

Contents

1	News.....	1
1.1	ftp-site link.....	1
1.2	ftp-site link (access in Google chrome).....	1
1.3	New Download centre on Delta website.....	2
1.4	All About Automation, Friedrichshafen.....	3
1.5	Upcoming events.....	4
2	Product update.....	4
2.1	NEW – WPLSoft 2.41.....	4
2.2	NEW – TPEditor 1.87.....	4
2.3	NEW – User Manual for VFD-E.....	5
2.4	NEW – CANopen module AH10COPM-5A.....	5
2.5	UPDATE – Brake resistor for VFD550C43A/E.....	5
2.6	NEW – VFD-ED Elevator Drive.....	6
2.7	NEW – DOPSoft version 2.00.04.09.....	8
2.8	UPDATE – Relay contacts CP2000.....	9
2.9	NEW – DRM-24V120W1PN slim power supply.....	9
3	Application.....	10
3.1	NEW – C2000 max. motor cable length.....	10
3.2	NEW – Application Notes.....	10
4	FAQ.....	11
4.1	VFD-series AC Motor drives.....	11



1 News

1.1 ftp-site link

Just to let you know (again), you can find the latest info about our products (manuals, pictures, catalogues, application notes, presentations, etc) on our ftp-site.

Note: The ftp-site can normally not be accessed via Google Chrome, only via Internet Explorer. See below

<ftp://den-eindhoven:BuPd2175@ftp2.delta-europe.com/deltronics-eindhoven/customer-service>

Name and password are included in the link.

Name: den-eindhoven

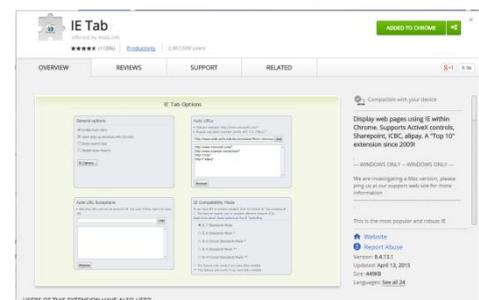
Password: BuPd2175

1.2 ftp-site link (access in Google chrome)

Internet Explorer compatibility in Chrome.

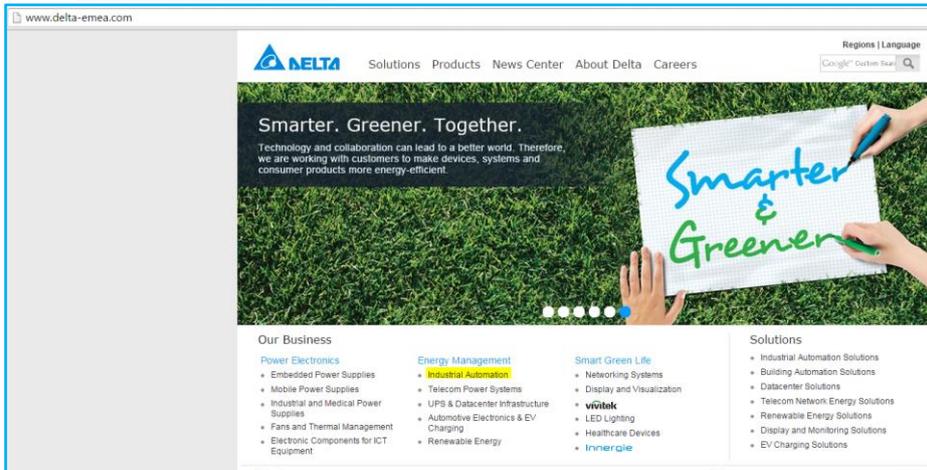
Download and install IETab in Google Chrome:

<https://chrome.google.com/webstore/detail/ie-tab/hehijbfgiekmjfkfjpbkbammjbdenadd?hl=en>

