



3030 East Causeway Approach
Mandeville, LA 70448
985 626.4431
Fax 985 626.3572
donahuefavret.com

September 29, 2021

Mr. John Vollman
CM Task Force
5951 Patton Street
New Orleans, LA 70115

RE: Lycee Francais Renovation
1601 Leonidas Street
New Orleans, LA 70118
Proposal # 054

This proposal request includes all labor, material, tax, insurance, supervision and equipment necessary for exhaust fan VFD changes listed in RFI 110 response.

For a total cost of (\$2,792)
Add days 0

We reserve the right to revise this proposal if not accepted within 15 days from this date. Please note that the general conditions will be revised based up the approval date.

If you have any questions, please feel free to contact our office.

Sincerely,
DonahueFavret Contractors, Inc.

A handwritten signature in blue ink, appearing to read 'Bill Mardis', is written over the typed name.

Bill Mardis
Senior Project Manager

cc: File; Field

Accepted By:

Date: _____

DonahueFavret Contractors, Inc.
Cost Proposal Request

Project	Lycee Francais Renovation		PR#	54
Location	1601 Leonidas Street, New Orleans, LA 70118		Date	9/29/2021
Architect	Eskew+Dumez+Ripple, APC	Owner	1601 Leonidas, LLC	Checked By BM

Description of Services:

This proposal request includes all labor, material, tax, insurance, supervision and equipment necessary for exhaust fan VFD changes listed in RFI 110 response.

DESCRIPTION	QUANTITY	UNIT	LABOR		MATERIAL		SUB / OTHER	
			UNIT	TOTAL	UNIT	TOTAL	UNIT	TOTAL
				\$0		\$0		\$0
Arc Mechanical	1	LS		\$0		\$0	-2792	(\$2,792)
				\$0		\$0		\$0
				\$0		\$0		\$0
				\$0		\$0		\$0
				\$0		\$0		\$0
				\$0		\$0		\$0
				\$0		\$0		\$0
				\$0		\$0		\$0
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				\$0		\$0		\$0
				\$0		\$0		\$0
				\$0		\$0		\$0
				\$0		\$0		\$0
				\$0		\$0		\$0
				\$0		\$0		\$0
				\$0		\$0		\$0
				\$0		\$0		\$0
SUB TOTALS:				\$0		\$0		(\$2,792)
SUB TOTALS WITH LABOR BURDEN & TAX:			45%	\$0	9.45%	\$0		(\$2,792)

Days ADDED to Contract:	0
Days price is good for:	5

TOTAL COST OF WORK:		(\$2,792)
DFC OH&P - DFC Labor & Materials	10%	\$0
DFC OH&P - Subcontractors	5%	
SUB TOTAL:		(\$2,792)
SAFETY:	1%	
INSURANCE:	2%	
BOND:	2%	
TOTAL:		(\$2,792)

**New Orleans Division**

201 St.Charles Ave
Unit 4318
New Orleans, LA 70112
Phone: 504-777-0040
Fax:

RFI Response 110

RFI # 110	Reviewer: ALYSSA FAIRCLOTH	Log ID: 216445
Project: 717027 - LYCEE HISTORIC AND NEW BUILDINGS		Received: 09/09/2021
Name: EXHAUST FAN VFD SUBSTITUTION		Returned: 09/10/2021

Please Note: The following RFI response is not intended to authorize any deviation or modification to the design documents except as specifically clarified below for this specific application and circumstance.

Furthermore, this response is not intended to authorize any increase in construction cost, schedule or time extension, or construction in conflict with any applicable codes or specified design standards. It is the responsibility of the Contractor to notify the design team immediately of any perceived scope, schedule, or cost impacts or adjustments.

Comments

1. NEMA 1 VFD enclosures are acceptable inside.

2. Please provide final submittals of the NEMA enclosures.

Please provide credit pricing for review.



