Newsletter

Industrial Automation Products

Edition 2017-02

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IABG
Technical Support
Ticket System

iatechnicalsupport@deltaww.com

1 News

1.1 IABG Technical Support Ticket System

We're glad to announce the release of Delta IABG Technical Support Ticket System.
The concept idea of this system is to deliver more organized and efficient technical support service.

This system idea is to avoid to depend on one single person's availability in order to solve your technical problems.
According to that, we will ask you, from now on, to send your technical requests to the following mail address:

IABG Support iatechnicalsupport@deltaww.com

The administrators of this new system will take care to assign your technical problem to the proper people within our organization. Could be from Delta Headquarters, or from the region, but in both cases the objective is give you the resolution with the minimum possible time frame.
Because is going to be a new way of working from both sides, we appreciate your patience and support with the implementation of this system.
Any problem or excessive delay, do not hesitate to contact with your sales contact in the region or our system administrators.
We will inform you of the status of your request.

System administrators are:
- Marcel Dorti mdorti@deltaww.com
- Jack Tsai Jtsai@deltaww.com
- Victor Ogedegbe vogedegbe@deltaww.com

Thank you very much for your collaboration.

Remark: Do not use this ticket system for RMA

1.2 ftp-site link

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

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

1.3 Delta at the MEE 2017 on youtube

We had a great exhibition in Dubai, with over 450 leads in 3 days, with lots of interest in everything Delta has to offer. Please see below. the link for a video that we made to record this memorable exhibition https://youtu.be/0XCs4uaVwkg

If you don't want to miss new Delta EMEA Video publications subscribe to the Delta EMEA Youtube channel on this page: https://www.youtube.com/channel/UC676v8baLYJkbNZZMGuaLow

2 Product update

2.1 NEW – C2000 575V & 690V Version B

INTRODUCTION

1. Due to some regions have the requirement for 575V model drive, BU developed new C2000 series 575V models, and its power range is from 1.5 to 15kW.

2. VFD-C2000 690V model revision change from Ver. A to Ver. B.
   2-1.VFD-C2000 690V rated output current revision change, please refer to "C2000 690V Rated Output Current Ver.A vs. Ver.B Comparison Table" for detail.
   2-2.All series N.D. & H.D. carrier frequency default setting is 4k Hz (No derating condition)
   2-3.Upgrade operation temperature to 50℃(no top cover and conduit box installation), please refer to "Operation Temperature and Protection Level Table" for detail.
   2-4.Upgrade the definition for L.D. overload capacity from 110% · 60S to 120% · 60S.
   2-5.Adjust some N.D. and H.D. correspond to motor power range.

3. Add new 630kW model for VFD-C2000 690V.

Operation Temperature and Protection Level Table

Model	Frame	Top Cover	Conduit Box	Protection Level	OperationTemperature
VFDxxxC53A-21 VFDxxxC63B-21	Frame A ~ C 1.5 ~ 37kW	Remove top cover	Standard conduit plate	IP20 / UL Open Type	-10°C ~ 50°C
		Standard with top cover		IP20 / UL Type1 / NEMA1	-10°C ~ 40°C
VFDxxxC63B-21	Frame D ~ H > 45kW	N / A	Standard conduit box	IP20 / UL Type1 / NEMA1	-10°C ~ 40°C
VFDxxxC63B-00	Frame D ~ H > 45kW	N / A	No conduit box		-10°C ~ 50°C

C2000 690V Rated Output Current Ver.A vs. Ver.B Comparison Table

Models	Ver. A			Ver. B		
	LD (A)	N D (A)	HD (A)	LD (A)	N D (A)	HD (A)
VFD185C63	24	20	17	24	20	14
VFD220C63	31	26	22	30	24	20
VFD300C63	36	30	25	36	30	24
VFD370C63	43	36	30	45	36	30
VFD450C63	54	45	38	54	45	36
VFD550C63	67	56	47	67	54	45
VFD750C63	78	65	54	86	67	54
VFD900C63	103	86	72	104	86	67
VFD1100C63	123	103	86	125	104	86
VFD1320C63	139	116	97	150	125	104
VFD1600C63	192	160	133	180	150	125
VFD2000C63	216	180	150	220	180	150
VFD2500C63	264	220	183	290	220	180
VFD3150C63	307	256	213	350	290	220
VFD4000C63	408	340	283	430	350	290
VFD4500C63	468	390	325	465	385	310
VFD5600C63	552	460	383	590	465	420
VFD6300C63				675	675	675

Launch

Models	Date	
	Worldwide	Taiwan
1.575V Frame A&B 1.5~15kW	2016/6/13 With CE UL	
2.690V Ver.B Frame C~G 18.5~315kW		
3.690V Ver.B Frame H 400~630kW	2017/1/20 With CE UL	

The A versions cannot be ordered anymore if there is a B-version. Please order the B-version from now on.

