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ACS550 Input Protective Devices

ALL REACTORS AND FUSES ARE SIZED TO THE HP_L RATINGS OF THE VFD

Voltage	Part number	Frame	HP _L	A _L	HP _H	A _H	Reactor	Reactor	Type/Description	Fuses	Fuse	Fuse	Fuse	Fuse	Fuse
							Part Number	Frame	Chassis Configuration	Qty	Block	Block	Block	Block	
							Open Frame Device (See Table Below For Enclosures)				Open Fuse Blocks (Other Methods of Protection Available Online)				
3Φ 240VAC	ACS550-U1-04A6-2	R1	1	4.6	0.75	3.5	KDRULA25H	E1	5% Input Line Reactor	JLLN-010	3	LFT30030-3C	1	LFT30030FBC	3
	ACS550-U1-06A6-2	R1	1.5	6.6	1	4.6	KDRULA27H	E1	5% Input Line Reactor	JLLN-010	3	LFT30030-3C	1	LFT30030FBC	3
	ACS550-U1-07A5-2	R1	2	7.5	1.5	6.6	KDRULA26H	E1	5% Input Line Reactor	JLLN-010	3	LFT30030-3C	1	LFT30030FBC	3
	ACS550-U1-012A-2	R1	3	11.8	2	7.5	KDRULA28H	E1	5% Input Line Reactor	JLLN-015	3	LFT30030-3C	1	LFT30030FBC	3
	ACS550-U1-017A-2	R1	4	16.7	3	11.8	KDRULB25H	E1	5% Input Line Reactor	JLLN-025	3	LFT30030-3C	1	LFT30030FBC	3
	ACS550-U1-024A-2	R2	7.5	24.2	5	16.7	KDRULB26H	E1	5% Input Line Reactor	JLLN-030	3	LFT30060-3C	1	LFT30060FBC	3
	ACS550-U1-031A-2	R2	10	30.8	7.5	24.2	KDRULD21H	E1	5% Input Line Reactor	JLLN-040	3	LFT30060-3C	1	LFT30060FBC	3
	ACS550-U1-046A-2	R3	15	46.2	10	30.8	KDRULD22H	E1	5% Input Line Reactor	JLLN-060	3	LFT30060-3C	1	LFT30060FBC	3
	ACS550-U1-059A-2	R3	20	59.4	15	46.2	KDRULC22H	E1	5% Input Line Reactor	JLLN-080	3	LFT30100-3CS	1	LFT30100FBC	3
	ACS550-U1-075A-2	R4	25	74.8	20	59.4	KDRULF28H	E2	5% Input Line Reactor	JLLN-100	3	LFT30100-3CS	1	LFT30100FBC	3
	ACS550-U1-088A-2	R4	30	88	25	74.8	KDRULF25H	E2	5% Input Line Reactor	JLLN-110	3	LFT30200-3CS	1	No Cover	3
	ACS550-U1-114A-2	R4	40	14	30	88	KDRULF26H	E2	5% Input Line Reactor	JLLN-150	3	LFT30200-3CS	1	No Cover	3
	ACS550-U1-143A-2	R6	50	143	40	114	KDRULH24H	E2	5% Input Line Reactor	JLLN-200	3	LFT30200-3CS	1	No Cover	3
	ACS550-U1-178A-2	R6	60	178	50	150	KDRULH23H	E2	5% Input Line Reactor	JLLN-250	3	LFT30400-3CS	1	No Cover	3
ACS550-U1-221A-2	R6	75	221	60	178	KDRULI22H	E3	5% Input Line Reactor	JLLN-300	3	LFT30400-3CS	1	No Cover	3	
ACS550-U1-248A-2	R6	100	240	75	192	KDRULI21H	E3	5% Input Line Reactor	JLLN-350	3	LFT30400-3CS	1	No Cover	3	