Request for Information # 110

Date: 09/09/2021

To:	From:
Andy Redmon	Janelle Stephens
Eskew+Dumez+Ripple	DonahueFavret Contractors, Inc.
365 Canal Street, Suite 3150	3030 East Causeway Approach
New Orleans, LA 70130	Mandeville, LA 70448
Phone: 504-561-8686	Phone: 985-626-4431
Fax: 504-522-2253	Fax: 985-626-3572
Email: aredmon@eskewdumezripple.com	Email: janelles@donahuefavret.com

Reference: Lycee Francais School Renovation

Subject:	Status:	Response Required By:
Exhaust Fan VFD Substitution	Please Advise	09/14/2021

Submittal #:	Drawing #:	Addendum:	Spec Section:

RFI Detail:
The specified VFD called for a NEMA 3R enclosure (typically for outdoors), which is substantially larger than a standard NEMA 1 enclosure. With these VFDs being installed in electrical panel room 223, we do not have the space for the 3R enclosure. Can NEMA 1 be used in lieu of NEMA 3R? See attachments for specifications and dimensions.

cc: Robert Foy, Arc Mechanical

Response:



Project LYCESS FRANCAIS DE LA NOU

Contractor

10/19/2020

Rep Firm AIR-SIDE EQUIPMENT INC

Engineering

Q-LINK VFD WITH DISCONNECT

1–28A, 208–480VAC, 3Ø

UL Type 3R Enclosure

Integrated PID Control



Special Instructions:

QLNK3-DISC009-DV-8: 3R, 9A Q-Link w/ 8A MMS

The same revolutionary connected drive with added MCP disconnect protection. Control and support via a smartphone provides a simple, intuitive user experience that greatly enhances and expedites setup and support.

FEATURES

- Simple and intuitive display
- Designated HOA buttons
- Native communications (BACnet & Modbus)
- R3 Filtering for harmonic mitigation
- Built in damper control
- **UL Type 3R Frame**
- Finger-safe power terminals
- Meets latest harmonized UL standard

TECHNOLOGIES

R³FILTERING **SMARTSTART[®]**



Q-LINK COMPANION APP

- Guided Start-UP
- In-App Troubleshooting Solutions
- Pre-Call Fault and Troubleshooting Reports
- Over-the-air Firmware Updates
- Monitoring via Bluetooth[®] Connection
- Start-up Report Generation
- iOS & Android Compatible
- Save and Store Device Settings
- Create Configuration Templates



