



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0773

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Rockwell Automation

Manufacturer's Technical Representative: Krzysztof Blok

Mailing Address: 6400 W Enterprise Dr, Mequon, WI 53092

Telephone: (414) 382-2000

Email: kblok@ra.rockwell.com

Product Information

Product Name: Motor Control Centers

Product Type: Motor Control Centers - Low Voltage

Product Model Number: PowerFlex 755TM Frame 7 Bus Supply, PowerFlex 755TL/TR Frame 7 Drive, PowerFlex 755TM - Non-Regenerative Supply (NRS)

General Description: Drives are designed to provide harmonic mitigation, regeneration, and common bus solutions. Seismic kits listed in certified product table attached need to be used.

Mounting Description: Rigid, Floor Mounted

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: Rockwell Automation

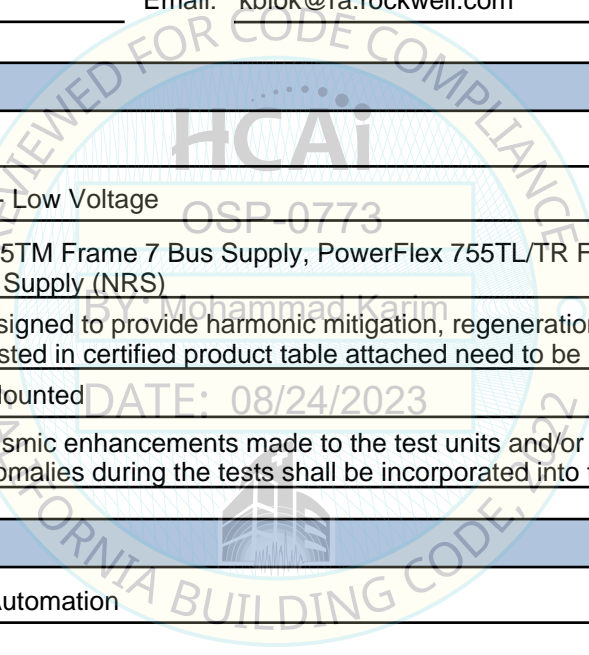
Contact Person: Krzysztof Blok

Mailing Address: 6400 W Enterprise Dr, Mequon, WI 53092

Telephone: (414) 382-2000

Email: kblok@ra.rockwell.com

Title: Project Engineer





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California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

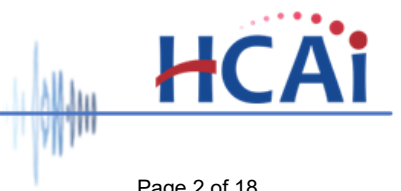
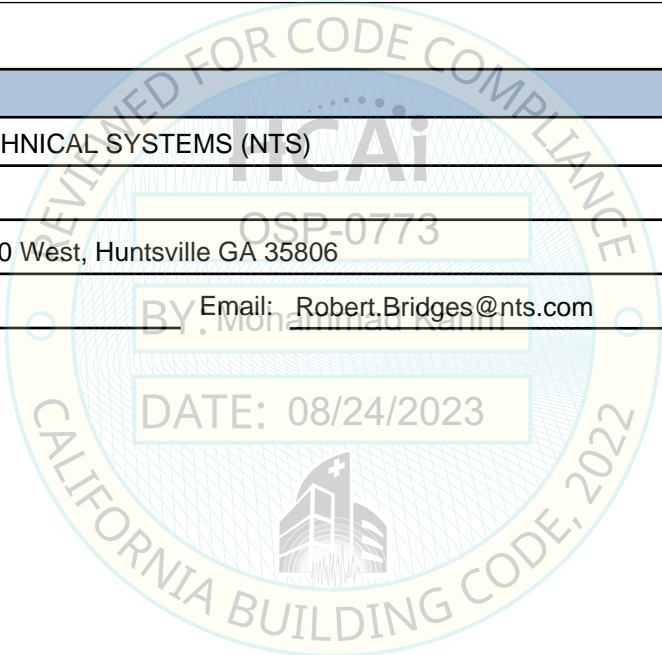
Company Name: FORELL / ELSESSER ENGINEERS, INC.
Name: Marco Scanu California License Number: S4454
Mailing Address: 160 Pine Street, Suite 600, San Francisco, CA 94111
Telephone: (415) 837-0700 Email: scanu@forell.com

Certification Method

GR-63-Core ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3
 Other (Please Specify): _____

Testing Laboratory

Company Name: NATIONAL TECHNICAL SYSTEMS (NTS)
Contact Person: Robert Bridges
Mailing Address: 7800 Highway 20 West, Huntsville GA 35806
Telephone: (256) 837-4411 Email: Robert.Bridges@nts.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.5

SDS (Design spectral response acceleration at short period, g) = 2.0

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

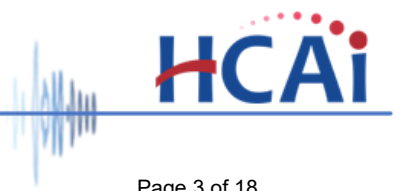
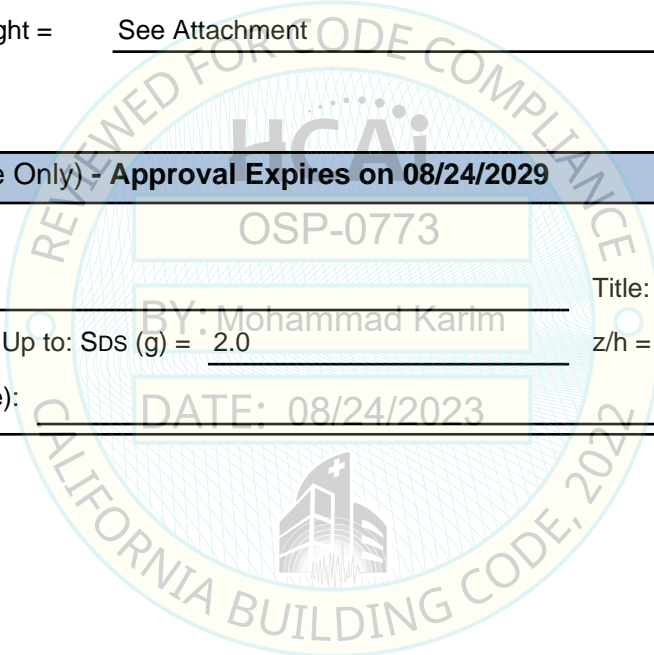
HCAI Approval (For Office Use Only) - Approval Expires on 08/24/2029