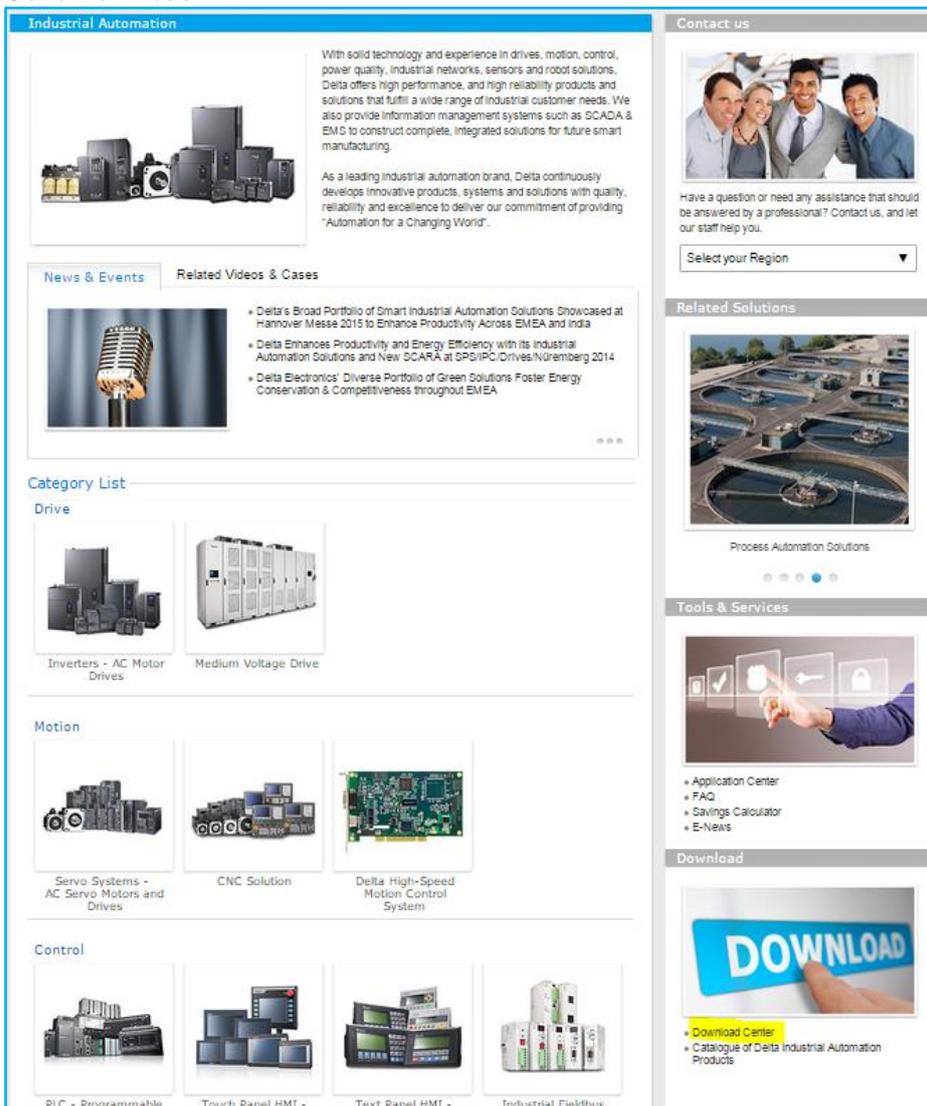


1.3 New Download centre on Delta website

Go to www.delta-emea.com and click on Industrial Automation.



Go to Download



DELTA **New Download Center**

New Download Center launched on May 29th!
All the documents are updated to the latest version.

Operation steps / Layout and function introduction:

Step 1: Find "Download Center" on the right sidebar on IABG's website. Or click the link below:
www.deltaww.com/ia/downloads

Step 2: Search files by **Product Category** or **File Type** or **Find a Particular Product**

Confidential 4

DELTA **New Download Center**
[* www.deltaww.com/ia/downloads](http://www.deltaww.com/ia/downloads)

Product Category :
(Ex. Search catalogue, operation manual, and software of AH500 Series PLC)

Step 1. Click dropdown menu 1 and select **Industrial Automation**

Confidential 5

DELTA **New Download Center**
[* www.deltaww.com/ia/downloads](http://www.deltaww.com/ia/downloads)

Product Category :
(Ex. Search catalogue, operation manual, and software of AH500 Series PLC)

Step 2. Click dropdown menu 2 and select **PLC**

Wait a moment for data processing

Confidential 6

DELTA **New Download Center**
[* www.deltaww.com/ia/downloads](http://www.deltaww.com/ia/downloads)