Q-Link Disconnect VFD



Project LYCESS FRANCAIS DE LA NOU

Contractor

Date 10/19/2020

Rep Firm AIR-SIDE EQUIPMENT INC

Engineering

SIZING INFORMATION TABLE

SUBMITTED EQUIPMENT SCHEDULE

QTY	Part #	HP	Voltage	Phase	Tag
13		5	480	3	SXEF-1 thru SXEF-13



Project LYCESS FRANCAIS DE LA NOU

Contractor

Date 10/19/2020

Rep Firm AIR-SIDE EQUIPMENT INC

Engineering

Q-Link Specification Table

Input ratings	Voltage (V)	Three phase, 208–480V (-10%, +15%)
	Frequency (Hz)	50~60Hz (±5%)
	Efficiency	≥98%, Full Load and Full Voltage
	Input Power Factor	>.99
Output ratings	Current	1-28A (208–460V)
	Voltage (V)	0-100% of Supply Voltage
	Frequency (Hz)	0~240Hz
Control	Control method	V/F Scalar Pulse Width Modulation
	Carrier Frequency	2kHz - 10kHz, 0.1kHz resolution, Default 2.5kHz
	Output Frequency Resolution	0.01Hz
	Frequency Setting Accuracy	Digital: 0.01 % of Max. Output Frequency Analog: 1 % of Max. Output Frequency
	V/F ratio	Linear, Square Pattern
	Overload Capacity	110% for 60s
Operation	Operation Method	OLED display and keypad, HOA buttons, Terminals, Bluetooth® mobile app, Communications
	Programming Method	OLED display and keypad, Bluetooth® mobile app, Communications
	PID	Standard
	Communications Interface	Physical (RS-485, Bluetooth®) Protocols (Native BACnet MS/TP Modbus RTU)*
	Logging	Faults/Alarms/Parameter Changes - w/ Real Time & Date)
	Indication	3 LEDs: Hand, Off, Auto
	Operation Functions	Frequency Limit / Skip Frequencies / Reverse Rotation Prevention / Auto Restart / Flying Start / Damper Control / Motor Pre-Heat / Torque Boost / Stall Prevention / DC Trip Prevention / DC Braking / DC Start / Analog Signal Loss / Auto Bypass (Bypass models only) / Fireman's Override / Auto Fault Restart
Dry Inputs	Count	4 configurable (NO or NC)
	Programmable Inputs	None / Enable / Fireman's Override / Speed- A / Speed- B / Setpoint-A / Setpoint-B / Damper LSW / Flow Switch / External Trip / Run Forward / Run Reverse / 2nd Acc/Dec Time / 3-Wire Start / 3-Wire Stop / HOA Auto / HOA Hand Shutdown / Fault Reset / Bypass / Switch 1A to 2A/3A
	Logic	PNP or NPN
	Voltage Level	24 VDC, 5mA Max
Wet (Voltage) Inputs	Count	2 configurable
	Programmable Inputs	None / Enable / Fireman's Override / Speed- A / Speed- B / Setpoint-A / Setpoint-B / Damper LSW / Flow Switch / External Trip / Run Forward / Run Reverse / 2nd Acc/Dec Time / 3-Wire Start / 3-Wire Stop / HOA Auto / HOA Hand / Shutdown / Fault Reset / Bypass / Switch 1A to 2A/3A
	Voltage Level	12-240 ± 10%V, 5mA Max
Analog I/O	Count	3 Selectable: 1A = AI, 0-10V/0-24V/4-20mA, 2A = AIO / 0-10V input or 0-10V/4-20mA output / 3A = AI 4-20mA
	Mode	Voltage or Current
	Level	0-10VDC or 4-20mA
Analog Output	Control Power	24VDC, 50mA Max
Damper Output	Count	1 damper actuator output
	Control Power Rating	24VDC, 0.5Amp Max
Relay Outputs	Count	2 Relay Outputs
	Programmable	Status, Run, Fault, SW Configurable
	Control Power Rating	125VAC, 1.25Amp Max, switching voltage 250VAC
Protection	Functions	OV/UV (Line or DC Bus) / Inverter Over Current / Inverter Overheat / Input Phase Loss / Output Phase Open / Ground Fault / Locked Rotor / Stall / Under Power / Over Power / Inverter Short Circuit Protection / Temperature Sensor Fault / Communication Loss / Loss of Analog Signal / Hardware Fault / Broken Belt / Max time to start / Bypass contactor
	Short Circuit Rating	100 kAIC fused protected
Environmental	Ambient Temperature	-10 to 40°C (104°F), 50°C (122°F) achievable following derate rules
	Storage Temperature	-20 to 65°C
	Location	Pollution Degree 2 Environment
	Altitude	1000m (3280ft) above sea level. De-rate 10% for installations up to 2000m (6560ft). Additional 20% for installations 2000-3000m (6560–9840ft). *OR reduce max ambient temp rating by 1°C per 200m (6560ft) altitude above 1000m (3280ft).
	Relative Humidity	95% Relative Humidity (non-condensing)
Certifications	Agency Approvals	UL, cUL
	Safety	UL 61800-5-1 (Harmonized Safety Standard)
	Harmonic Distortion	R ³ Filtering ≤ 35% to address IEEE519 and EN50160
	EMC	EN 61800-3 (Radiated and Conducted Emissions)
	CE	Electromagnetic compatibility 2004/108/EEC, Low-voltage directive 2006/95/EEC

CONTROL POWER OPTION BLOCKS

☐ STANDARD CPT 49VA
☐ QLNK-CPT-24V-100VA

TFU SIZING CHART

V	PRIMARY VOLTAGE	
VA	208V/240V/480V	600V
☐ 49VA	N/A	N/A
☐ 100VA	1A	0.5A

CONTROL OPTION BLOCKS

☐ STANDARD
☐ QLNK-HOA-KEY

STANDARD Q-LINK PROGRAMMING:
 PRI-22: EXTERNAL HOA
 I/O-48: ENABLE
 I/O-49: HAND
 I/O-51: AUTO

0-10VDC ANALOG TRANSDUCER

DIP 3 4 ON ↑

4-20mA ANALOG TRANSDUCER

DIP 3 4 ON ↑

BUILDING MANAGEMENT SYSTEM (BMS) CONTROL

BMS

0-10VDC DIP

DIP 3 4 ON ↑

4-20mA DIP

DIP 3 4 ON ↑

1. DASHED LINES INDICATE FIELD WIRING.
2. CHECK BOX INDICATES A SELECTED OPTION.
3. REMOVE EMC JUMPER FOR CORNER GROUNDED DELTA SYSTEMS.
4. REMOVE JRS JUMPER TO USE REMOTE START.
5. REMOVE JPE1 JUMPER TO USE SYSTEM ENABLE.
6. CUSTOMER TO MOVE JPV JUMPER TO SUPPLY VOLTAGE.