Date: 8/24/2023

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = 2.0 z/h = 1

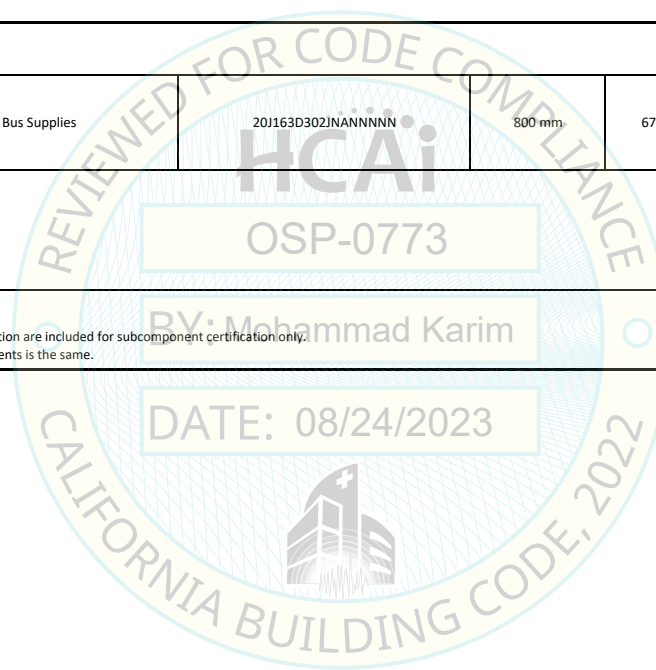
Condition of Approval (if applicable): DATE: 08/24/2023



Rockwell Automation - PowerFlex 755T AFE Bus Supply and AFE Drive

I. Certified Product Table¹⁻³

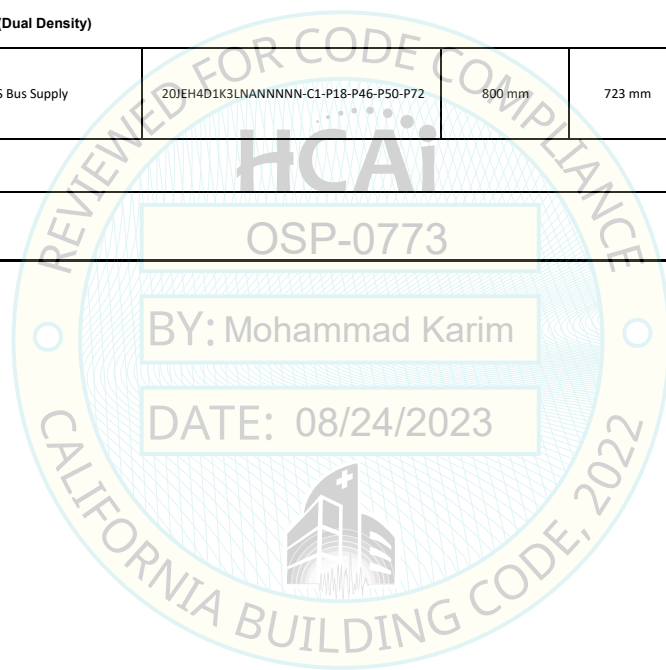
System Catalog Numbers	Unit	Catalog Number	Width	Depth	Height	Weight	Enclosure Type	z/h=1	Test Status
								S _{DS}	
AFE Drives (20G*±\$#RRR%N&NNNN-PXX) ± = environment 1(K-Line) or E (extra-tough) ± = Input type 6 (Regen) or 7 (Low Harmonic) [software difference only] \$ = Enclosure type: 3 (UL Type 1/ IP21/ Nema 1) or 4 (UL Type 12/ IP54/ Nema 12) # = Voltage Rating, C(400V), D(480V), E(600V) or F(690V) (software controls Voltage.) RRR = Output current rating Normal Duty (192A - 617A and is software controlled) % = EMC Filter Jumper option J,K,L or M [switch position only] & = HIM option- A(No HIM), D (Enhanced LCD HIM) C0=Torque accuracy P51= DC bus conditioner (Marine) The above options were all tested in EUT-1.	AFE Drives								
	Frame 7 AFE Drives	20G164D617PNANNNNN-P51-C0	800 mm	721 mm	2291 mm	1320 lbs	UL Type 1/IP21 and UL Type 12/IP54 (same construction).	2.0	EUT-1
AFE Bus supplies (20J*±\$#RRR%N&NNNN-PXX) ± = environment 1(K-Line) or E (extra-tough) ± = Input type 6 (Regen) or 7 (Low Harmonic) [software difference only] \$ = Enclosure type: 3 (UL Type 1/ IP21/ Nema 1) or 4 (UL Type 12/ IP54/ Nema 12) # = Voltage Rating, C(400V), D(480V), E(600V) or F(690V) (software controls Voltage.) RRR = Output current rating Normal Duty (171A - 617A and is software controlled) % = EMC Filter Jumper option J,K,L or M [switch position only] & = HIM option- A(No HIM), D (Enhanced LCD HIM) No additional options were tested in EUT-2.	AFE Bus Supplies								
	Frame 7 AFE Bus Supplies	20J163D302JNANNNNN	800 mm	676 mm	2131 mm	1070 lbs	UL Type 1/IP21 and UL Type 12/IP54 (same construction)	2.0	EUT-2
1. All enclosures are cold-formed carbon steel, 14 gauge doors and 16 gauge frame and panels. 2. All units are floor-mounted. 3. Only the EUTs listed in the table above are submitted to certify the enclosure itself. Other EUTs in this application are included for subcomponent certification only. 4. Parameter E means special protection to corrosive environments. Structure of the product and its subcomponents is the same.									



