

Typical Applications



An inverter input reactor is specially recommended to be used in the following circumstance:

- Several inverters are closed connected in parallel.
- There is obvious disturbance(interference, over voltage) from other equipment.
- The voltage imbalance between different phases of the power supply is above 1.8% of the rated voltage.
- A great number of inverters installed in one circuit.
- Decrease the overload of power factor correction capacitor, if there is certain power factor correction device in the cabinet.
- Power capacity $\geq 600\text{KVA}$, and the distance between inverter and the large capacity power supply is within 10m.
- The inverter is powered by circuit with extremely low impedance(the transformer capacity is higher than 10times of the rated value of inverter).

Features and Benefits

- Provide improved overload protection for power supply
- Reduce the current harmonic distortion of inverter
- Increase the power factor of input supply, reduce high order harmonics
- Restrain the surge to power equipment caused by transformer

Working Conditions

- Ambient temperature: $-10\text{ }^{\circ}\text{C} \sim +45\text{ }^{\circ}\text{C}$ no decreasing of the rated value, highest temp. $+55^{\circ}\text{C}$; if above 45°C , the rated current decreases 2% with the temperature increases 1°C .
- Working place not higher than 2000 meters above the sea level.
- Operation temperature: $-25^{\circ}\text{C} \sim +45^{\circ}\text{C}$, relative humidity $\leq 90\%$.
- No harmful gas, no flammable or explosive articles.
- With good ventilation, if installed in cabinet, please add ventilating equipment.



Standards

- IEC289: 1987 Reactor
- GB10229-88 Reactor(eqv IEC289:1987)
- JB9644-1999: Reactor for Semiconductor Electric Drive

Technical Data

Rated Voltage: V_R	$\Phi 3/380VAC \sim 1140VAC$
Working Frequency: f_R	50/60Hz
Rated Current: I_R	3A~1600A
Max. Current	1.5×rated current, lasts for 60s
Protection Class	IP00~IP22
Insulation Class	class F, H
Insulation Resistance	$\geq 100M\Omega @ 1000VDC$
Voltage Drop	<4%, torque loss may be caused if higher than 4%
Noise	$\leq 65dB$
Temperature Rise	$\leq 85K$
Dielectric Strength	3000VAC/50Hz/5mA/10S no breakdown of the core windings(factory test)

Tabulates

Inverter Input Reactor (voltage drop)					
Part No.	Outline Drawing	Power(KW)	Current(A)	Insulation Class	Voltage Drop
FT33DK-10-A	Fig.1	3.7	10	F	2%
FT33DK-15-A		5.5	15	F	2%
FT33DK-20-A	Fig.2	7.5	20	F	2%
FT33DK-30-A		11	30	F	2%
FT33DK-40-A	Fig.3	15	40	F	2%
FT33DK-50-A		18.5	50	F	2%
FT33DK-60-A	Fig.4	22	60	F	2%
FT33DK-80-A		30	80	F	2%
FT33DK-90-A		37	90	F	2%
FT33DK-120-A	Fig.5	45	120	F	2%
FT33DK-150-A		55	150	F	2%
FT33DK-200-A		75	200	F	2%
FT33DK-250-A		110	250	F	2%
FT33DK-300-A		132	300	F	2%
FT33DK-330-A		160	330	F	2%
FT33DK-390-A		185	390	F	2%
FT33DK-490-A		220	490	F	2%
FT33DK-600-A		280	600	F	2%
FT33DK-660-A		300	660	F	2%
FT33DK-800-A		380	800	F	2%

Tabulates

Inverter Input Reactor (voltage drop)					
Part No.	Outline Drawing	Power(KW)	Current(A)	Insulation Class	Voltage Drop
FT33DK-10-C	Fig.1	3.7	10	F	2%
FT33DK-15-C		5.5	15	F	2%
FT33DK-20-C		7.5	20	F	2%
FT33DK-30-C	Fig.2	11	30	F	2%
FT33DK-40-C		15	40	F	2%
FT33DK-50-C		18.5	50	F	2%
FT33DK-60-C		22	60	F	2%
FT33DK-80-C	Fig.5	30	80	F	2%
FT33DK-90-C		37	90	F	2%
FT33DK-120-C		45	120	F	2%
FT33DK-150-C		55	150	F	2%
FT33DK-200-C		75	200	F	2%
FT33DK-250-C		110	250	F	2%
FT33DK-300-C		132	300	F	1%
FT33DK-330-C		160	330	F	1%
FT33DK-390-C		185	390	F	1%
FT33DK-490-C		220	490	F	1%
FT33DK-600-C		280	600	F	1%
FT33DK-660-C		300	660	F	1%
FT33DK-800-C		380	800	F	1%
FT33DK-1000-C		450	1000	F	1%
FT33DK-1200-C		550	1200	F	1%
FT33DK-1600-C		630	1600	F	1%