DRIVE VOLTAGE
☐ 200V-480V
☐ 600V

CONTROL INPUTS:
 ON (HAND)
 OFF (RESET)
 AUTO
 UP
 DOWN
 SOFT1
 SOFT2
 ENTER

INTERNAL USE ONLY → **ETHERNET** (ENET)

24VDC ACTUATOR OUTPUT (0.5A MAX.) → **A+**
24VDC SENSOR POWER (50mA MAX.) → **A-**
ACTUATOR OUTPUT

0-10V/0-24V/4-20mA ANALOG INPUT → **24**
0-10V ANALOG INPUT/OUTPUT → **1A**
SIGNAL GROUND → **2A**
ANALOG I/O

PROGRAMMABLE DRY INPUT 1 (DEFAULT: RUN FORWARD) → **D1**
PROGRAMMABLE DRY INPUT 2 (DEFAULT: NONE) → **D2**
SIGNAL GROUND → **SG**
COMMUNICATIONS GROUND → **CG**
RS-485 - → **C-**
RS-485 + → **C+**
RS-485 BACNET/MODBUS

SIGNAL GROUND → **SG**
MULTI-DRIVE - → **M-**
MULTI-DRIVE + → **M+**
RS-485 MULTI-DRIVE

PROGRAMMABLE RELAY OUTPUT 1 (250V MAX., SEE MANUAL FOR RATING DETAILS, DEFAULT: RUN) → **O1**
PROGRAMMABLE WET INPUT 1 (12-250V, DEFAULT: SPEED-A/SPOINT-A) → **O2**
PROGRAMMABLE WET INPUT 2 (12-250V, DEFAULT: EXTERNAL TRIP) → **V1**
V2
V3
V4
RELAY OUTPUT
VOLTAGE INPUT 1
VOLTAGE INPUT 2

PROGRAMMABLE DRY INPUT 3 (DEFAULT: HAND) → **D3**
PROGRAMMABLE DRY INPUT 4 (DEFAULT: AUTO) → **D4**
4-20mA ANALOG INPUT → **3A**
SIGNAL GROUND → **SG**
DSC-CNTRL-OPT1
DRY INPUTS AND ANALOG I/O

PROGRAMMABLE RELAY OUTPUT 2 (250V MAX., SEE MANUAL FOR RATING DETAILS, DEFAULT: FAULT) → **NC** → **O3**
COM → **O4**
NO → **O5**
RELAY OUTPUT 2

POWER INPUT
 R/L1
 S/L2
 T/L3
 GND

MOTOR OUTPUT
 U/T1
 V/T2
 W/T3
 *NOTE 3

EMC JUMPER

WINDING CONNECTIONS:
☐ NONE
☐ QL NK-OR-XXXX
☐ QL NK-OF-XXXX
 OR
 OR/OF

MOTOR CONNECTIONS:
 T1
 T2
 T3
 GND
 MOTOR

COMPONENT SPECIFICATIONS

The following section details the various components' sizing and ratings. To locate your component part numbers for the EMS reference the sizing information table above.

THREE POLE CONTACTORS



3-POLE CONTACTOR SPECIFICATIONS

Type				MRC-9A	MRC-12B	MRC-18B	MRC-22B	MRC-32LA	MRC-40LA	
Frame Size				22AF				40AF		
Terminal Type				Screw				Screw		
Number of poles				3 pole				3 pole		
Rated operation voltage, Ue				690V				690V		
Rated insulation voltage, Ui				690V				1000V		
Rated frequency				50/60Hz				50/60Hz		
Rated impulse withstand voltage, Uimp				6kV				8kV		
Max. operating rate in operating cycles per hour (AC3)				1800 operations per hour				1800 operations per hour		
Durability	Mechanical			15 mil. operations				12 mil. operations		
	Electrical			2.5 mil. operations				2 mil. operations		
Current and power	AC-1, Thermal current		A	25	25	40	40	50	60	
	AC-3	200/240V	kW A	2.5 11	3.5 13	4.5 18	5.5 22	7.5 32	11 40	
		380/440V	kW A	4 9	5.5 12	7.5 18	11 22	15 32	18.5 40	
		500/550V	kW A	4 7	7.5 12	7.5 13	15 20	18.5 28	22 32	
		690V	kW A	4 6	7.5 9	7.5 9	15 18	18.5 20	22 23	
	Continuous current		A	25	25	32	32	50	60	
	UL rating (50/60Hz)	Single Phase	110~120V	HP	0.5	0.75	1	2	2	3
		Three Phase	220~240V	HP	1.5	2	3	3	5	7.5
200~208V			HP	2	3	5	7.5	7.5	15	
220~240V			HP	3	5	7.5	7.5	10	15	
440~4 80V			HP	5	7.5	10	10	20	30	
550~600V		HP	7.5	10	15	15	25	30		
NEMA size				00	—	0	—	1	—	
Size and weight	MRC	Weight Size (WxHxD)	lbs in	0.73 lbs 1.77 x 2.89 x 3.39 in				0.88 lbs 1.77 x 3.27 x 3.54 in		
	MRD	Weight Size (WxHxD)	lbs in	1.12 lbs 1.77 x 2.89 x 4.63 in				2.65 lbs 1.77 x 3.27 x 4.61 in		
Auxiliary (standard)				1NO & 1NC				1NO & 1NC		
Auxiliary	Side mount			MA-1				MA-1		
	Front mount			CA-2, CA-4				CA-2, CA-4		