Rockwell Automation - PowerFlex 755T AFE Bus Supply and AFE Drive

I. Certified Product Table ¹⁻³

System Catalog Numbers	Unit	Catalog Number	Width	Depth	Height	Weight	Enclosure Type	S _{DS}	z/h	Test Status
NRS Bus supplies (20JEH\$#RRRLNANNNN-CX-PXX) § = Enclosure type: 3 (UL Type 1/IP21/ Nema 1) or 4 (UL Type 12/IP54/ Nema 12) # = Voltage Rating, C(400V), D(480V), E(600V) or F(690V) (software controls Voltage.) RRR = Output current rating Normal Duty (505A - 1463A and is software controlled) C2 = Bus Supply Control Transformer Only P72 = Integral NRS Module Bus Capacitor The above options were all tested in EUT-3.	NRS Bus Supplies - Frame 8 (Single Density)									
	PF755T Frame 1X NRS Bus Supply	20JEH3D740LNANNNN-C2-P72	400 mm	678 mm	2125 mm	672 lbs	UL Type 1/IP21 and UL Type 12/IP54 (same construction)	2.0	1	EUT-3
NRS Bus supplies (20JEH\$#RRRLNANNNN-CX-PXX) § = Enclosure type: 3 (UL Type 1/IP21/ Nema 1) or 4 (UL Type 12/IP54/ Nema 12) # = Voltage Rating, C(400V), D(480V), E(600V) or F(690V) (software controls Voltage.) RRR = Output current rating Normal Duty (505A - 1463A and is software controlled) C1 = Bus Supply and CBI Control Transformer P18 = NRS Wire Entry Bay (Default for X2 Rating) P46 = System DC Bus (4700 Amp, Copper) P50 = DC Bus Conditioner P72 = Integral NRS Module Bus Capacitor The above options were all tested in EUT-4.	NRS Bus Supplies - Frame 9 (Dual Density)									
	PF755T Frame 2X NRS Bus Supply	20JEH4D1K3LNANNNN-C1-P18-P46-P50-P72	800 mm	723 mm	2125 mm	1272 lbs	UL Type 1/IP21 and UL Type 12/IP54 (same construction)	2.0	1	EUT-4
1. All enclosures are cold-formed carbon steel, 14 gauge doors and 16 gauge frame and panels. 2. All units are floor-mounted. 3. The bays shown above are combined to create PowerFlex NRS Bus Supply systems up to 4359kW.										



Rockwell Automation - PowerFlex 755T AFE Bus Supply and AFE Drive
II. Certified Subcomponents Table

Internal Components	Manufacturer	Part Number	Catalog Number	Width (mm)	Depth (mm)	Height (mm)	Weight (lbs)	Testing Status
AC Precharge subcomponents								
AC Precharge PCBA, 400/480 VAC, Frame 7	Rockwell Automation	PN-581149	20-750-MACPC1-CD-F7M	305	20	152	2	EUT-1/EUT-2
AC Precharge PCBA, 600/690 VAC, Frame 7	Rockwell Automation	PN-581151	20-750-MACPC1-EF-F7M					Interpolated
AC Precharge Circuit Breaker, 400/480/600/690V, Frame 7	Rockwell Automation	PN-382989	20-750-MACPCB-1K0	268	210	178	24	EUT-1/EUT-2
AC Precharge Time Delay Relay, 400/480/600/690V, Frame 7	Rockwell Automation	PN-312032	20-750-MACPC-TDR	150	200	60	6	EUT-1/EUT-2
AC Precharge Resistor Banks, 400/480, Frame 7	Rockwell Automation	PN-382981	20-750-MACPR-CD-F7M	289	41	78	4	EUT-1/EUT-2
AC Precharge Resistor Banks, 600/690, Frame 7	Rockwell Automation	PN-382982	20-750-MACPR-EF-F7M					Interpolated
AC Precharge Fused Disconnect, 400/480, Frame 7	Rockwell Automation	PN-214349	194R-J30-1753-PBS1	171	148	248	2	EUT-1/EUT-2
AC Precharge Fused Disconnect, 600/690, Frame 7	Rockwell Automation	PN-230828	194R-D32-1753-PBS1	196	130	291	5	Interpolated
AC Precharge Contactor, 400/480/600/690V, Frame 7	Rockwell Automation	100-C30KA10 A	100-C30KA-10					EUT-1/EUT-2
AC Precharge TVSS Module, 400/480, Frame 7	Rockwell Automation	PN-581152	20-750-MACP-CD-TVSS	75	100	105	1.5	EUT-1/EUT-2
AC Precharge TVSS Module, 600/690, Frame 7	Rockwell Automation	PN-581155	20-750-MACP-EF-TVSS					Interpolated
Fiber Transceiver Board, 400/480/600/690V, Frame 7	Rockwell Automation	PN-581170	20-750-MFTB1-F8	90	50	10	0.1	EUT-1/EUT-2
Control Transformer T1...T4, 400/480V, Frame 7	SNC		P22568	171	162	195	40	EUT-1/EUT-2
Control Transformer T1...T4, 400/480V, Frame 7	SNC		P22569					Interpolated
Switched Mode Power Supply, 400/480/600/690V, Frame 7	Rockwell Automation	1606-XLS240ECA	1606-XLS240EC	60	117	124	2	EUT-1/EUT-2
Control Pods								
Control Pod, Regen, Fr7	Rockwell Automation	PN-383009	20-750-MCPOD1-F7M	253	142	664	40	EUT-1/EUT-2
Control Pod, Low Harmonic, Fr7	Rockwell Automation	PN-383010	20-750-MCPOD2-F7M	253	142	664	40	Interpolated
Control Pod, Regen, Fr7 XT	Rockwell Automation	PN-586133	20-750-MCPOD3-F7M	253	142	664	40	Interpolated
Control Pod, Low Harmonic, Fr7 XT	Rockwell Automation	PN-586134	20-750-MCPOD4-F7M	253	142	664	40	Interpolated
Note: Rockwell Automation control pods 20-750-MCPOD1-F7M and 20-750-MCPOD2-F7M differ in software.								
Power Modules (IGBT PS)								
Converter: 400/480 VAC, 188kW/216 kW Inverter: 580/696 VDC, 160 kW/250 kW	Rockwell Automation	PN-581210	20-750-MI4-C302D302	230	452	1112	250	EUT-2
Converter: 400/480 VAC, 228kW/258 kW Inverter: 580/696 VDC, 200 kW/300 kW	Rockwell Automation	PN-581211	20-750-MI4-C367D361	230	452	1112	250	Interpolated
Converter: 400/480 VAC, 286kW/307 kW Inverter: 580/696 VDC, 250 kW/350 kW	Rockwell Automation	PN-581212	20-750-MI4-C460D430	230	452	1112	250	Interpolated
Converter: 400/480 VAC, 336kW/361 kW Inverter: 580/696 VDC, 315 kW/400 kW	Rockwell Automation	PN-581213	20-750-MI4-C540D505	230	452	1112	250	Interpolated
Converter: 400/480 VAC, 373kW/429 kW Inverter: 580/696 VDC, 315 kW/500 kW	Rockwell Automation	PN-592311	20-750-MI4-C585D617	230	452	1112	250	EUT-1
Converter: 600/696 VAC, 171kW/176 kW Inverter: 810/932 VDC, 200kW/160 kW	Rockwell Automation	PN-581214	20-750-MI4-E192F171	230	452	1112	250	Interpolated
Converter: 600/690 VAC, 217kW/221 kW Inverter: 810/932 VDC, 250kW/200 kW	Rockwell Automation	PN-581215	20-750-MI4-E242F215	230	452	1112	250	Interpolated
Converter: 600/690 VAC, 263kW/272 kW Inverter: 810/932 VDC, 300 kW/250 kW	Rockwell Automation	PN-581216	20-750-MI4-E295F265	230	452	1112	250	Interpolated
Converter: 600/690 VAC, 317kW/339 kW Inverter: 810/932 VDC, 350kW/315 kW	Rockwell Automation	PN-581217	20-750-MI4-E355F330	230	452	1112	250	Interpolated
Converter: 600/690 VAC, 353kW/380 kW Inverter: 810/932 VDC, 400kW/355 kW	Rockwell Automation	PN-581218	20-750-MI4-E395F370	230	452	1112	250	Interpolated
20-750-MI4-* is only option for Frame 7 AFE Power Bays.								