Product Category :
(Ex. Search catalogue, operation manual, and software of AH500 Series PLC)

Step 3. Check **Catalogue, Operation Manual, and Software** on the right, and click **Submit**

Wait a moment for data processing

Confidential 7

DELTA **New Download Center**
[* www.deltaww.com/ia/downloads](http://www.deltaww.com/ia/downloads)

Product Category :
(Ex. Search catalogue, operation manual, and software of AH500 Series PLC)

Step 4. The files are categorized by **Catalogues, Operation Manuals, and Software**. Click file icons to download the request files on the rightest column

Confidential 8

DELTA **New Download Center**
[* www.deltaww.com/ia/downloads](http://www.deltaww.com/ia/downloads)

Search by File Type:

- I. Select "File Type" at 1.
- II. Select "Industrial Automation" at 2.
- III. Select "Product Sub-Category" at 3.
- IV. Press **Submit** to search files.

Find a Particular Product :

- I. Enter a **product name / model number** in the text search box.
- II. Press **Submit** to search files.

Confidential 9

1.4 All About Automation, Friedrichshafen

all about **automation** **friedrichshafen**

07.-08.06.2016

There were many visitors to the booth with many leads!

We will be participating in AAA in Leipzig, which takes place on the 23rd and 24th of September 2015.

All About Automation DE - is an exhibition that takes place in 3 locations in Germany that are attractive for the Automation sector; Dortmund, Friedrichshafen and Leipzig.

The exhibitions are on a smaller scale, making it easy to make contact with all the visitors as well as the other exhibitors – a good networking opportunity!

Deltronics Netherlands (Germany) exhibited at AAA in Friedrichshafen for the first time this June, with a booth of 16m2.



1.5 Upcoming events

In 2015 Delta has participated or will participate in these exhibitions.



January–June 2015



March 2nd-4th, 2015



April 13th-17th, 2015



May 12th-14th, 2015



June 9th-10th, 2015



June 9th-11th, 2015

IABG Events 2015

July–December 2015



all about automation leipzig
23.-24.09.2015



October 8th-8th, 2015



October 13th-16th, 2015



November 2nd-6th, 2015



November 4th-6th, 2015



November 17th-19th



October 29., 2015



November 24th-26th, 2015

Delta Confidential

2 Product update

2.1 NEW – WPLSoft 2.41

A new version of WPLSoft has been released, mainly to solve the security problem of the recent release of v2.40.

You can find it on our ftp-site.

2.2 NEW – TPEditor 1.87

A new version of TPEditor has been released.

You can find it on our ftp-site.

2.3 NEW – User Manual for VFD-E

A new manual for VFD-E is released, version 09EE.

You can find the file [DELTA_IA-MDS_VFD-E_UM_EN_20150302.pdf](#) on our ftp site.

2.4 NEW – CANopen module AH10COPM-5A

We are happy to announce the release of the new CANopen module for AH-500 PLC series (AH10COPM-5A).

AH10COPM-5A must be connected to the right side of the AH500 series CPU module, which then forms a CANopen master or CANopen slave station with the AH500 series CPU module.



When AH10COPM-5A is used as a MASTER station, it has the following functions:

- Conforms to the CANopen protocol DS301 V4.02.
- Supports NMT master.
- Error control: It supports a heartbeat and node guarding protocol.
- Supports PDOs and SDOs
- Supports emergency protocol.
- It functions as the interface between Delta CANopen Builder and a CANopen network. CANopen builder can directly configure a network through AH10COPM-5A.
- When AH10COPM-5A exchanges PDOs with an AH500 series CPU module, users only need to write a program for the D registers in the AH500 series CPU module which are mapped, and do not need to use FROM/TO.

When AH10COPM-5A is used as a SLAVE station, it has the following functions:

- It conforms to the CANopen protocol DS301 V4.02.
- Supports NMT slave.
- Error control: It supports a heartbeat and node guarding protocol.
- Supports PDOs. Every slave station can be assigned eight TxPDOs and eight RxPDOs.
- PDO transmission type: The transmission triggered by an event, the transmission triggered by time, synchronous cyclic transmission, and synchronous acyclic transmission are supported.
- Supports SDOs.
- Supports emergency protocols.