COMPONENT SPECIFICATIONS

The following section details the various components' sizing and ratings. To locate your component part numbers for the Q-Link reference the sizing information table below.

(MCP) DISCONNECT



Specification Table

VFD Input Current	Disconnect Part Number
2.4	CMS-32HI-2.5
4	CMS-32HI-4
7.2	CMS-32HI-8
9.6	CMS-32HI-10
13.6	CMS-32HI-17
19.2	CMS-32HI-22
22.4	CMS-32HI-26

Frame Size	Part #	Rated operational current Ie (A)	Magnetic release operating current (A)	KAIC Ratings [kA]		
				240V	480V	600V
32AF	CMS-32HI-2.5	2.5	32.5	100	50	10
	CMS-32HI-4	4	52	100	50	10
	CMS-32HI-8	8	104	100	50	10
	CMS-32HI-10	10	130	100	50	10
	CMS-32HI-17	17	221	100	50	10
	CMS-32HI-22	22	286	100	30	10
	CMS-32HI-26	26	338	100	30	10

Q-LINK VFD DIMENSIONS

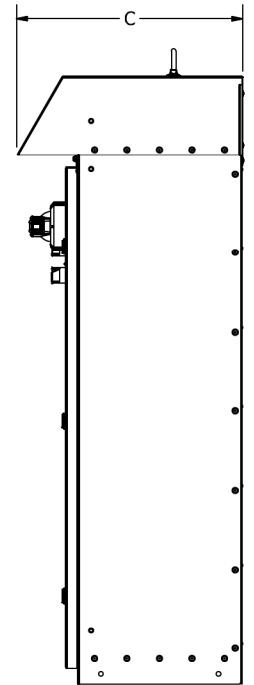
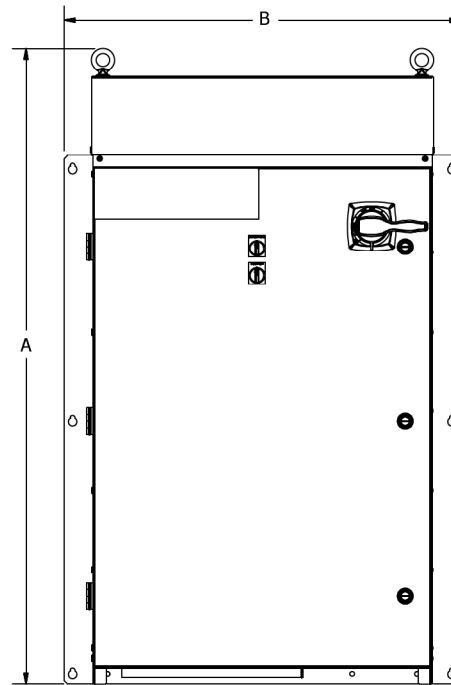
**All measurements in inches*

UL TYPE 3R ENCLOSURE

Q-Link 3R Enclosed Drive

H x W x D, (A x B x C)

26"x 36.5" x 16.5"



DRIVE WITH DISCONNECT 1-56A, 200-460VAC, 3Ø

SMARTER & MORE VERSATILE THAN EVER

The same revolutionary connected drive with added MMS disconnect protection. Control and support via a smartphone provides a simple, intuitive user experience that greatly enhances and expedites setup and support.

