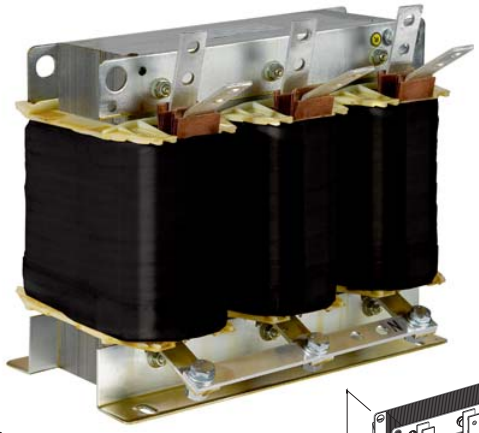
AT3TH-UL

NEW



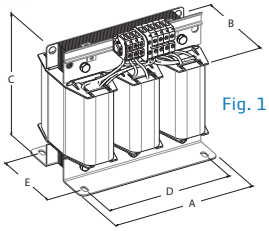


Fig. 1

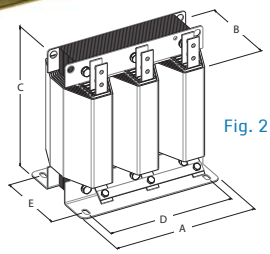


Fig. 2

General data

Three-phase auto-transformers are electrical machine with one single common wiring where primary and secondary are not galvanically separated. They have smaller construction compared to the same isolating transformers.
Typical applications are speed control for Fans, Starting of big three-phase Electric Motors, etc... Auto-transformers do not protect from earth failure. Their special feature is that the nearer are the values of the input and output voltage, the more cost-effective are auto-transformers. It is clear that auto-transformers should be calculated and designed every time, based on customer requests, since the input and output voltages are critical to determine the correct electrical sizing. Certification CRU US file E169331 vol. 1 sec. 2
Construction in accordance with the following standards:

Standard

CEI-EN 61558; p. 2-13

UL 5058 1-2 up to 345Amps (generally equivalent to 250kVA of nominal power and core power up to 80kVA)

The design rating power could be calculated by the following formula:

$$\text{Design rating} = \text{Pnom}\left(1 - \frac{V_1}{V_2}\right)$$

where:
Pnom = rated power (VA)
V1 = lower voltage (V)
V2 = higher voltage(V)

Example:
Pnom = 100 kVA
V1 = 380 V
V2 = 480 V

$$\text{Design rating} = 100 \times \left(1 - \frac{380}{480}\right) = 21 \text{ kVA}$$

In this case technical data are referred to AT3TH-UL-20kVA

Technical data AT3TH-UL

Electrical data

CODE	DESIGN RATING	INSULATION CLASS	DIMENSIONS (mm)					WEIGHT	FIG.	LOSSES (W)			EFFICIENCY	UCC	INRUSH CURRENT
	KVA		A	B	C	D	E	Kg		no-load	load	tOTAL	%	%	x In
AT3TH-UL-...	3	H	300	170	315	250	110	30	1	60	210	270	91,7	5,8	20
	5	H	300	190	315	250	140	40	1	85	280	365	93,2	5,2	18
	7,5	H	360	200	356	325	150	62	1	115	330	445	94,4	4,6	17
	10	H	360	230	356	325	180	80	1	125	350	475	95,4	4,2	17
	15	H	420	250	415	375	170	91	1	125	540	665	95,7	4,2	18
	20	H	420	270	415	375	200	135	1	205	500	705	96,6	3,7	18
	25	H	480	300	445	425	190	145	1	190	710	900	96,5	3,5	18
	30	H	480	320	445	425	210	155	1	210	760	970	96,8	3,4	17
	35	H	480	340	445	425	230	180	1	235	860	1095	96,9	3,2	17
	40	H	480	350	445	425	240	190	2	250	970	1220	97	3,2	17
	45	H	600	350	600	540	220	200	2	250	1430	1680	96,5	4,8	10
	50	H	600	360	600	540	230	220	2	270	1480	1750	96,6	5,5	9
	60	H	600	380	600	540	250	250	2	320	1565	1885	97	4,7	9
	70	H	600	390	600	540	260	270	2	340	1830	2170	97	4,9	9
	80	H	600	410	600	540	280	305	2	390	1950	2340	97,2	4,6	9