Operation manual download:

http://www.delta.com.tw/product/em/download/download_main.asp?act=3&pid=3&cid=1&tpid=1

See Chapter 15: CANopen Communication Module AH10COPM-5A

AH10COPM-5A module is on stock and ready to be ordered.

2.5 UPDATE – Brake resistor for VFD550C43A/E

The manual shows incorrect info:

75	55	37.2	4030*2	BR1K0W5P1*4	4 parallel	8000W/10.2Ω	76	9.5	80	60.8
----	----	------	--------	-------------	------------	-------------	----	-----	----	------

Each VFDB4030 connects to 4x BR1K0W5P1 **in series**, giving 20.4Ω 4000W.

The drive “sees” these 2 branches in parallel, giving 10.2Ω 8000W.

It will be corrected in the next manual.

2.6 NEW – VFD-ED Elevator Drive

Delta introduces the VFD-ED, our new elevator drive. It includes 230V 1-phase models and also a 400V 4kW model.

Introduction

Simple Instructions

▶ Auto-tuning with the load attached

- Ability to perform auto-tuning with load when elevator structure is complete
- Supports all types of encoders
- Precisely measures the motor parameters and PG offset angle
- Load balance without adding additional loads, safe and convenient

▶ Auto-homing mode reduces maintenance costs

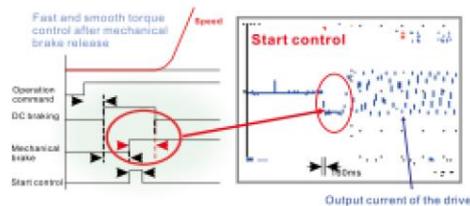
▶ Built-in LED digital keypad. Pull-out type digital keypad is available upon purchase

▶ Compact control box design strengthens the drive structure



Ride Comfort

▶ High efficiency scheduling, precisely controls the elevator for smooth start and stop



▶ DC braking level and slip compensation to enhance the leveling accuracy and provide a comfortable ride

Safety Ensured

▶ Dual output protection for reliable ride

- Auto-detect output phase loss to ensure proper motor operation
- Auto-check torque output before the mechanical brake is released



Dual output protection mechanisms strictly ensure elevator operation for passenger safety

▶ Emergency Operation

- Supports single-phase 230VAC Uninterrupted Power System (UPS). Light-load direction search function is triggered automatically when power failure occurs

▶ Built-in STO (Safe Torque Off) function

- Complies with EN61800-5-2 (STO) and EN61508 (SIL2) standards for high safety protection and reliability
- Lowers system construction cost by reducing the required amount of output contactors



The light-load direction search function is triggered when power failure occurs and brings the elevator to the nearest floor immediately

Specifications

Frame Size		230V										
		B		C			D			E		
Model VFD-__ED23/21S		022*	037*	40	55	75	110	150	185	220	300	370
Applicable Motor Output (KW)		2.2	3.7	4	5.5	7.5	11	15	18.5	22	30	37
Applicable Motor Output (HP)			5	5	7.5	10	15	20	25	30	40	50
Output Rating	Rated Output Capacity (KVA)	4.8	6.8	7.9	9.5	12.5	19	25	29	34	46	55
	Rated Output Current (A)	12.0	17	20.0	24.0	30.0	45.0	58.0	77.0	87.0	132.0	161.0
	Maximum Output Voltage (V)	3-phase Proportional to Input Voltage										
	Output Frequency	0.00 ~ 400Hz										
	Carrier Frequency	2 ~ 15kHz										2 ~ 9kHz
Input Rating	Rated Output Maximum Carrier Frequency	8kHz			10kHz			8kHz			6kHz	
	Input Current (A)	26	37.4	20	23	30	47	56	73	90	132	161
Rated Voltage / Frequency		1-phase 200 ~ 240V 50/60Hz					3-phase 200 ~ 240V 50/60Hz					
Voltage Tolerance		±10% (180 ~ 264V)										
Frequency Tolerance		±5% (47 ~ 63Hz)										
Cooling Method		Fan cooling										
Weight (kg)		6	6	6	8	10	10	13	13	13	36	36