Internal Components	Manufacturer	Part Number	Catalog Number	Width (mm)	Depth (mm)	Height (mm)	Weight (lbs)	Testing Status
LCL Filter Modules								
400/480 VAC, 388kW/447kW	Rockwell Automation	PN-581177	20-750-ML4-C585D617	230	439	1171	450	EUT-1/EUT-2
600/690 VAC, 368kW/396kW	Rockwell Automation	PN-581178	20-750-ML4-E395F370	230	439	1171	450	Interpolated
Note: The 600/690VAC modules have less Amperage than the 400/480VAC modules. Software controls the Amperage and is the differentiator.								
DC Bus Conditioner								
580/696/810/932 VDC, Frame 7	Rockwell Automation	PN-581277	20-750-MDCBUS-COND-F7M	180	211	145	2	EUT-1
Torque Accuracy Module*								
Torque Accuracy Module, 400/480VAC, Frame 7	Rockwell Automation	PN-581219	20-750-MTAM1-CD	163	225	46	2	EUT-1
Torque Accuracy Module, 600/690VAC, Frame 7	Rockwell Automation	PN-581220	20-750-MTAM1-EF	163	225	46	2	Interpolated
* Rockwell Automation Torque Accuracy Modules differ in software only.								
Other IP00 Modules, Accessories, Spares								
AC Fuse Link, 400/480 VAC, Frame 7	Rockwell Automation	PN-382996	20-750-MACL2-CD-F7M	630	25	51	15	EUT-1/EUT-2
AC Fuse Link, 600/690 VAC, Frame 7	Rockwell Automation	PN-382997	20-750-MACL2-EF-F7M	630	25	51	15	Interpolated
ACPC, CB Bus Bar Input, Flex	Rockwell Automation	PN-465605	20-750-MACINP-F7	340	300	540	13	EUT-2
ACPC, CB Bus Bar Output	Rockwell Automation	PN-383001	20-750-MPCCB-F7M	543	242	105	2	EUT-1
IP54 Vent 800mm	Rockwell Automation	PN-383006	20-750-MVENT2-F7M	543	242	105	2	EUT-1
IP21 Vent 800mm	Rockwell Automation	PN-580999	20-750-MVENT1-F7M	165	229	127	3	EUT-2
AC Bus Bar Terminals	Rockwell Automation	PN-383049	20-750-MACIOT-F7M	765	732	189	44	EUT-1/EUT-2
DC Output Terminals	Rockwell Automation	PN-465607	20-750-MDCOT-F7M	765	732	189	44	EUT-1/EUT-2
AC Flex Bus Bar Motor output	Rockwell Automation	PN-383047	20-750-MSOF-F7	120	450	700	14	EUT-1
DC Output Flex Bus Bar and Fuse Assembly Kits, 400/480V	Rockwell Automation	PN-465603	20-750-MDCFB-CD-F7M	1200	50	51	16	EUT-2
DC Output Flex Bus Bar and Fuse Assembly Kits, 600/690V	Rockwell Automation	PN-465604	20-750-MDCFB-EF-F7M	1200	50	51	16	Interpolated
Mounting bracket 800mm	Rockwell Automation	PN-471797	20-750-MMNT1-F7M	52	21	18	15	EUT-1
Option Cards								
Marine auto discharge	Rockwell Automation	PN-581075	20-750-MBSCD-DB	140	30	70	1	EUT-1
Seismic Kit								
Frame 7 Seismic Kit	Rockwell Automation	PN-658842	20-750-MOSHDP-F7M	na	na	na	na	EUT-1/EUT-2