Outline Drawing and Dimensions(mm)

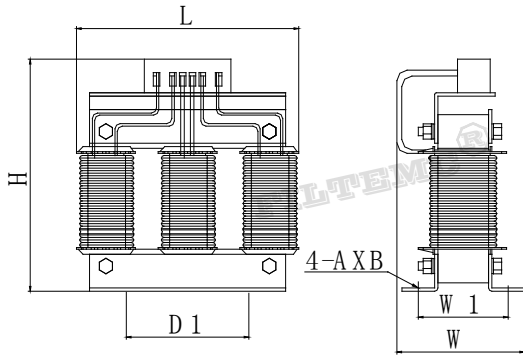


Fig.1

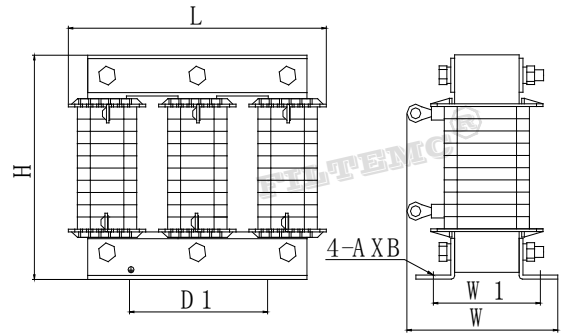


Fig.2

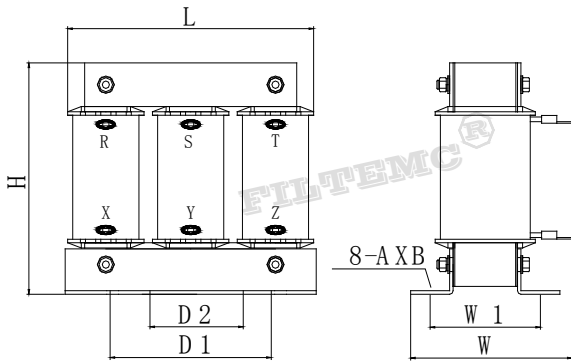


Fig.3

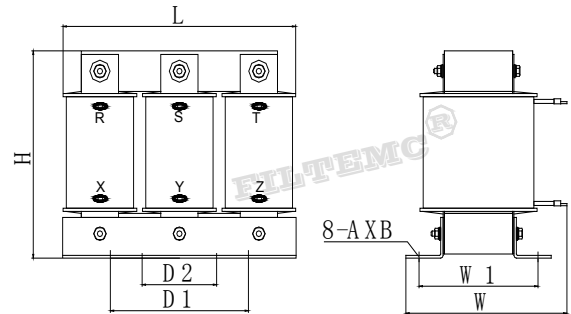


Fig.4

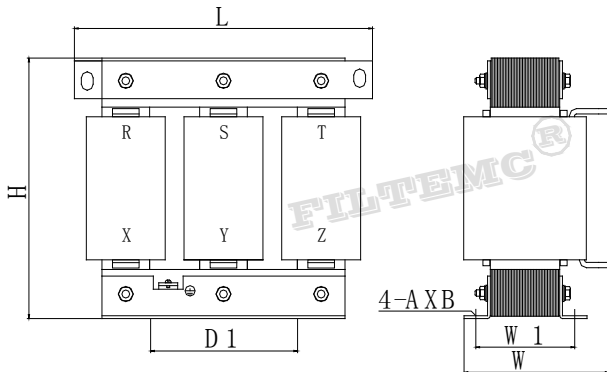


Fig.5

Inverter Input Reactor (voltage drop)								
Part No.	Outline Drawing	Dimensions(mm)						
		L(max)	W(max)	H(max)	D1±2	D2±2	W1±3	A×B
FT33DK-10-A	Fig.1	145	80	140	75	/	57	6.5×11
FT33DK-15-A		145	80	140	75	/	57	6.5×11
FT33DK-20-A	Fig.2	170	120	140	80	/	65	6.5×11
FT33DK-30-A		170	120	140	80	/	65	6.5×11
FT33DK-40-A	Fig.3	155	150	140	95	55	78	6×15
FT33DK-50-A		155	150	140	95	55	78	6×15
FT33DK-60-A	Fig.4	195	160	165	120	64	92	8.5×20
FT33DK-80-A		195	160	165	120	64	92	8.5×20
FT33DK-90-A		195	160	165	120	64	92	8.5×20
FT33DK-120-A	Fig.5	210	135	170	110	/	95	8×24
FT33DK-150-A		245	175	215	130	/	110	11×24
FT33DK-200-A		250	185	220	130	/	110	11×24
FT33DK-250-A		265	190	250	150	/	115	11×24
FT33DK-300-A		265	190	225	150	/	112	11×24
FT33DK-330-A		285	190	250	170	/	115	11×24
FT33DK-390-A		340	195	300	195	/	125	11×24
FT33DK-490-A		340	195	300	195	/	125	11×24
FT33DK-600-A		340	250	300	195	/	135	11×24
FT33DK-660-A		340	250	300	195	/	145	11×24
FT33DK-800-A		385	265	360	230	/	150	11×24

Inverter Input Reactor (voltage drop)								
Part No.	Outline Drawing	Dimensions(mm)						
		L(max)	W(max)	H(max)	D1±2	D2±2	W1±3	A×B
FT33DK-10-C	Fig.1	145	80	140	75	/	57	6.5×11
FT33DK-15-C		145	80	140	75	/	57	6.5×11
FT33DK-20-C		145	80	140	75	/	57	6.5×11
FT33DK-30-C	Fig.2	170	120	140	80	/	65	6.5×11
FT33DK-40-C		170	120	140	80	/	65	8×15
FT33DK-50-C		170	120	140	80	/	65	8×15
FT33DK-60-C		170	120	140	80	/	65	8×15
FT33DK-80-C	Fig.5	210	135	175	110	/	97	8×18
FT33DK-90-C		210	140	175	110	/	97	8×18
FT33DK-120-C		210	135	170	110	/	95	8×24
FT33DK-150-C		210	140	175	110	/	99	8×18
FT33DK-200-C		245	180	220	130	/	118	11×24
FT33DK-250-C		260	185	220	130	/	120	11×24
FT33DK-300-C		245	185	220	130	/	120	11×24
FT33DK-330-C		280	200	240	130	/	115	11×24
FT33DK-390-C		280	200	240	130	/	115	12×20
FT33DK-490-C		280	200	240	130	/	115	11×24
FT33DK-600-C		280	200	280	130	/	115	11×24