*VFD022ED21S & VFD037ED21S are single phase model

Frame Size		460V											
		B	C			D			E				
Model VFD-__ED43S		40	55	75	110	150	185	220	300	370	450	550	750
Applicable Motor Power (KW)		4	5.5	7.5	11	15	18.5	22	30	37	45	55	75
Applicable Motor Power (HP)		5	7.5	10	15	20	25	30	40	50	60	75	100
Output Rating	Rated Output Capacity (KVA)	9.2	10.4	13.5	18.3	24	30.3	36	46.2	63.7	80	96.4	116.3
	Rated Output Current (A)	11.5	13	17	23	30	38	45	58	80	100	128	165
	Maximum Output Voltage (V)	3-phase 380 ~ 480V, 50/60Hz											
	Output Frequency	0.00 ~ 400Hz											
	Carrier Frequency	2 ~ 15kHz						2 ~ 9kHz			2 ~ 6kHz		
Input Rating	Rated Output Maximum Carrier Frequency	8kHz	10kHz			8kHz			6kHz				
	Rated Input Current (A)	11.5	14	17	24	30	37	47	58	80	100	128	165
Rated Voltage		3-phase 380 ~ 480V, 50/60Hz											
Voltage Tolerance		±10% (342 ~ 528V)											
Frequency Tolerance		±5% (47 ~ 63Hz)											
Cooling Method		Fan cooling											
Weight (kg)		6	8	10	10	10	10	13	14.5	36	36	50	50

The measure of input and output current is influenced by the power supply, input reactor, wiring cables and the power supply impedance applied to the AC motor drive.

Ordering information

- Model Name

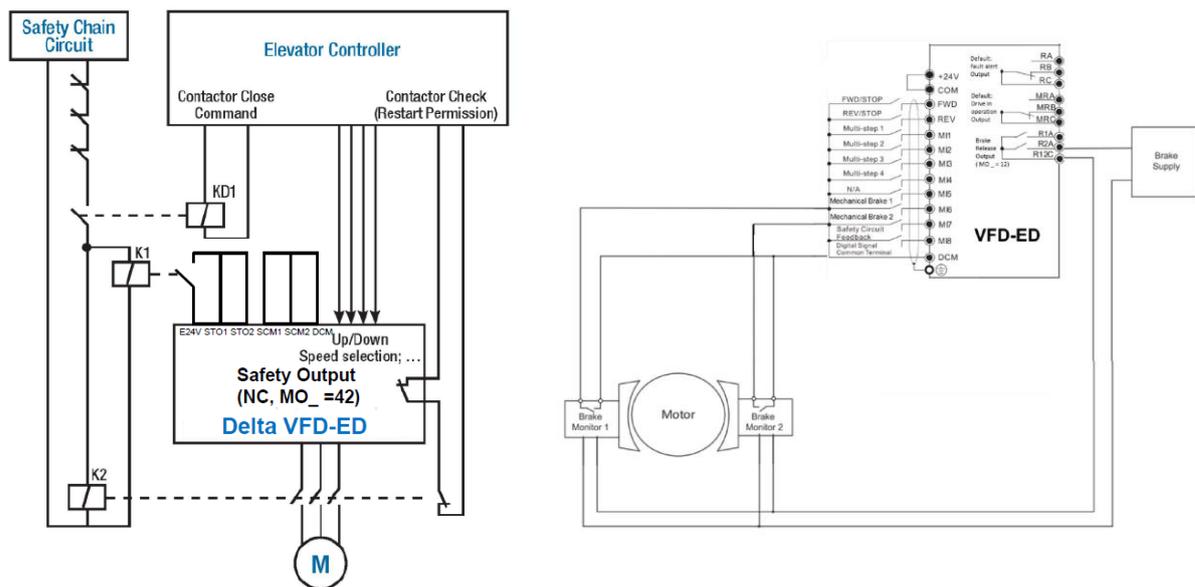


VFD-ED is ready for ordering, stock is being built up.

Safety features as standard functions

- One contactor solution according to EN81-1.(Figure1)*
- VFD-ED is approved for being implemented to system design according to ISO EN13849-1 PLd and IEC EN 61508 SIL2.
- Elevator controller could monitor the safety status of the drive through the Safety Output on VFD-ED
- To comply with the EN 81-1: 1998 +A3: 2009 , the Brake Feedback function must be selected for two digital inputs simultaneously.(Figure2)*

* Under Certification



2.7 NEW – DOPSoft version 2.00.04.09

Delta is pleased to announce the immediate release of new DOPSoft version 2.00.04.09 patch for DOP series HMI. This release is an improvement, which includes new HMI model and bug fixes.