3Φ 480VAC	ACS550-U1-03A3-4	R1	1.5	3.3	1	2.4	KDRULA9H	E1	5% Input Line Reactor	JLLS-010	3	LFT60030-3C	1	LFT60030FBC	3
	ACS550-U1-04A1-4	R1	2	4.1	1.5	3.3	KDRULA1H	E1	5% Input Line Reactor	JLLS-010	3	LFT60030-3C	1	LFT60030FBC	3
	ACS550-U1-06A9-4	R	3	6.9	2	5.4	KDRULA2H	E1	5% Input Line Reactor	JLLS-010	3	LFT60030-3C	1	LFT60030FBC	3
	ACS550-U1-08A8-4	R1	5	8.8	3	6.9	KDRULA3H	E1	5% Input Line Reactor	JLLS-015	3	LFT60030-3C	1	LFT60030FBC	3
	ACS550-U1-012A-4	R1	7.5	11.9	5	8.8	KDRULA4H	E1	5% Input Line Reactor	JLLS-015	3	LFT60030-3C	1	LFT60030FBC	3
	ACS550-U1-015A-4	R2	10	15.4	7.5	11.9	KDRULA5H	E1	5% Input Line Reactor	JLLS-020	3	LFT60030-3C	1	LFT60030FBC	3
	ACS550-U1-023A-4	R2	15	23	10	15.4	KDRULB2H	E1	5% Input Line Reactor	JLLS-030	3	LFT60030-3C	1	LFT60030FBC	3
	ACS550-U1-031A-4	R3	20	31	15	23	KDRULC3H	E1	5% Input Line Reactor	JLLS-040	3	LFT60060-3C	1	LFT60060FBC	3
	ACS550-U1-038A-4	R3	25	38	20	31	KDRULC1H	E1	5% Input Line Reactor	JLLS-050	3	LFT60060-3C	1	LFT60060FBC	3
	ACS550-U1-045A-4	R3	30	44	25	38	KDRULE2H	E1	5% Input Line Reactor	JLLS-060	3	LFT60060-3C	1	LFT60060FBC	3
	ACS550-U1-059A-4	R4	40	59	30	44	KDRULF4H	E2	5% Input Line Reactor	JLLS-080	3	LFT60100-3CS	1	LT60100FBC	3
	ACS550-U1-072A-4	R4	50	72	40	59	KDRULF1H	E2	5% Input Line Reactor	JLLS-090	3	LFT60100-3CS	1	LT60100FBC	3
	ACS550-U1-078A-4	R4	60	77	50	65	KDRULF2H	E2	5% Input Line Reactor	JLLS-100	3	LFT60100-3CS	1	LT60100FBC	3
	ACS550-U1-097A-4	R4	75	96	60	77	KDRULH2H	E2	5% Input Line Reactor	JLLS-125	3	LFT60200-3CS	1	LT60200FBC	3
	ACS550-U1-125A-4	R5	100	124	75	96	Not Required		5% built into Drive	JLLS-175	3	LFT60200-3CS	1	LT60200FBC	3
	ACS550-U1-157A-4	R6	125	157	100	124	Not Required		5% built into Drive	JLLS-200	3	LFT60200-3CS	1	LT60200FBC	3
	ACS550-U1-180A-4	R6	150	180	125	156	Not Required		5% built into Drive	JLLS-250	3	LFT60400-3CS	1	LT60400FBC	3
	ACS550-U1-246A-4	R6	200	245	150	192	Not Required		5% built into Drive	JLLS-350	3	LFT60400-3CS	1	LT60400FBC	3

NOTES

Input Reactors recommended(not required), Input Fuses Required for proper installation
Line Reactors Used on Single Phase Input, Connect to Terminals A & C, Insulate Terminal B

HP_L = Normal Duty (CT) 110% Overload , HP_H = Heavy Duty (CT) 150% Overload, @ 40°C (104°F)
FOR 1 MIN EVERY 10 MIN, MAX 50°C (122°F) RATING 1% Derate Per 1°C

Reactor Enclosures					
Frame	Type		Type		
E1	UL Type 1		E011	UL Type 3R	E3R1
E2	UL Type 1		E012	UL Type 3R	E3R2
E3	UL Type 1		E013	UL Type 3R	E3R3

Note: Suffix E01 = Nema 1, E3R = Nema 3R

Chart Also Includes U1, CC, PD, PC & +B055, B058 Versions



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ACS550 Output Protective Devices

ALL REACTORS AND DV/DT FILTERS ARE SIZED TO THE HP_L RATINGS OF THE VFD

Voltage	Part number	Frame	HP _L	A _L	HP _H	A _H	MAXIMUM MOTOR LEAD LENGTH						
							100' MAX, Open Frame (See Table Below For Enclosures)			>101', <1000', Open Frame		>101', <1000', Nema 1 Enclosure	
							Part Number	Frame	Type/Description	Part Number	Type/Description	Part Number	Type/Description
3Φ 240VAC	ACS550-U1-04A6-2	R1	1	4.6	0.75	3.5	Output Motor Protection Typically not required for 208-240V Motors, Consult Platt Specialist or Factory If Customer Requires						
	ACS550-U1-06A6-2	R1	1.5	6.6	1	4.6							
	ACS550-U1-07A5-2	R1	2	7.5	1.5	6.6							
	ACS550-U1-012A-2	R1	3	11.8	2	7.5							
	ACS550-U1-017A-2	R1	4	16.7	3	11.8							
	ACS550-U1-024A-2	R2	7.5	24.2	5	16.7							
	ACS550-U1-031A-2	R2	10	30.8	7.5	24.2							
	ACS550-U1-046A-2	R3	15	46.2	10	30.8							
	ACS550-U1-059A-2	R3	20	59.4	15	46.2							
	ACS550-U1-075A-2	R4	25	74.8	20	59.4							
	ACS550-U1-088A-2	R4	30	88	25	74.8							
	ACS550-U1-114A-2	R4	40	14	30	88							
	ACS550-U1-143A-2	R6	50	143	40	114							
	ACS550-U1-178A-2	R6	60	178	50	150							
ACS550-U1-221A-2	R6	75	221	60	178								
ACS550-U1-248A-2	R6	100	240	75	192								