**Rockwell Automation - PowerFlex 755T AFE Bus Supply and AFE Drive
II. Certified Subcomponents Table**

Internal Components	Manufacturer	Part Number	Catalog Number	Width (mm)	Depth (mm)	Height (mm)	Weight (lbs)	Testing Status
NRS Power Modules								
NRS Single density module 400/480V Input 739/681Amps, Output 887/817Amps With Bus Capacitors	Rockwell Automation	PN-613433	20-750-MN1-C770D740	230	565	1556	295 lbs	EUT-3
NRS Single density module 400/480V Input 739/681Amps, Output 887/817Amps Without Bus Capacitors	Rockwell Automation	PN-613434	20-750-MN2-C770D740	230	565	1556	275 lbs	Interpolated
NRS Dual density module 400/480V Input 1406/1256Amps, Output 1685/1507Amps With Bus Capacitors	Rockwell Automation	PN-613437	20-750-MN1-C1K4D1K3	230	565	1556	450 lbs	EUT-4
NRS Dual density module 400/480V Input 1406/1256Amps, Output 1685/1507Amps Without Bus Capacitors	Rockwell Automation	PN-613438	20-750-MN2-C1K4D1K3	230	565	1556	410 lbs	Interpolated
NRS Single density module 600/690V Input 501/501Amps, Output 602/602Amps With Bus Capacitors	Rockwell Automation	PN-613435	20-750-MN1-E545F505	230	565	1556	295 lbs	Interpolated
NRS Single density module 600/690V Input 501/501Amps, Output 602/602Amps Without Bus Capacitors	Rockwell Automation	PN-613436	20-750-MN2-E545F505	230	565	1556	275 lbs	Interpolated
NRS Dual density module 600/690V Input 901/901Amps, Output 1082/1082Amps With Bus Capacitors	Rockwell Automation	PN-613439	20-750-MN1-E980F920	230	565	1556	450 lbs	Interpolated
NRS Dual density module 600/690V Input 901/901Amps, Output 1082/1082Amps Without Bus Capacitors	Rockwell Automation	PN-613440	20-750-MN2-E980F920	230	565	1556	410 lbs	Interpolated
Control Board Kits								
400/480V	Rockwell Automation	PN-625724	SK-RM-MCB3-PF755-CD	175	30	275	3 lbs	EUT-3/EUT-4
600/690V	Rockwell Automation	PN-625725	SK-RM-MCB3-PF755-EF	175	30	275	3 lbs	Interpolated
Bus Capacitor Kits								
400/480V	Rockwell Automation	PN-625722	SK-RM-DCCAP1-CD	220	170	435	25 lbs	EUT-3/EUT-4
600/690V	Rockwell Automation	PN-625723	SK-RM-DCCAP1-EF	220	170	435	25 lbs	Interpolated
DC link/fuse assembly								
400/480V, 887/817Amps, Single density	Rockwell Automation	PN-625699	20-750-MN-DCLINK1-CD	200	440	340	12	EUT-3
400/480V, 887/817Amps, Dual density	Rockwell Automation	PN-625701	20-750-MN-DCLINK2-CD	200	440	340	12	EUT-4
600/690V, 602/602Amps, Single density	Rockwell Automation	PN-625700	20-750-MN-DCLINK1-EF	200	440	340	12	Interpolated
600/690V, 602/602Amps, Dual density	Rockwell Automation	PN-625702	20-750-MN-DCLINK2-EF	200	440	340	12	Interpolated
DC link/fuse assembly support	Rockwell Automation	PN-625703	20-750-MN-DCLS1-400	356	15	40	8	EUT-3/EUT-4

Internal Components	Manufacturer	Part Number	Catalog Number	Width (mm)	Depth (mm)	Height (mm)	Weight (lbs)	Testing Status
DC bus bar (400 mm)								
Aluminum DC Bus Bars, 3000Amps	Rockwell Automation	PN-161169	20-750-MDCBUS4-3K0	380	140	400	7 lbs	EUT-3
Copper DC Bus Bars, 4700Amps	Rockwell Automation	PN-160575	20-750-MDCBUS4-4K7	380	140	400	24 lbs	EUT-4
Control Transformer 1KVA								
400V	Rockwell Automation	PN-649423	20-750-MN-XMFR1-C	150	115	134	26 lbs	Interpolated
480V	Rockwell Automation	PN-649424	20-750-MN-XMFR1-D	150	115	134	26 lbs	EUT-3/EUT-4
600V	Rockwell Automation	PN-649425	20-750-MN-XMFR1-E	150	115	134	26 lbs	Interpolated
690V	Rockwell Automation	PN-649426	20-750-MN-XMFR1-F	150	115	134	26 lbs	Interpolated
Control Transformer 3KVA								
400V	Rockwell Automation	PN-649427	20-750-MN-XMFR2-C	270	140	150	70 lbs	Interpolated
480V	Rockwell Automation	PN-649428	20-750-MN-XMFR2-D	270	140	150	60 lbs	EUT-4
600V	Rockwell Automation	PN-625697	20-750-MN-XMFR2-E	270	140	150	70 lbs	Interpolated
690V	Rockwell Automation	PN-625698	20-750-MN-XMFR2-F	270	140	150	60 lbs	Interpolated
400/480/600/690V transformers are the same size and weight. Different fuse ratings are used.								
Back panel with stab receptacles with bus bars								
1X, 2X, 1X+2X	Rockwell Automation	PN-625728	20-750-MNIR1	380	140	630	40 lbs	EUT-3/EUT-4
2X+2X+1X, 2X+2X+2X, 2 (2X+1X), 2 (2X+2X), 2 (2X+2X+1X), 2 (2X+2X+2X)	Rockwell Automation	PN-625729	20-750-MNIR2	380	140	630	60 lbs	Extrapolated
DC bus conditioner								
Standard	Rockwell Automation	PN-581224	20-750-MDCBUS-COND	211 mm	126 mm	180 mm	6 lbs	EUT-3/EUT-4
Marine	Rockwell Automation	PN-581223	20-750-MDCBUS1-COND	211 mm	126 mm	180 mm	8 lbs	Interpolated
Wiring Bays								
PowerFlex 750 Kit, NRS Wiring Bay 400mm Standard AC & System DC Bus	Rockwell Automation	PN-625710	20-750-MN-WBAY2-400	400	600	2000	242 lbs	Interpolated

Internal Components	Manufacturer	Part Number	Catalog Number	Width (mm)	Depth (mm)	Height (mm)	Weight (lbs)	Testing Status
Busbar Splice Kits								
AC bus bar splice kit wire bay to NRS	Rockwell Automation	PN-312005	20-750-MACSPL2-3K0	270	50	240	16 lbs	EUT-3/EUT-4
AC bus bar splice kit NRS to NRS	Rockwell Automation	PN-647755	20-750-MACSPL3-3K0	270	50	240	15 lbs	Interpolated
AC bus bar splice kit, 4700Amps	Rockwell Automation	PN-312010	20-750-MACSPL2-4K7	270	50	240	35 lbs	Extrapolated
DC bus bar splice kit, 3000Amps	Rockwell Automation	PN-161170	20-750-MDCSPL1-3K0	190	50	160	7 lbs	EUT-3
DC bus bar splice kit, 4700Amps	Rockwell Automation	PN-160124	20-750-MDCSPL1-4K7	190	50	160	18 lbs	EUT-4

Harnesses								
Thermal Switch Harness (wire bay to NRS)	Rockwell Automation	PN-636293	20-750-MNIH-JMP3	110	80	210	1 lbs	EUT-4
NRS Module Signal Harness (NRS to NRS)	Rockwell Automation	PN-636292	20-750-MNIH-JMP2	115	50	100	1 lbs	Interpolated
Loop-back Harness	Rockwell Automation	PN-636289	20-750-MNIH-JMP1	15	40	20	1 lbs	EUT-3/EUT-4
NRS Module Harness	Rockwell Automation	PN-625692	20-750-MNIH1	340	280	450	1 lbs	EUT-3/EUT-4
Back to Back Thermal Switch Harness	Rockwell Automation	PN-636303	20-750-MNIH3	160	880	130	1 lbs	Interpolated
PowerFlex 750 Kit NRS N-1 Jumper	Rockwell Automation	PN-625726	SK-RM-JMPR-N1	10	50	50	1 lbs	EUT-3/EUT-4

