



Model #: **VFD1A6MS23ANSA**

Date: 2020-04-15

| Description   |                          |   |                                     |                                  |                           |   |                          |                 |
|---|--------------------------|---|-------------------------------------|----------------------------------|---------------------------|---|--------------------------|-----------------|
| VFD-MS300, 1/4-1/3HP, 0.186/0.246kw, (HD 1.62/ND 2.16A), 3 Ø 230VAC, 599.0Hz, (V/Hz, SVC, PM), IP20, Frame A1 |                          |   |                                     |                                  |                           |   |                          |                 |
| Manufacturer  | Heavy Duty Output Rating |   | Normal Duty Output Rating           |                                  | Light Duty Output Rating  |   | Single Phase Duty Rating |                 |
| Delta Electronics   | HD Input Amps Rating     | 1,9   | ND Input Amps Rating                | 2,0                              | LD Input Amps Rating      | -   | 1 Ø Input Amps Rating    | 2,0             |
|   | Rated HP                 | Rated Amps  | HP                                  | Rated Amps                       | HP                        | Rated Amps                                | HP                       | Amps            |
|   | 0,3                      | 1,6   | 0,3                                 | 1,8                              | -                         | -   | 0,1                      | 0,8             |
|   | Max. HP                  | Max. Amps   | Max. HP                             | Max. Amps                        | Max. HP                   | Max. Amps                                 | Max. HP                  | Max. Amps       |
| Max. Capacity   | 0,3                      | 1,9   | 0,3                                 | 2,2                              | -                         | -   | 0,1                      | 0,8             |
| Line Reactor  | Heavy Duty               |   | Normal Duty                         |                                  | Light Duty                |   | 1 Ø Phase                |                 |
|   | Line                     | Load  | Line                                | Load                             | Line                      | Load                                      | Line                     | Load            |
| Model   | KDRMA22H1                | KDRMA22L1   | KDRMA22H1                           | KDRMA22L1                        | -                         | -   | KDRMA22H1                | KDRMA22L1       |
| HP Rating   | 0,5                      | 0,50  | 0,5                                 | 0,50                             | 0,00                      | -   | 0,50                     | 0,50            |
| Max Amps  | 3,4                      | 5,0   | 3,4                                 | 5,0                              | -                         | -   | 3,4                      | 5,0             |
| Inductance uH   | 7040                     | 4200  | 7040,0                              | 4200                             | -                         | -   | 7040                     | 4200            |
| Nema 1 Encl.Size  | C1                       | C1  | C1                                  | C1                               | -                         | -   | C1                       | C1              |
| Motor Models Compatible   | Heavy Duty               |   | Normal Duty                         |                                  | Light Duty                |   | 1 Ø Phase                |                 |
|   | Model                    | HP  | Model                               | HP                               | Model                     | HP  | Model                    | HP              |
|   | MQR-134CW                | 0,33  | MQR-124CW                           | 0,5                              | -                         | -   | -                        | -               |
|   | FLA                      | 1,5   | FLA                                 | 2,2                              | FLA                       | -   | FLA                      | -               |
| VFD Dimensions  | Width (mm)               | Width (in.)   | Height (mm)                         | Height (in.)                     | Depth (mm)                | Depth (in)                                | Wgt (Kg)                 | Wgt (lbs)       |
|   | 68                       | 2,67716   | 128                                 | 5,03936                          | 96                        | 3,77952                                   | 0,7                      | 1,508325        |
| Input Voltage   | Input Frequency          | Input Phase   | Enclosure                           |                                  | Control Method            | V/Hz, Sensorless Vector, PM Motor Control |                          |                 |
| 200 ~ 240VAC (± 10%)  | 50/60Hz (±5%)            | 3   | NEMA1 Optional                      |                                  |                           |   |                          |                 |
| Regulated Output Voltage  | Efficiency               | Motor Current Protection Range  | Stall Prevention Level HD           | Stall Prevention Level ND        | Stall Prevention Level LD | Carrier Frequency                         | Accel / Decel Time       | Default Rating  |
| 0.0 ~ 255.0Vac  | ≥97%                     | 0.16 ~ 2.16 A   | 0 ~ 200%                            | 0 ~ 150%                         | -                         | 2 ~ 15kHz                                 | 0.00 ~ 600.00            | Heavy Duty      |
| Over Torque Level   | DC Injection             | Braking Chopper   | Equivalent Braking Resistor Circuit | Minimum Braking Resistance Value | Starting Torque @         |   |                          |                 |
| 10 ~ 250%   | 0 ~ 100.0 %              | Builtin   | 80W 750Ω                            | 190 Ω                            | V/Hz                      | SVC                                       | VC+PG                    |                 |
|   |                          |   |                                     |                                  | 10 ~ 200% @ 3.0Hz         | 10 ~ 200% @ 0.3Hz                         |                          |                 |
| Analog Inputs   |                          |   | Analog Outputs                      |                                  |                           | Keypad                                    | Fault Record             | Reel Time Stamp |
| AVI   | ACI                      | AUI   | AFM1                                | AFM2                             | DFM                       |   |                          |                 |