3Φ 480VAC	ACS550-U1-03A3-4	R1	1.5	3.3	1	2.4	KDRULA1P		E1	Output Reactor	V1K3A00		Dv/DT Filter	V1K3A01		Dv/DT Filter
	ACS550-U1-04A1-4	R1	2	4.1	1.5	3.3	KDRULA1P		E1	Output Reactor	V1K4A00		Dv/DT Filter	V1K4A01		Dv/DT Filter
	ACS550-U1-06A9-4	R	3	6.9	2	5.4	KDRULA2P		E1	Output Reactor	V1K6A00		Dv/DT Filter	V1K6A01		Dv/DT Filter
	ACS550-U1-08A8-4	R1	5	8.8	3	6.9	KDRULA3P		E1	Output Reactor	V1K8A00		Dv/DT Filter	V1K8A01		Dv/DT Filter
	ACS550-U1-012A-4	R1	7.5	11.9	5	8.8	KDRULA4P		E1	Output Reactor	V1K12A00		Dv/DT Filter	V1K12A01		Dv/DT Filter
	ACS550-U1-015A-4	R2	10	15.4	7.5	11.9	KDRULB1P		E1	Output Reactor	V1K16A00		Dv/DT Filter	V1K16A01		Dv/DT Filter
	ACS550-U1-023A-4	R2	15	23	10	15.4	KDRULD1P		E1	Output Reactor	V1K25A00		Dv/DT Filter	V1K25A01		Dv/DT Filter
	ACS550-U1-031A-4	R3	20	31	15	23	KDRULD2P		E1	Output Reactor	V1K27A00		Dv/DT Filter	V1K27A01		Dv/DT Filter
	ACS550-U1-038A-4	R3	25	38	20	31	KDRULD3P		E1	Output Reactor	V1K35A00		Dv/DT Filter	V1K35A01		Dv/DT Filter
	ACS550-U1-045A-4	R3	30	44	25	38	KDRULD4P		E1	Output Reactor	V1K45A00		Dv/DT Filter	V1K45A01		Dv/DT Filter
	ACS550-U1-059A-4	R4	40	59	30	44	KDRULC1P		E1	Output Reactor	V1K55A00		Dv/DT Filter	V1K55A01		Dv/DT Filter
	ACS550-U1-072A-4	R4	50	72	40	59	KDRULF1P		E2	Output Reactor	V1K80A00		Dv/DT Filter	V1K80A01		Dv/DT Filter
	ACS550-U1-078A-4	R4	60	77	50	65	KDRULF2P		E2	Output Reactor	V1K80A00		Dv/DT Filter	V1K80A01		Dv/DT Filter
	ACS550-U1-097A-4	R4	75	96	60	77	KDRULF3P		E2	Output Reactor	V1K110A00		Dv/DT Filter	V1K110A01		Dv/DT Filter
	ACS550-U1-125A-4	R5	100	124	75	96	KDRULH1P		E2	Output Reactor	V1K130A00		Dv/DT Filter	V1K130A01		Dv/DT Filter
	ACS550-U1-157A-4	R6	125	157	100	124	KDRULI1P		E2	Output Reactor	V1K160A00		Dv/DT Filter	V1K160A01		Dv/DT Filter
	ACS550-U1-180A-4	R6	150	180	125	156	KDRULI2P		E3	Output Reactor	V1K200A00		Dv/DT Filter	V1K200A01		Dv/DT Filter
	ACS550-U1-246A-4	R6	200	245	150	192	KDRULG1P		E3	Output Reactor	V1K250A00		Dv/DT Filter	V1K250A01		Dv/DT Filter

NOTES

For proper motor and lead protection we recommend(not required) units specified above, not using these devices can lead to pin holes in the motor leads and/or motor insulation failure

HP_L = Normal Duty (CT) 110% Overload , HP_H = Heavy Duty (CT) 150% Overload, @ 40°C (104°F)

