Ø 10 / section 70 mm².

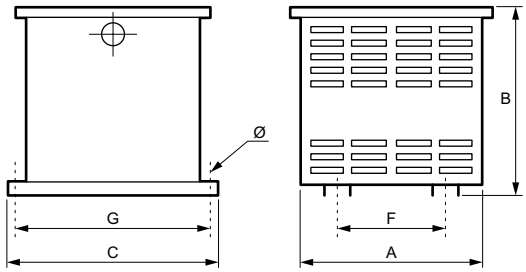
4. DIMENSIONS

4.1 Rating 1.6 kVA to 8 kVA



Cats. Nos	Rating	Dimensions (mm)			Fixing (mm)			Weight
	(VA)	A	B	C	F	G	Ø	(Kg)
042517	1600	250	270	253	230	140	7	25
042518	2500	320	330	253	300	111	9	33
042555	4000	340	410	320	320	130	9	49
042556	5000	340	410	320	320	180	9	65
042557	6300	340	410	320	320	180	9	74
042558	8000	390	460	380	370	150	9	88

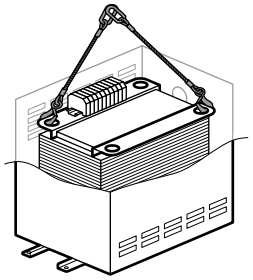
4.2 Rating 10 to 25 kVA



Cats. Nos	Rating	Dimensions (mm)			Fixing (mm)			Weight
	(VA)	A	B	C	F	G	Ø	(Kg)
142559	10000	431	650	440	411	146	11	70
142560	12500	431	650	440	411	146	11	75
142561	16000	431	650	440	411	146	11	93
142562	20000	530	560	540	240	510	12	105
142563	25000	530	560	540	240	510	12	124

5. HANDLING / LIFTING OPERATION

Lifting holes (Ø 25 mm) on upper fitting devices, cover opened.



6. PROTECTIONS

Minimal protection rating for primary supply line on transformer(1).

Rating	230V Mono				400V Mono			
	aM type fuse		D type Mcb		aM type fuse		D type Mcb	
1600 VA	10A	013010	16A	408015	6A	013006	10A	408014
2500 VA	16A	013016	25A	408017	10A	013010	16A	408015
4 kVA	25A	013025	32A	408018	16A	013016	20A	408016
5 kVA	32A	408016	40A	408019	16A	013016	25A	408017
6.3 kVA	32A	014032	50A	408020	20A	013020	32A	408018
8 kVA	40A	014040	63A	408021	25A	013025	40A	408019
10 kVA	63A	015063	80A	409458	32A	014032	50A	408020
12.5 kVA	63A	015063	100A	409459	40A	014040	63A	408021
16 kVA	80A	015080	160A	420007	50A	014050	80A	409458
20 kVA	100A	015096	160A	420007	63A	015063	100A	409459
25 kVA	125A	015097	200A	420208	80A	015080	125A	409460

(1) These values are indicative's one for transformers with inrush current value close to 25 In.

Secondary side protection.

Rating	115V				230V			
	Caliber	Fuse	Caliber	Mcb	Caliber	Fuse	Caliber	Mcb
1600 VA	16	013316	13	407699	8	013308	8	407697
2500 VA	20	013320	20	407701	10	013310	10	407698
4 kVA	32	014332	32	407703	16	013316	16	407700
5 kVA	40	014340	40	407704	20	013320	20	407701
6.3 kVA	50	014350	50	407659	25	013325	25	407702
8 kVA	80	015380	80	409140	32	014332	32	407703
10 kVA	80	015380	80	409140	40	014340	40	407704
12.5 kVA	100	015396	100	409141	50	014350	50	407659
16 kVA	160	016355	160	420047	80	015380	80	409140
20 kVA	160	016355	200	420208	80	015380	80	409140
25 kVA	200	016860	250	420209	100	015396	100	409141

7. ADDITIONAL CHARACTERISTICS

7.1 Calorific potential (Mega Joules)

Cats. Nos	P. Cal. (MJ)
0425 17	190
0425 18	465
0425 55	335
0425 56	375
0425 57	450
0425 58	510
1425 59	650
1425 60	740
1425 61	990
1425 62	1240
1425 63	1420

7.2 Casing resistance to chemical agents

Resistance to spraying risk under ambient temperature.

++ : Excellent resistance (permanent exposure)
+ : Satisfactory resistance (long-term exposure)
– : Limited resistance (possibility of brief exposure)
– – : Low resistance (exposure should be avoided)

Aqueous solutions	Cold water		++
	Hot water		+
	Vapour		-
	Salt water 5 %		+
	Hydrogen peroxide		-
	Water + washing powder/liquid detergent		+
	Water + surface active agents		+
Alcohols	Ethanol		+
	Methanol		+
	Propanol		+
	Butanol		+
Strong oxidizing acids	Concentrate acetic acid		+
	Nitric acid 5 %		+
	Sulphuric acid 30 %		+
	Hydrochloric acid 30 %		+
	Perchloric acid 70 %		++
	Hydrofluoric acid 70 %		– –
	Chromic acid 50 %		–
	Phosphoric acid 30 %		+
Weak acids	Diluted acetic acid < 25 %		+
	Citric acid		++
	Lactic acid		++
	Formic acid		+
	Uric acid		+
Bases	Ammonia		+
	Sodium hydroxide (soda)		+
	Sodium hypochlorite (bleach 12°)		+
	Potassium hydroxide (potash)		+
Oils and greases	Plant origin	Linseed oil	++
		Peanut/Olive oil	++
		Castor oil	++
		Glycerin	+
	Mineral origin	Paraffin (Vaseline)	++
		Car engine oil	+
		Silicon oils	++
		Cutting oils	++
		Hydraulic oils	+
Hydrocarbons	Lead-free petrol		+
	Gas-oil		++
	Kerosene		++
	White-spirit		++
Chlorinated solvents	Trichloroethylene		- -
	Trichloroethane		-
	Perchloroethylene		- -
	Methylene chloride		- -
	Carbon tetrachloride		- -
	Chloroform		-
Aromatic solvents	Benzene		+
	Toluene		-
	Xylene		+
Aliphatic solvents	Hexane		++
	Heptane		++