| 0 ~ 10vdc or 10 ~ +10vdc  | 0/4 ~ 20ma or 0 ~ 10vdc  | -   | 0/4 ~ 20ma or 0 ~ 10vdc             | -                                | -                         | Removable                                 | 10 last faults           | Thru PLC        |
| Digital Inputs  |                          |   |                                     |                                  | Signal mode               |   |                          |                 |
| Dedicated   | Safe Torque Off          | Programmable  | Control Voltage                     |                                  |                           |   |                          |                 |
| STO1, STO2  | Yes                      | 7   | 24vdc                               |                                  | Sink (NPN) / Source (PNP) |   |                          |                 |
| Digital Outputs   |                          |   |                                     | Built in Controllers             |                           |   |                          |                 |
| DO1   | DO2                      | DO3   | DO4                                 | Preset speeds                    | Process Control           | PLC                                       | PID                      | Position        |
| 1NO/NC Form C relay, ≤ 240VAC, ≤ 24vdc  | Optocoupler NPN ≤ 48vdc  | Optocoupler NPN ≤ 48vdc   | -                                   | 15                               | No                        | 2K Steps                                  | Yes                      | No              |
| Communication   |                          |   |                                     | Built In Protocol 1              | Built In Protocol 2       | Built In Protocol 3                       |                          |                 |
| Comm Port 1   | Comm Port 2              | Comm port 3   | Comm port 4                         |                                  |                           |   |                          |                 |
| USB type B  | RJ45 (RS-485) / SG+, SG- | -   | -                                   | Modbus ACSII                     | Modbus RTU                | -   |                          |                 |
| Options   |                          |   |                                     |                                  |                           |   |                          |                 |
| Option 1  | KPC-CC01                 | Standard keypad shipped with C2000 series. Also compatible, MS-300 & MH-300.  |                                     |                                  |                           |   |                          |                 |
| Option 2  | MKC-KPPK                 | VFD-C2000, Keypad Remote Panel Adapter, IP66  |                                     |                                  |                           |   |                          |                 |
| Option 3  | MKM-EPA                  | VFD-MH/MS300, EMC Shielded Cable Earthing Plate, Frame A  |                                     |                                  |                           |   |                          |                 |
| Option 4  | -                        | -   |                                     |                                  |                           |   |                          |                 |
| Option 5  | KPC-CE01                 | VFD-C2000, LED English Keypad for C2000   |                                     |                                  |                           |   |                          |                 |
| Option 6  | MKM-CBA0                 | VFD-MH/MS300, NEMA1 conduit box frame A (A1 - A2)   |                                     |                                  |                           |   |                          |                 |
| Option 7  | CMM-COP01                | VFD-MH/MS300, CANopen Communication Card  |                                     |                                  |                           |   |                          |                 |
| Option 8  | CMM-DN01                 | VFD-MH/MS300, DeviceNet Communication Card  |                                     |                                  |                           |   |                          |                 |
| Option 9  | CMM-EIP01                | VFD-MH/MS300, EtherNet/IP Communication Card  |                                     |                                  |                           |   |                          |                 |
| Option 10   | CMM-EC01                 | VFD-MH300, EtherCAT Communication Card  |                                     |                                  |                           |   |                          |                 |
| Option 11   | CMM-MOD01                | VFD-MH/MS300, Modbus TCP Communication Card   |                                     |                                  |                           |   |                          |                 |
| Option 12   | CMM-PD01                 | VFD-MH/MS300, Profibus DP Communication Card  |                                     |                                  |                           |   |                          |                 |
| Option 13   | EMM-BPS01                | VFD-MH/MS300, Back-up Power Supply card   |                                     |                                  |                           |   |                          |                 |
| Option 14   | MKM-DRB                  | VFD-MH/MS300, DIN Rail Kit, Frame A or B  |                                     |                                  |                           |   |                          |                 |
| Option 15   | EG1010A                  | 1 meter Extension Cable for remote Keypad mounting, compatible with B, M, E, MH-300 & MS-300 series removable Keypads |                                     |                                  |                           |   |                          |                 |
| Option 16   | EG2010A                  | 2 meter Extension Cable for remote Keypad mounting, compatible with B, M, E, MH-300 & MS-300 series removable Keypads |                                     |                                  |                           |   |                          |                 |
| Option 17   | EG3010A                  | 3 meter Extension Cable for remote Keypad mounting, compatible with B, M, E, MH-300 & MS-300 series removable Keypads |                                     |                                  |                           |   |                          |                 |
| Option 18   | EG5010A                  | 5 meter Extension Cable for remote Keypad mounting, compatible with B, M, E, MH-300 & MS-300 series removable Keypads |                                     |                                  |                           |   |                          |                 |