FOR 1 MIN EVERY 10 MIN, MAX 50°C (122°F) RATING 1% Derate Per 1°C

Reactor Enclosures

Frame	Type		Type	
E1	UL Type 1		E011	UL Type 3R
E2	UL Type 1		E012	UL Type 3R
E3	UL Type 1		E013	UL Type 3R

Note: Suffix E01 = Nema 1, E3R = Nema 3R

Chart Also Includes U1, CC, PD, PC & +B055, B058 Versions



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Drive to Motor Lead Length Considerations

For motor leads 100' or less, Output (Load) Reactors may be used.
Small Machinery Drives (ACS150, ACS310, ACS355) less than 15HP should be sized to next larger size to accommodate motor cable capacitance charging current requirements in leads longer than 100'

Flexible Armored THHN Cable		Units 35 Amps and below			
Frequency (kHz)	Cable Leads (Feet)				
	100'	101'-500'	501'-1000'	>1000'	
2	V1000-STD	V1000-STD	V1000-STD	V1000-EX	
4	V1000-STD	V1000-STD	V1000-STD	V1000-EX	
6	V1000-STD	V1000-STD	V1000-EX	MotorGuard	
8	V1000-STD	V1000-EX	MotorGuard	MotorGuard	

Flexible Armored THHN Cable		Units 45 Amps to 750 Amps			
Frequency (kHz)	Cable Leads (Feet)				
	100'	101'-500'	501'-1000'	>1000'	
2	V1000-STD	V1000-STD	V1000-STD	V1000-EX	
4	V1000-STD	V1000-STD	V1000-STD	V1000-EX	
6	V1000-STD	V1000-STD	V1000-STD	V1000-EX	
8	V1000-STD	V1000-EX	V1000-EX	V1000-EX	

Flat Cable or VFD Cable		Units 35 Amps and below			
Frequency (kHz)	Cable Leads (Feet)				
	100'	101'-500'	501'-1000'	>1000'	
2	V1000-STD	V1000-STD	V1000-STD	V1000-EX	
4	V1000-STD	V1000-STD	V1000-EX	MotorGuard	
6	V1000-STD	V1000-STD	MotorGuard	MotorGuard	
8	MotorGuard	MotorGuard	MotorGuard	MotorGuard	

Flat Cable or VFD Cable		Units 45 Amps to 750 Amps			
Frequency (kHz)	Cable Leads (Feet)				
	100'	101'-500'	501'-1000'	>1000'	
2	V1000-STD	V1000-STD	V1000-STD	V1000-EX	
4	V1000-STD	V1000-STD	V1000-EX	MotorGuard	
6	V1000-STD	V1000-EX	MotorGuard	MotorGuard	
8	MotorGuard	MotorGuard	MotorGuard	MotorGuard	

Notes:

All ABB drives are factory set @ 4 kHz

V1000 is a T.C.I. DV/DT Output Filter

V1000-EX is a T.C.I. Heavy Duty Rated DV/DT Output Filter

MotorGuard is the T.C.I. KMG High Performance Output Filter

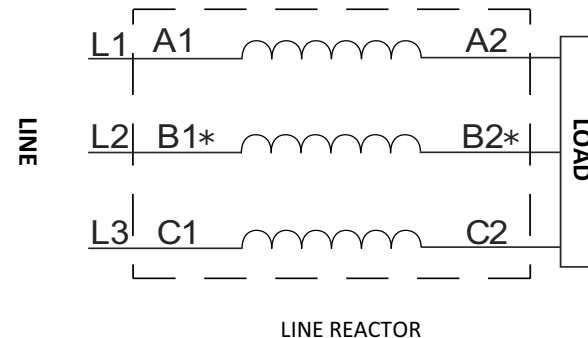
Refer to the Trans-Coil, Inc. catalogs for part numbers, details of product design and their use. <http://www.transcoil.com/>

Field Wiring Information

Below is the typical wiring diagram for the 3-phase reactor applied to the front end of the Variable Frequency Drive (VFD).

Single-phase applications are acceptable, however, it is important to size the unit based on the single phase Full Load Amperage of the VFD. The input and output connections should be on

Wiring Diagram



* For single-phase applications, use coils A and C.
Isolate terminals B1 and B2

For Input Reactors

The VFD will be connected to the load side of the reactor. A2, B2, C2 would be connected to U1, V1, W1 of the VFD. When connecting to a single phase input on a ACS150, ACS310, ACS355, connect A2 to U1, C2 to V1, On an ACS550 connect A2 to U1, C2 to W1. Connect Input Fuses

For Output Reactors & Dv/Dt Filters

The output of the VFD U1, V1, W1 would be connected to A1, B1, C1 of the reactor. The motor would be connected to A2, B2, C2 of the reactor.