Options/Spares								
Control bus assembly 400 mm, 240V, 100Amps	Rockwell Automation	PN-269639	20-750-MCBUS1-PB-F8M	390	120	110	7 lbs	EUT-3/EUT-4
Control bus assembly 400 mm, 240V, 100Amps	Rockwell Automation	PN-335138	20-750-MCBUS1-IB-F8M	390	120	110	7 lbs	EUT-4
Vent kit IP21 / UL Type1 (400 mm)	Rockwell Automation	PN-625731	20-750-MNVENT1	390	450	150	30 lbs	EUT-3
Vent kit IP54 / UL Type12 (400 mm)	Rockwell Automation	PN-625732	20-750-MNVENT2	390	450	150	30 lbs	EUT-4
PowerFlex 750 Kit NRS Vent Filter	Rockwell Automation	PN-658879	SK-RM-PBAY-FLTR-NRS	100	26	360	1 lbs	EUT-3/EUT-4
Power module floor mount bracket (400 mm)	Rockwell Automation	PN-636341	20-750-MN-PNL4-NRS	395	430	115	20 lbs	EUT-3/EUT-4
Bus support panels, upper	Rockwell Automation	PN-625706	20-750-MN-PNL1-NRS	20	540	520	20 lbs	EUT-3/EUT-4
Bus support panels, lower	Rockwell Automation	PN-625707	20-750-MN-PNL3-NRS	60	570	1400	20 lbs	EUT-3/EUT-4
Control bus connector	Rockwell Automation	PN-312059	20-750-MCTRLBUS-CONN1	30	70	50	0.1 lbs	EUT-3/EUT-4
PowerFlex 750 Kit Sight Window Overlay	Rockwell Automation	PN-636342	20-750-MN-OVR-NRS	90	4	130	0.3 lbs	N/A
PowerFlex 750 Kit Single Den Mod Fan	Rockwell Automation	PN-625727	SK-RM-MFAN-NRS	220	350	110	10 lbs	EUT-3/EUT-4

Seismic Kits								
Frame 9 Drive, BS or CBI	Rockwell Automation	PN-454938	20-750-MOSHDP-F9M	na	na	na	na	EUT-3/EUT-4

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III. UUT Summary Sheets

Date: 8/3/2023

Test Report No. PR114422-TR-21, Rev. 2 (002)– EUT 1

AFE Drives (20G*†\$#RRR%N&NNNNN-PXX)

Enclosure type: UL Type 1/IP21

800 mm W x 721 mm D x 2291 mm H, 1320 lbs

Rigid Floor mounted to NTS-provided test fixtures using 4 M12 class 8.8 hardware. Test fixtures then welded to the triaxial seismic table.



Photo 7 - Test Setup - Series 1 - EUT 1

Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
				A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2022	ICC-ES AC 156	2.0	1	3.200	2.400	2.560	1.920
Natural Frequencies (Hz)			Test Results				
F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 test. UUT full of contents during testing.				
7	5.8	12.5					

Subcomponents	Manufacturer	Part #
AC Precharge PCBA, 400/480 VAC, Frame 7	Rockwell Automation	20-750-MACPC1-CD-F7M PN-581149
AC Precharge Circuit Breaker, 400/480/600/690V, Frame 7	Rockwell Automation	20-750-MACPCCB-1K0 PN-382989
AC Precharge Time Delay Relay, 400/480/600/690V, Frame 7	Rockwell Automation	20-750-MACPC-TDR PN-312032
AC Precharge Resistor Banks, 400/480, Frame 7	Rockwell Automation	20-750-MACPR-CD-F7M PN-382981
AC Precharge Fused Disconnect, 400/480, Frame 7	Rockwell Automation	194R-J30-1753-PBS1 PN-214349
AC Precharge Contactor, 400/480/600/690V, Frame 7	Rockwell Automation	100-C30KA-10 100-C30KA10 A
AC Precharge TVSS Module, 400/480, Frame 7	Rockwell Automation	20-750-MACP-CD-TVSS PN-581152
Fiber Transceiver Board, 400/480/600/690V, Frame 7	Rockwell Automation	20-750-MFTB1-F8 PN-581170
Control Transformer T1...T4, 400/480V, Frame 7	SNC	P22568
Switched Mode Power Supply, 400/480/600/690V, Frame 7	Rockwell Automation	1606-XLS240EC 1606-XLS240EC A
Control Pod, Regen, Fr7	Rockwell Automation	20-750-MCPOD1-F7M PN-383009
08/24/2023 Power Module	OSP-0773 Rockwell Automation	20-750-MACPC1-CD-F7M PN-581149 PN-592311

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LCL Filter	Rockwell Automation	20-750-ML4-C585D617 PN-581177
DC Bus Conditioner	Rockwell Automation	20-750-MDCBUS-COND-F7M PN-581277
Torque Accuracy Module	Rockwell Automation	20-750-MTAM1-CD PN-581219
AC Fuse Link, 400/480 VAC, Frame 7	Rockwell Automation	20-750-MACL2-CD-F7M PN-382996
ACPC, CB Bus Bar Output	Rockwell Automation	20-750-MPCCB-F7M PN-383001
IP54 Vent 800mm	Rockwell Automation	20-750-MVENT2-F7M PN-383006
AC Bus Bar Terminals	Rockwell Automation	20-750-MACIOT-F7M PN-383049
DC Output Terminals	Rockwell Automation	20-750-MDCOT-F7M PN-465607
AC Flex Bus Bar Motor output	Rockwell Automation	20-750-MSOF-F7 PN-383047
Mounting bracket 800mm	Rockwell Automation	20-750-MMNT1-F7M PN-471797
Marine auto discharge	Rockwell Automation	20-750-MBSCD-DB PN-581075
Frame 7 Seismic Kit	Rockwell Automation	20-750-MOSHDP-F7M PN-658842

DATE: 08/24/2023

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Date: 8/3/2023

Test Report No. PR114422-TR-21, Rev. 2 (002) – EUT 2

AFE Bus Supplies (20J*†§#RRR%N&NNNNN-PXX)

Enclosure type: UL Type 1/IP21

800 mm W x 676 mm D x 2131 mm H, 1070 lbs

Rigid Floor mounted to NTS-provided test fixtures using 4 M12 class 8.8

hardware. Test fixtures then welded to the triaxial seismic table.