- Simple and intuitive display
- Designated HOA buttons
- Native communications (BACnet & Modbus)
- R³ Filtering for harmonic mitigation
- Built in damper control
- Compact UL Type 1 frame
- Finger-safe power terminals
- Meets latest harmonized UL standard

Q-LINK COMPANION APP

- Guided Start-UP
- In-App Troubleshooting Solutions
- Pre-Call Fault and Troubleshooting Reports
- Over-the-air Firmware Updates
- Monitoring via Bluetooth® Connection
- Start-up Report Generation
- iOS & Android Compatible
- Save and Store Device Settings
- Create Configuration Templates

ORDERING & SIZING INFORMATION - UL TYPE 1



PART NUMBER	UL HP & kAIC												DISCONNECT
	200VAC			208VAC			230VAC			380~480VAC			
	HP	FLA	kAIC	HP	FLA	kAIC	HP	FLA	kAIC	HP	FLA	kAIC	
QLNK1-DISCO03-DV-1.6	-	-	-	-	-	-	-	-	-	3/4	1.6	65	CMS-32HI-1.6
QLNK1-DISCO03-DV-2.5	1/2	2.5	100	1/2	2.4	100	1/2	2.2	100	1	2.1	65	CMS-32HI-2.5
QLNK1-DISCO05-DV-4	3/4	3.7	100	3/4	3.5	100	3/4	3.2	100	2	3.4	65	CMS-32HI-4
QLNK1-DISCO09-DV-6	1	4.8	100	1	4.6	100	1.5	6	100	3	4.8	65	CMS-32HI-8
QLNK1-DISCO09-DV-8	2	7.8	100	2	7.5	100	2	6.8	100	5	7.6	65	CMS-32HI-8
QLNK1-DISCO12-DV-10	2	7.8	100	2	7.5	100	3	9.6	100	5	7.6	65	CMS-32HI-10
QLNK1-DISCO17-DV-13	3	11	100	3	10.6	100	3	9.6	100	7.5	11	65	CMS-32HI-13
QLNK1-DISCO17-DV-17	3	11	100	3	10.6	100	5	15.2	100	10	14	30	CMS-32HI-17
QLNK1-DISCO24-DV-22	5	17.5	100	5	16.7	100	7.5	22	100	15	21	30	CMS-32HI-22
QLNK1-DISCO28-DV-26	7.5	25.3	100	7.5	24.2	100	7.5	22	100	15	21	30	CMS-32HI-26
QLNK1-DISCO28-DV-32	7.5	25.3	100	7.5	24.2	100	10	28	100	20	27	30	CMS-32HI-32
QLNK1-DISCO38-DV-40	10	32.2	100	10	30.8	100	10	28	100	25	34	50	CMS-63HI-40
QLNK1-DISCO45-DV-40	10	32.2	100	10	30.8	100	10	28	100	30	40	50	CMS-63HI-40
QLNK1-DISCO56-DV-50	15	48.3	100	15	46.2	100	15	42	100	30	40	50	CMS-63HI-50
QLNK1-DISCO56-DV-63	-	-	-	-	-	-	20	54	100	40	52	50	CMS-63HI-63

