Reactor

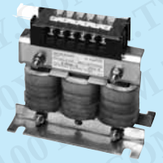
AC reactor

FR-HAL ALL

An AC reactor connected on the input side of the inverter improves power factor and reduces harmonic currents on the input side.

● Specifications

Type FR-HAL-□□	200V	400V
	0.4K to 110K *1	H0.4K to H560K *1
Power factor improvement effect *2	Power factor 88% or more (at 100% load)	
Vibration	5.9m/s² or less	H110K or less : 5.9m/s² or less H185K or more : 2.9m/s² or less
Installation procedure	(H)55K or less : horizontal plane installation or vertical plane installation (H)75K or more : horizontal plane installation	

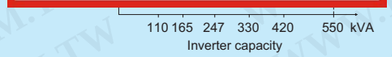


FR-HAL

*1 Refer to the type in the table of outline dimension drawing for details of capacity.
*2 Power factor stated above is the value when considering the power supply impedance is 1%. The value changes according to the power supply capacity and power supply impedance.
The load is considered as 100% when the fundamental current value specified in JEM-TR201 is 100%. The power factor improving effect is slightly lower when the motor below 0.4kW is used.

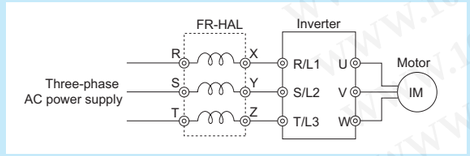
● Selection

- Make selection according to the applicable motor capacity. (When the inverter capacity is larger than the motor capacity, make selection according to the motor capacity.)
- When the inverter is connected under a large-capacity power transformer (1000kVA or more transformer) or when a power capacitor is to be switched over, an excessive peak current may flow in the power input circuit, damaging the inverter. Be sure to install an AC reactor in such a case.

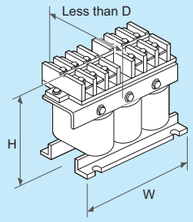


<Selection of reactor when using the large-capacity power transformer>

● Connection diagram



● Outline dimension drawings



* The appearance of a one of typical model. The shape differs according to each model.

(Unit : mm)

	Type	W	H	D	Mass (kg)
200V	0.4K	104	99	72	0.6
	0.75K	104	99	74	0.8
	1.5K	104	99	77	1.1
	2.2K	115	115	77	1.5
	3.7K	115	115	83	2.2
	5.5K	115	115	83	2.3
	7.5K	130	135	100	4.2
	11K	160	164	111	5.2
	15K	160	167	126	7.0
	18.5K	160	128	175	7.1
	22K	185	150	158	9.0
	30K	185	150	168	9.7
	37K	210	175	174	12.9
	45K	210	175	191	16.4
	55K	210	175	201	17.4
	75K	240	210	213	23
	110K	330	325	258	40

	Type	W	H	D	Mass (kg)
400V	H0.4K	135	115	59.6	1.5
	H0.75K	135	115	59.6	1.5
	H1.5K	135	115	59.6	1.5
	H2.2K	135	115	59.6	1.5
	H3.7K	135	115	70.6	2.5
	H5.5K	160	142	72	3.5
	H7.5K	160	142	91	5.0
	H11K	160	146	91	6.0
	H15K	220	195	105	9.0
	H18.5K	220	215	170	9.0
	H22K	220	215	170	9.5
	H30K	220	215	170	11
	H37K	220	214	170	12.5
	H45K	280	245	165	15
	H55K	280	245	170	18
	H75K	205	170	208	20
	H110K	240	225	220	28
	H185K	330	325	270	55
	H280K	330	325	320	80
	H355K	330	325	340	80
	H560K	450	540	635	190

DC reactor

FR-HEL ALL

A DC reactor connected on the DC side of the inverter improves power factor and reduces harmonic currents on the input side.

● Specifications

Type FR-HEL-□□	200V	400V
	0.4K to 55K *1	H0.4K to H55K *1
Power factor improvement effect *2	Power factor 93% or more (at 100% load)	
Vibration	5.9m/s² or less	
Installation procedure	Horizontal plane installation or vertical plane installation	

FR-HEL

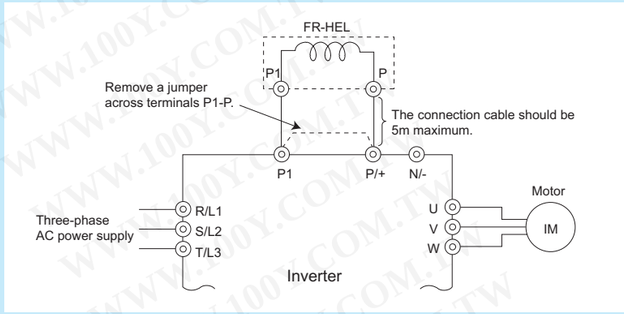
*1 Refer to the type in the table of outline dimension drawing for details of capacity.
*2 Power factor stated above is the value when considering the power supply impedance is 1%.
The value changes according to the power supply capacity and power supply impedance. The load is considered as 100% when the fundamental current value specified in JEM-TR201 is 100%.
The power factor improving effect is slightly lower when the motor below 0.4kW is used.
*3 A DC reactor is enclosed with the inverter of 75K or more, be sure to connect the reactor to the inverter.

● Selection

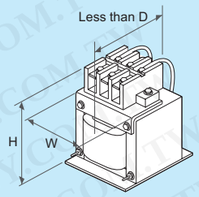
- Make selection according to the applicable motor capacity. (When the inverter capacity is larger than the motor capacity, make selection according to the motor capacity.)

● Connection diagram

- Connect the reactor to terminal P1 and P of the inverter. Make sure to remove a jumper across terminal P1-P before connecting. (A failure to do so will produce no power factor improving effect.)
- The wiring length between the reactor and inverter should be 5m maximum and minimized.



● Outline dimension drawings



* The appearance of a one of typical model. The shape differs according to each model.

(Unit : mm)

	Type	W	H	D	Mass (kg)
200V	0.4K	70	71	61	0.4
	0.75K	85	81	61	0.5
	1.5K	85	81	70	0.8
	2.2K	85	81	70	0.9
	3.7K	77	92	82	1.5
	5.5K	77	92	92	1.9
	7.5K	86	113	98	2.5
	11K	105	133	112	3.3
	15K	105	133	115	4.1
	18.5K	105	93	165	4.7
	22K	105	93	175	5.6
	30K	114	100	200	7.8
	37K	133	117	195	10
	45K	133	117	205	11
	55K	153	132	209	12.6

	Type	W	H	D	Mass (kg)
400V	H0.4K	90	78	60	0.6
	H0.75K	66	100	70	0.8
	H1.5K	66	100	80	1
	H2.2K	76	110	80	1.3
	H3.7K	86	120	95	2.3
	H5.5K	96	128	100	3
	H7.5K	96	128	105	3.5
	H11K	105	137	110	4.5
	H15K	105	152	125	5
	H18.5K	114	162	120	5
	H22K	133	178	120	6
	H30K	133	178	120	6.5
	H37K	133	187	155	8.5
	H45K	133	187	170	10
	H55K	152	206	170	11.5