Photo T1 - Test Setup - Series 1 - EUT 2

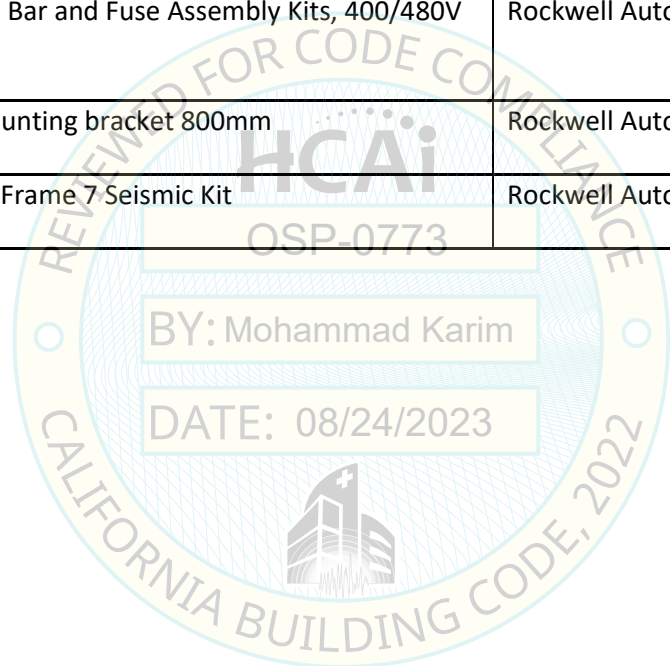
Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
				A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2022	ICC-ES AC 156	2.0	1	3.200	2.400	2.560	1.920
Natural Frequencies (Hz)			Test Results				
F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 test. UUT full of contents during testing.				
6.3	6.1	-					

Subcomponents	Manufacturer	Part #
AC Precharge PCBA, 400/480 VAC, Frame 7	Rockwell Automation	20-750-MACPC1-CD-F7M PN-581149
AC Precharge Circuit Breaker, 400/480/600/690V, Frame 7	Rockwell Automation	20-750-MACPCCB-1K0 PN-382989
AC Precharge Time Delay Relay, 400/480/600/690V, Frame 7	Rockwell Automation	20-750-MACPC-TDR PN-312032
AC Precharge Resistor Banks, 400/480, Frame 7	Rockwell Automation	20-750-MACPR-CD-F7M PN-382981
AC Precharge Fused Disconnect, 400/480, Frame 7	Rockwell Automation	194R-J30-1753-PBS1 PN-214349
AC Precharge Contactor, 400/480/600/690V, Frame 7	Rockwell Automation	100-C30KA-10 100-C30KA10 A
AC Precharge TVSS Module, 400/480, Frame 7	Rockwell Automation	20-750-MACP-CD-TVSS PN-581152
Fiber Transceiver Board, 400/480/600/690V, Frame 7	Rockwell Automation	20-750-MFTB1-F8 PN-581170
Control Transformer T1...T4, 400/480V, Frame 7	SNC	P22568
Switched Mode Power Supply, 400/480/600/690V, Frame 7	Rockwell Automation	1606-XLS240EC 1606-XLS240EC A
Control Pod, Regen, Fr7	Rockwell Automation	20-750-MCPOD1-F7M PN-383009
Power Module	Rockwell Automation	20-750-MI4-C302D302

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Date: 8/3/2023

		PN-581210
LCL Filter	Rockwell Automation	20-750-ML4-C585D617 PN-581177
AC Fuse Link, 400/480 VAC, Frame 7	Rockwell Automation	20-750-MACL2-CD-F7M PN-382996
ACPC, CB Bus Bar Input, Flex	Rockwell Automation	20-750-MACINP-F7 PN-465605
IP21 Vent 800mm	Rockwell Automation	20-750-MVENT1-F7M PN-580999
AC Bus Bar Terminals	Rockwell Automation	20-750-MACIOT-F7M PN-383049
DC Output Terminals	Rockwell Automation	20-750-MDCOT-F7M PN-465607
DC Output Flex Bus Bar and Fuse Assembly Kits, 400/480V	Rockwell Automation	20-750-MDCFB-CD- F7M PN-465603
Mounting bracket 800mm	Rockwell Automation	20-750-MMNT1-F7M PN-471797
Frame 7 Seismic Kit	Rockwell Automation	20-750-MOSHDPD-F7M PN-658842



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Date: 8/3/2023

Test Report No. PR114422-TR-21, Rev. 2 (002) – EUT 3

NRS Bus Supplies - Frame 8 (Single Density) (20JEH\$#RRRLNANNNNN-CX-PXX)

Enclosure type: UL Type 1/IP21

400 mm W x 678 mm D x 2125 mm H, 672 lbs

Rigid Floor mounted to NTS-provided test fixtures using 4 M12 class 8.8 hardware.

Test fixtures then welded to the triaxial seismic table.



Photo 15 - Test Setup - Series 1 - EUT 3

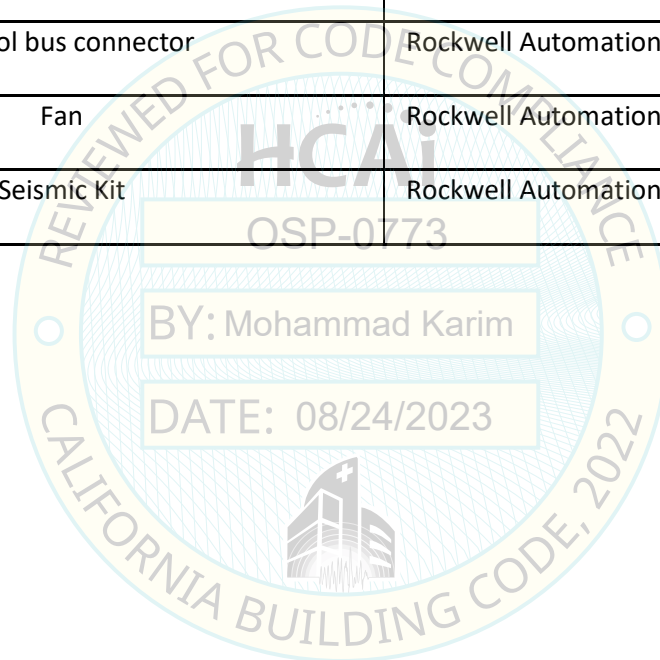
Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
				A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2022	ICC-ES AC 156	2.0	1	3.200	2.400	2.560	1.920
Natural Frequencies (Hz)			Test Results				
F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 test. UUT full of contents during testing.				
15	6.9	29					