Download the Companion App



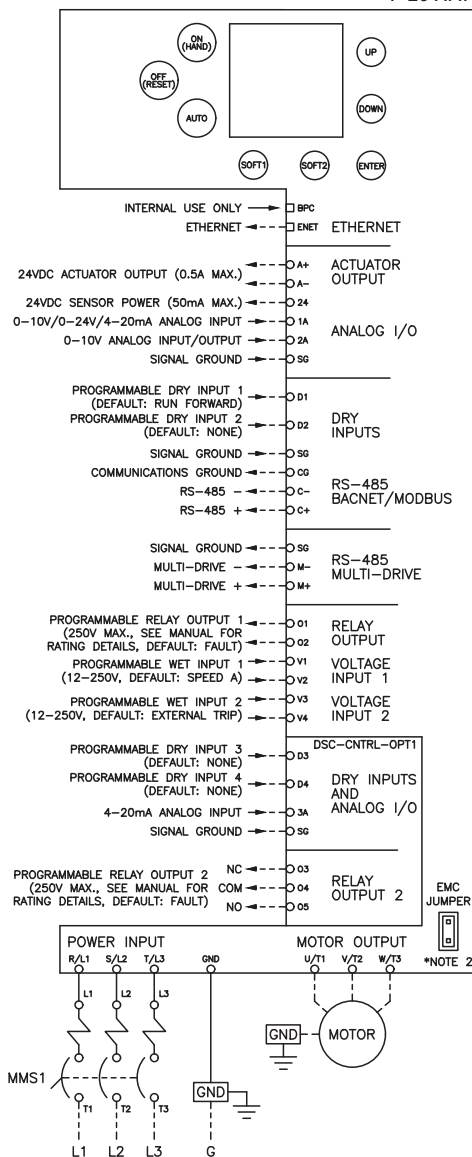
Q-LINK SPECIFICATIONS TABLE

Specifications		
Input ratings	Voltage (V)	Three phase, 200–480V (-10%, +15%)
	Frequency (Hz)	50-60Hz (±5%)
	Efficiency	≥98%, Full Load and Full Voltage
	Input Power Factor	>.99
Output ratings	Current	1–56A (200–460V)
	Voltage (V)	0-100% of Supply Voltage
	Frequency (Hz)	0-240Hz
Control	Control method	V/F Scalar Pulse Width Modulation
	Carrier Frequency	2kHz – 10kHz, 0.1kHz resolution, Default 2.5kHz
	Output Frequency Resolution	0.01Hz
	Frequency Setting Accuracy	Digital: 0.01 % of Max. Output Frequency Analog: 1 % of Max. Output Frequency
	V/F ratio	Linear, Square Pattern
	Overload Capacity	110% for 60s
Operation	Operation Method	OLED display, HOA keypad, Terminals, Bluetooth® mobile app, Communications
	Programming Method	OLED display, Programming keypad, Bluetooth® mobile app, Communications
	PID	Standard
	Communications Interface	Physical (RS-485, Bluetooth®) Protocols (Native BACnet MS/TP Modbus RTU)
	Logging	100 Faults/100 Alarms/100 Parameter Changes - w/ Real Time & Date
	Indication	3 LEDs: Hand, Off, Auto
	Operation Functions	Frequency Limit / Skip Frequencies / Reverse Rotation Prevention / Auto Restart / Flying Start / Damper Control / Motor Pre-Heat / Torque Boost / Stall Prevention / DC Trip Prevention / DC Braking / DC Start / Analog Signal Loss / Auto Bypass (Bypass models only) / Fireman's Override / Auto Fault Restart
Dry Inputs	Count	4 configurable (NO or NC)
	Programmable Inputs	None / Enable / Fireman's Override / Speed- A / Speed- B / Setpoint-A / Setpoint-B / Damper LSW / Flow Switch / External Trip / Run Forward / Run Reverse / 2nd Acc/Dec Time / 3-Wire Start / 3-Wire Stop / HOA Auto / HOA Hand / Shutdown / Fault Reset / Bypass / Switch 1A to 2A/3A
	Logic	PNP or NPN
	Voltage Level	24 VDC, 5mA Max
Wet (Voltage) Inputs	Count	2 configurable
	Programmable Inputs	None / Enable / Fireman's Override / Speed- A / Speed- B / Setpoint-A / Setpoint-B / Damper LSW / Flow Switch / External Trip / Run Forward / Run Reverse / 2nd Acc/Dec Time / 3-Wire Start / 3-Wire Stop / HOA Auto / HOA Hand / Shutdown / Fault Reset / Bypass / Switch 1A to 2A/3A
	Voltage Level	12-240 ± 10%V, 5mA Max
Analog I/O	Count	3 Selectable: 1A = AI 0-10V/0-24V/4-20mA 2A = AIO - 0-10V input or 0-10V/4-20mA output 3A = AI 4-20mA
	Mode	Voltage or Current
	Level	0-10VDC or 4-20mA
Analog Output	Control Power	24VDC, 50mA Max
Damper Output	Count	1 damper actuator output
	Control Power Rating	24VDC, 0.5A Max
Relay Outputs	Count	2 Relay Outputs
	Programmable	Status, Run, Fault, SW Configurable
	Control Power Rating	125VAC, 1.25Amp Max, switching voltage 250VAC
Protection	Functions	OV/UV (Line or DC Bus) / Inverter Over Current / Inverter Overheat / Input Phase Loss / Output Phase Open / Ground Fault / Locked Rotor / Stall / Under Power / Over Power / Inverter Short Circuit Protection / Temperature Sensor Fault / Communication Loss / Loss of Analog Signal / Hardware Fault / Broken Belt / Max time to start / Bypass contactor
	Short Circuit Rating	100 kAIC fused protected
Environmental	Ambient Temperature	-10 to 40°C (104°F), 50°C (122°F), 45°C (113°F) achievable following derate rules
	Storage Temperature	-20 to 65°C (-4°F to 149°F)
	Location	Pollution Degree 2 Environment
	Altitude	1000m (3280ft) above sea level. De-rate 10% for installations up to 2000m (6560ft). Additional 20% for installations 2000–3000m (6560–9840ft). *OR reduce max ambient temp rating by 1°C per 200m (6560ft) altitude above 1000m (3280ft)
	Relative Humidity	95% Relative Humidity (non-condensing)
Certifications	Agency Approvals	UL, cUL
	Safety	UL 61800-5-1 (Harmonized Safety Standard)
	Enclosure Rating	UL Type 1, (Consult factory for UL Type 12, UL Type 3R, UL Type 4X options)
	Keypad Rating	UL Type 1
	Harmonic Distortion	≤ 35% via R ² Filtering to help meet IEEE519 and EN50160
	EMC	EN 61800-3 (Radiated and Conducted Emissions)