- DOP-H models after updating firmware are 3.0091.

Changes:

1. The model(s): DOP series
2. Fixes in DOPSoft version 2.00.04.09:
 - 2.1 Fixed when upload/download HMI through CDC mode will cause error message “No Response From HMI!”.
 - 2.2 Fixed compile will show incorrect error message when address of Alarm Setting is not specified.

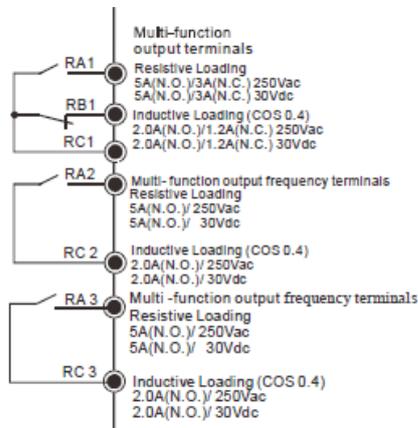
3. Add in DOPSoft version 2.00.04.09:

3.1 Add DOP-H series HMI model: DOP-H07E460, DOP-H07S460, DOP-H07E420 and DOP-H07S420.

For more details, refer to [DELTA_IA-HMI_DOPSoft-New-Function_UM-EN_20150610.pdf](#) on the ftp-site in the folder Customer-Service\Industrial Automation Products\HMI Human Machine Interface\DOP Announcements\2015

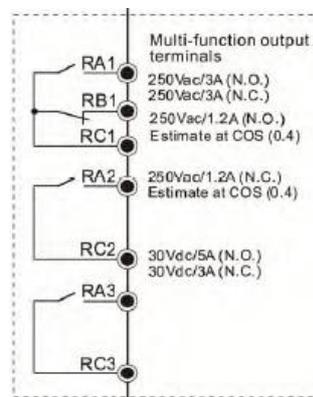
2.8 UPDATE – Relay contacts CP2000

In the old manuals it shows:



In the latest manual

[DELTA_IA-MDS_CP2000_UM_EN_20141111.pdf](#) it shows:



The relays themselves haven't been changed, only their spec was corrected in the manual.

When older applications work fine, leave them.

For new applications, the latest info in the manual is correct. The datasheet has been corrected too.

2.9 NEW – DRM-24V120W1PN slim power supply



Delta Electronics introduces one of the slimmest DIN rail industrial power supplies in its class, the CliQ M DIN rail power supply series. To fulfil the demands in maritime applications, the product is designed according to major industrial and maritime safety standards. Other features include compliance with harmonic current IEC/EN 61000-3-2, Class A.

The DRM-24V120W1PN has a high efficiency of >92% @ 230Vac and is the first model in the CliQ family to feature Advanced Power Boost (APB). When large outrush current due to faulty load on a current path of a multiple loads connection is detected by APB, APB will be activated to trip the circuit breaker on that current path. This thus prevents the system from shutting down while the other connected current paths continue to operate without interruption. Additionally, the product also includes built-in DC OK contact and LED indicator for DC OK/ Overload.

Highlights & Features

- Universal AC input voltage
- High power density in corrosion resistant aluminium casing
- Power Boost of 150% for 5 seconds
- Advanced Power Boost (APB) – Prevents system shutdown due to faulty load on a multiple loads connection
- Conforms to harmonic current IEC/EN 61000-3-2, Class A
- Built-in DC OK Contact
- Conformal coating on PCBAs to protect against common dust and chemical pollutants

3 Application

3.1 NEW – C2000 max. motor cable length

The maximum shielded/unshielded motor cable length with/without AC output reactor has been re-established.

The info will be updated in the next user manual.