Subcomponents	Manufacturer	Part #
NRS Single density module 400/480V Input 739/681Amps, Output 887/817Amps With Bus Capacitors	Rockwell Automation	20-750-MN1-C770D740 PN-613433
Control Board	Rockwell Automation	SK-RM-MCB3-PF755-CD PN-625724
Bus Capacitor	Rockwell Automation	SK-RM-DCCAP1-CD PN-625722
DC link/fuse assembly	Rockwell Automation	20-750-MN-DCLINK1-CD PN-625699
DC link/fuse assembly support	Rockwell Automation	20-750-MN-DCLS1-400 PN-625703
DC bus bar	Rockwell Automation	20-750-MDCBUS4-3K0 PN-161169
Control Transformer 1KVA	Rockwell Automation	20-750-MN-XMFR1-D PN-649424
Back panel with stab receptacles with bus bars	Rockwell Automation	20-750-MNIR1 PN-625728
DC bus conditioner	Rockwell Automation	20-750-MDCBUS-COND PN-581224
DC bus bar splice kit	Rockwell Automation	20-750-MDCSPL1-3K0 PN-161170
Loop-back Harness	Rockwell Automation	20-750-MNIH-JMP1 PN-636289
NRS Module Harness	Rockwell Automation	20-750-MNIH1 PN-625695

Industrial Electric Mfg. – LV & MV Switchgear and Panels

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PowerFlex 750 Kit NRS N-1 Jumper	Rockwell Automation	SK-RM-JMPR-N1 PN-625726
Control bus assembly 400 mm, 240V, 100Amps	Rockwell Automation	20-750-MCBUS1-PB-F8M PN-269639
Vent kit IP21 / UL Type1 (400 mm)	Rockwell Automation	20-750-MNVENT1 PN-625731
PowerFlex 750 Kit NRS Vent Filter	Rockwell Automation	SK-RM-PBAY-FLTR-NRS PN-658879
Power module floor mount bracket (400 mm)	Rockwell Automation	20-750-MN-PNL4-NRS PN-636341
Bus support panels, upper	Rockwell Automation	20-750-MN-PNL1-NRS PN-625706
Bus support panels, lower	Rockwell Automation	20-750-MN-PNL3-NRS PN-625707
Control bus connector	Rockwell Automation	20-750-MCTRLBUS-CONN1 PN-312059
Fan	Rockwell Automation	SK-RM-MFAN-NRS PN-625727
Seismic Kit	Rockwell Automation	20-750-MOSHDPD-F9M PN-454938



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III. UUT Summary Sheets

Test Report No. PR114422-TR-21, Rev. 2 (002) – EUT 4

NRS Bus Supplies - Frame 9 (Dual Density) (20JEH\$#RRRLNANNNNN--CX-PXX)

Enclosure type: UL Type 1/IP21

800 mm W x 723 mm D x 2125 mm H, 1272 lbs

Rigid Floor mounted to NTS-provided test fixtures using 8 M12 class 8.8 hardware. Test fixtures then welded to the triaxial seismic table.



Photo 19 - Test Setup - Series 1 - EUT 4

Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
				A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2022	ICC-ES AC 156	2.0	1	3.200	2.400	2.560	1.920
Natural Frequencies (Hz)			Test Results				
F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 test. UUT full of contents during testing.				
12	6.1	25					

Subcomponents	Manufacturer	Part #
NRS Dual density module 400/480V Input 1406/1256Amps, Output 1685/1507Amps With Bus Capacitors	Rockwell Automation	20-750-MN1-C1K4D1K3 PN-613437
Control Board	Rockwell Automation	SK-RM-MCB3-PF755-CD PN-625724
Bus Capacitor	Rockwell Automation	SK-RM-DCCAP1-CD PN-625722
DC link/fuse assembly	Rockwell Automation	20-750-MN-DCLINK2-CD PN-625701
DC link/fuse assembly support	Rockwell Automation	20-750-MN-DCLS1-400 PN-625703
DC bus bar	Rockwell Automation	20-750-MDCBUS4-4K7 PN-160575
Control Transformer 1KVA	Rockwell Automation	20-750-MN-XMFR1-D PN-649424
Control Transformer 3KVA	Rockwell Automation	20-750-MN-XMFR2-D PN-649428
Back panel with stab receptacles with bus bars	Rockwell Automation	20-750-MNIR1 PN-625728
DC bus conditioner	Rockwell Automation	20-750-MDCBUS-COND PN-581224
PowerFlex 750 Kit, NRS Wiring Bay 400mm Standard AC & DC Bus	Rockwell Automation	20-750-MN-WBAY1-400 PN-625709
AC bus bar splice kit wire bay to NRS	Rockwell Automation	20-750-MACSPL2-3K0 PN-312005
08/24/2023 DC bus bar splice kit	OSP-0773 Rockwell Automation	20-750-MDCSPL1-4167 PN-160124

Industrial Electric Mfg. – LV & MV Switchgear and Panels

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Thermal Switch Harness (wire bay to NRS)	Rockwell Automation	20-750-MNIH-JMP3 PN-636293
Loop-back Harness	Rockwell Automation	20-750-MNIH-JMP1 PN-636289
NRS Module Harness	Rockwell Automation	20-750-MNIH1 PN-625692
PowerFlex 750 Kit NRS N-1 Jumper	Rockwell Automation	SK-RM-JMPR-N1 PN-625726
Control bus assembly 400 mm, 240V, 100Amps	Rockwell Automation	20-750-MCBUS1-PB-F8M PN-269639
Control bus assembly 400 mm, 240V, 100Amps	Rockwell Automation	20-750-MCBUS1-IB-F8M PN-335138
Vent kit IP54 / UL Type12 (400 mm)	Rockwell Automation	20-750-MNVENT2 PN-625732
PowerFlex 750 Kit NRS Vent Filter	Rockwell Automation	SK-RM-PBAY-FLTR-NRS PN-658879
Power module floor mount bracket (400 mm)	Rockwell Automation	20-750-MN-PNL4-NRS PN-636341
Bus support panels, upper	Rockwell Automation	20-750-MN-PNL1-NRS PN-625706
Bus support panels, lower	Rockwell Automation	20-750-MN-PNL3-NRS PN-625707
Control bus connector	Rockwell Automation	20-750-MCTRLBUS-CONN1 PN-312059
Fan	Rockwell Automation	SK-RM-MFAN-NRS PN-625727
Seismic Kit	Rockwell Automation	20-750-MOSHDPD-F9M PN-454938