MVH2 Medium Voltage VFD Sales Checklist

*Note: Items marked with * are mandatory fields.*
See Pg. 4 for standard features included with all VFDs.

*Requestor Name: _____ *Date Submitted: _____

*Requestor Phone: _____ *Requestor Email: _____

*Project Name and/or End-User: _____

*Contact Name: _____ *Phone Number: _____

*Email: _____

*Project Type: ☐Budgetary ☐Funded Est. Installation Timeframe: _____

*Specifications: ☐Yes ☐No Competitors: _____

SECTION A – Application:

***Type of application (load)** _____

***Input Power Supply**

Voltage: _____VAC _____Hz
(does not need to match motor nameplate voltage or frequency)

***Operating Conditions**

☐ Continuous duty (motor will run continuously at any chosen speed) *(standard)*

☐ Synchronous transfer to line (continuous duty)[1]
Number of Motors: _____
Protection for line connected motors:
☐ Benshaw MX3 ☐ Other: _____

☐ Synchronous transfer to line (starting duty only)[2]
Number of Motors: _____
Total Starts/hr. _____ Maximum accel. time: _____
Total Stops/hr. _____ Maximum decel. time: _____
Protection for line connected motors:
☐ Benshaw MX3 ☐ Other: _____

[1]Continuous duty sync transfer allows for a motor to be continuously through the VFD, usually to "trim" a process output after other motors have been started.
[2]May allow for reduced drive/transformer requirements and therefore cost/space savings.

BENSHAW
Applied Motor Controls

SECTION B - Motor Data:

***Type of motor:** ☐ Induction ☐ Synchronous

(If Synchronous or Wound Rotor, see Section "E" or "F" for additional questions.)

***Horsepower:**_____(HP) ***Motor voltage:** _____(VAC) ***Motor Frequency:** _____(Hz)

***FLA:**_____ **Service Factor:** _____ **Motor LRA:** _____ **Motor Speed:** _____(RPM)

NEMA Design Type: _____ (If known) or ☐ A ☐ B ☐ C ☐ D ☐ E

Motor Data Sheets Available: ☐ Yes ☐ No
(If yes, provide at time of request)

SECTION C - Enclosure / Environnent Data:

***Expected ambient temperature:** Minimum: _____ Maximum: _____
(Space Heater required if less than 0°C)

Space heater: ☐ Yes ☐ No *(standard)* **Physical Location:** ☐ Indoor *(standard)* ☐ Outdoor

Size limitations (if any): _____"H x _____"W x _____"D

***Altitude:** ☐ Up to 3,300ft. *(standard)* ☐ Above 3,300ft. _____ *(please specify)*

Unusual Ambient Conditions (if any): _____
(describe)

Color: ☐ ANSI 61 Grey *(standard)* ☐ Other: _____ *(please specify)*

Cable *Entry* location: ☐ Top ☐ Bottom *(standard)* **Cable *Exit* location:** ☐ Top ☐ Bottom *(standard)*

***NEMA Enclosure Type:** ☐ 1 *(standard)* ☐ Other: _____ *(please specify)*

BENSHAW
Applied Motor Controls

SECTION D - Miscellaneous:

***Disconnect:** ☐ Fusible Disconnect w/ Isolation Contactor *(standard)* ☐ None

Communication: ☐ Modbus RTU ☐ Modbus TCP ☐ Ethernet IP *(standard)*

☐ Profinet ☐ Profibus

Emergency Drive Bypass: ☐ None *(standard)* ☐ ATL/FVNR ☐ RVSS

Pilot Devices: ☐ Reset PB *(standard)* ☐ E-Stop PB *(standard)* ☐ HOA Selector Switch ☐ LOR Selector Switch

☐ Pushbutton (specify): _____

☐ Indicator Light (specify): _____

RTD Inputs (100Ω Pt): ☐ None *(standard)* ☐ 4 Channel ☐ 8 Channel

Cell Bypass[3]: ☐ None *(standard)* ☐ Cell Bypass ☐ Redundant Cell Bypass

[3]Power cell bypass allows for continued operation with 1 or 2 failed cells. Failed cells are bypassed automatically without interruption of equipment process.

*SECTION E – Synchronous Motor Data: *(Required only for synchronous motors)*

Normal Field Current: _____(ADC) **Max Field Current:** _____(ADC)

Field Discharge Resistor Rating: _____(Ω) **Synchronous Motor Field Voltage:** _____(VDC)

Specify any additional details of current system and requirements in Section F.

SECTION F – Additional Modifications, Accessories and/or Information:

SECTION G – Standard Features (included w/ all VFDs):

- Overload Capacity: 150% instantaneous, 120% for 120 seconds, every 15 minutes
- Efficiency: ≥ 96%
- Control Inputs:
  - Analog: 2x Programmable isolated input: 4-20mA/2-10V, 1x Excitation feedback 4-20mA/2-10V
  - Digital: 14 Isolated inputs: 24Vdc
- Control Outputs:
  - Analog: 2x Fixed outputs: 4-20mA/2-10V, 2 Programmable outputs: 4-20mA/2-10V
  - Relay: 22 Isolated outputs with dry contacts
- Communication
  - Standard Modbus RTU
- Disconnect
  - 400A Load Break rated
  - 5KV Class E fuses
  - 400A fixed mount vacuum contactor
- Door mounted HMI
- Conformities Standards
  - IEEE 519-2014
  - IEC 61800-3
  - UL/cUL (up to 154A)

Document Revision Control History Log ...

Date	Remarks	Revised by
8/29/2022	Initial release	AMI