FT33DK-660-C		320	230	285	170	/	140	12×20
FT33DK-800-C		320	240	295	170	/	140	12×20
FT33DK-1000-C		355	275	330	200	/	155	14×24
FT33DK-1200-C		355	285	340	200	/	155	14×24
FT33DK-1600-C		350	285	340	200	/	165	14×24

Reminding and Warning:

Please read carefully all the safety warnings and instructions before installing reactors and putting them into use:

- Study thoroughly the product instructions to have a full understanding of its performance, structure, dimensions, weight, installation method, etc.
- Check carefully the part number and manufacturer of reactors before installation to see if they comply with the design drawings, installation is forbidden if there is any difference. Also it is crucial to check the working voltage and withstand voltage of reactors.
- If there is no holes on the mounting bracket, punch holes first according to the installation dimensions; otherwise you can install directly. Tighten the screws to the utmost. Reactors should be mounted steady and stable with inclination no more than 5° , and they must be earth connected after installation.
- Reactors shouldn't be hanged, but fixed horizontally on a racket. Please take the electrical safety distance between the copper bar, winding of reactor and the chassis into consideration to make sure the installations are compliance with the related safety standards and beneficial for heat dissipation.
- Connect reactors strictly according to the design drawings to avoid wrong wiring:
For low current versions with wire beezer terminals, normally the black wire is input and the white is output(reactors are equipped with black/white silica gel tubing sleeve). For copper bars, the upper is input and the bottom is output, and the faying surface should be well contacted. Screws to fix the wire must be tightened, and make sure the copper bars are not squeezed nor dragged for large current versions after installation.
- For reactors without warning signs(Reactors supplied by FILTEMC have yellow high temperature warning label and electric shock warning label), please add the cautionary labels after installation to prevent accidents.

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