400V types	kW	hp	Rated current (A _{RMS})	Max. motor cable length without AC output reactor		Max. motor cable length with 3% AC output reactor					
				Shielded (m)	Unshielded (m)	Shielded (m)	Unshielded (m)				
VFD007C43A	0.75	1	3/2.9	50	75	75	115				
VFD015C43A	1.5	2	4/3.8								
VFD022C43A	2.2	3	6/5.7								
VFD037C43A	3.7	5	9/8.1								
VFD040C43A	4	5	10.5/9.5								
VFD055C43A	5.5	7.5	12/11	100	150	150	225				
VFD075C43A	7.5	10	18/17								
VFD110C43A	11	15	24/23								
VFD150C43A	15	20	32/30								
VFD185C43A	18.5	25	38/36								
VFD220C43A	22	30	45/43								
VFD300C43A	30	40	60/57								
VFD370C43S/U	37	50	73/69								
VFD450C43S/U	45	60	91/86								
VFD550C43A/E	55	75	110/105					150	225	225	325
VFD750C43A/E	75	100	150/143								
VFD900C43A/E	90	125	180/171								
VFD1100C43A/E	110	150	220/209								
VFD1320C43A/E	132	175	260/247								
VFD1600C43A/E	160	215	310/295								
VFD1850C43A/E	185	250	370/352								
VFD2200C43A	220	300	460/437								
VFD2800C43A	280	375	550/523								
VFD3150C43A	315	420	616/585								
VFD3550C43A	355	475	683/649								
VFD4500C43A	450	600	866/816								
VFD007C43E	0.75	1	3/2.9	30	60	45	90				
VFD015C43E	1.5	2	4/3.8								
VFD022C43E	2.2	3	6/5.7								
VFD037C43E	3.7	5	9/8.1								
VFD040C43E	4	5	10.5/9.5								
VFD055C43E	5.5	7.5	12/11	50	100	75	150				
VFD075C43E	7.5	10	18/17								
VFD110C43E	11	15	24/23								
VFD150C43E	15	20	32/30								
VFD185C43E	18.5	25	38/36								
VFD220C43E	22	30	45/43								
VFD300C43E	30	40	60/57								

For CP2000 similar info will be updated soon.

3.2 NEW – Application Notes

New application notes have been published recently on our ftp-site:

- [Fluid Machinery Industry Notification - Centrifugal Submersible Pump in Music Fountain System.pdf](#)
- [Fluid Machinery Industry Notification-Air Handling Unit.pdf](#)
- [Fluid Mechanic Notification- SI Booster Pump System.pdf](#)
- [CNC Industry Notification-Machining Center.pdf](#)

- HVAC Industry Notification_ Coal-fired Water Boiler Control System.pdf
- Pharmaceuticals Industry Notification-Medicine Reciprocating type Packing Machine.pdf
- Robot Industry Notification-Machine tool loading and unloading Robot.pdf
- RubberPlastics Industry Notification- Intensive Mixer.pdf
- Electronics Industry Notification-Reinforcing Mesh Auto Welding Machine.pdf.

4 FAQ

4.1 VFD-series AC Motor drives

VFD-E

Q When is OH1 (de)activated?

A OH1 activates at 85°C.
It will deactivate at $85^{\circ} - 5^{\circ} = 80^{\circ}\text{C}$.

Q Restart after LV

A In the latest firmware 1.22/2.22 the setting of Pr02-05 has been extended.
When Pr02-05=4, the drive restarts also when powered again during "LV" and also when during "LV" the RUN command on MI1/MI2 is interrupted. Valid when Pr02-01=1 or 2.

VFD-EL

Q When are parameters saved in EEPROM?

A We save the parameters in EEPROM at power off, except some special frequently written parameters such as Fcmd & Fpid. They are written in RAM.

C2000

Q How to control AFM1&2 via Modbus?

A There are no Modbus registers to directly control AFM1&2.

But it can be done in this way:

- Set Pr 03-20/03-23 = 23 for constant voltage
- Then write to Pr03-32/03-33 to control the level.

Pr03-32 has Modbus address 320h and setting is 0~10000 = 0.00~100.00%

Pr03-33 has Modbus address 321h and setting is 0~10000 = 0.00~100.00%

This also works in CP2000.

CP2000

Q What is the setting range of Pr08-01?

A In the manual the setting range is 0.0~100.0%. This is not correct.

The setting range is 0.0~100.0. This will be corrected in the next manual.

DVP-PSxx Power Supplies

Q What is the overcurrent protection level?

A The DVPPS01/02/05 overcurrent protection level is:

- DVPPS01: 2A typ.
- DVPPS02: 3A typ.
- DVPPS05: 6.5A typ.

They are short-circuit proof.