Q-LINK WITH DISCONNECT SCHEMATIC

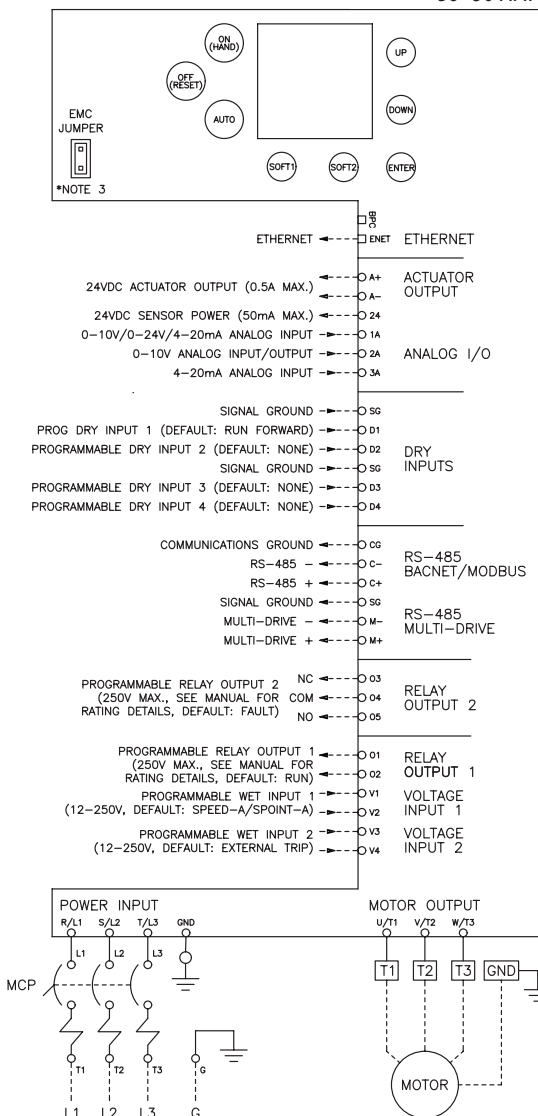
WIRING DIAGRAM

1-28 AMP



- NOTES
1. DASHED LINES INDICATE FIELD WIRING.
 2. REMOVE EMC JUMPER FOR CORNER GROUNDED DELTA SYSTEMS.

38-56 AMP



Q-LINK WITH DISCONNECT SCHEMATIC

Q-LINK W/DISCONNECT DIMENSIONS

Q-LINK VFD	H x W x D
QLNK1-DISCO03-DV-1.6	31.75" x 5.5" x 6.75" (806mm x 140mm x 171.45)
QLNK1-DISCO03-DV-2.5	
QLNK1-DISCO05-DV-4	
QLNK1-DISCO09-DV-6	
QLNK1-DISCO09-DV-8	
QLNK1-DISCO12-DV-10	
QLNK1-DISCO17-DV-13	
QLNK1-DISCO17-DV-17	
QLNK1-DISCO24-DV-22	
QLNK1-DISCO28-DV-26	
QLNK1-DISCO28-DV-32	
QLNK1-DISCO38-DV-40	49.5" x 6.5" x 7.3" (1257mm x 165mm x 186mm)
QLNK1-DISCO45-DV-22	
QLNK1-DISCO28-DV-26	
QLNK1-DISCO28-DV-32	