You can find the updated manual on our ftp-site.
The datasheet will soon be updated.

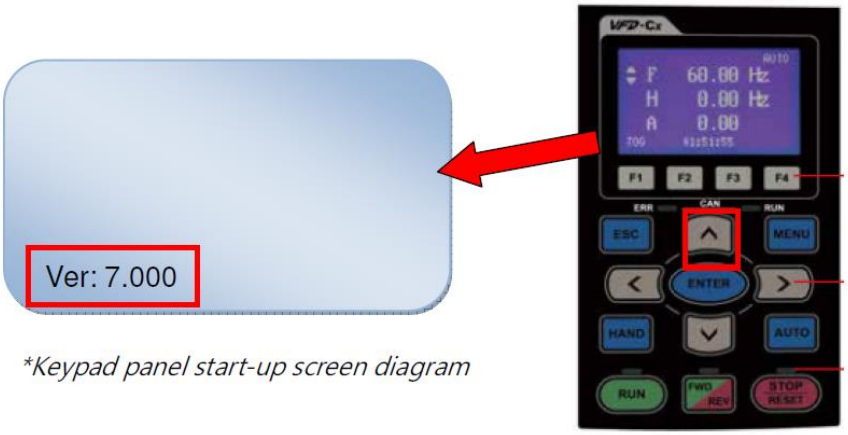
2.2 UPDATE – VFDsoft software V1.56

VFDsoft software is updated from V1.542 to V1.56

A. New Function

Update Parameter Copy function which is available to read VFD parameters from KPC-CC01 of firmware version 7.0.

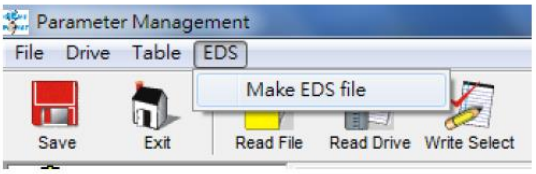
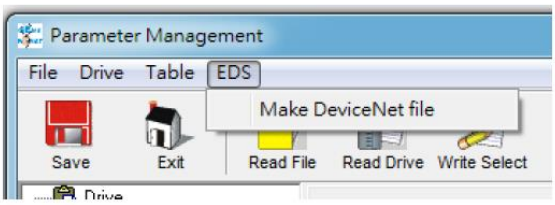
Step1: First determine the Keypad firmware version 7.000 >> when we use cable connected Keypad (KPC-CC01) and VFD Inverter, hold down the keypad " UP " button, the panel screen will show the firmware version. As shown below.



Keypad panel start-up screen diagram

Step2: a. Open the VFDsoft v1.56 and connect to Inverter,
b. Enter the "Parameter Management" form, then click Table tab and select "Read From KPC-CC01(V7.000)" item to starting upload the parameters.

B. Modified Function

Item	Problems found in V1.542	Solution in V1.56
1	EDS tab in Parameter Management form - Make EDS file (See Figure 1-1.)	EDS tab in Parameter Management form -Make DeviceNet file (See Figure 1-2.)
1-1		
1-2		

2.3 NEW – Delta's Industry PC (IPC) & Panel PC (PPC)

We are happy to announce the release of Delta's Industry PC (IPC) & Panel PC (PPC)

Industry PC (IPC) introduction
Delta's Industry PC is a low power consumption, high reliability, and fully-sealed fan-less industrial computer featured with:

- Intel I5 3337U dual-core processor.
- 4GB DDRIII RAM equipped as standard (Max. 8GB).
- 512 GB SSD.
- 4x USB ports / 4x Serial COM ports (3x RS-232, 1x RS-485 / RS-422).
- 1x VGA, 1x HDMI display port.
- 2x RJ45 Gigabit Ethernet LAN.
- 1x Audio port.
- Fully-sealed fan less design, suitable for harsh industrial environment applications.
- Aluminium alloy metal shell.
- Supported OS: Windows XP, Windows 7, Windows 10, Linux.
- Colour: Black.

Panel PC (PPC) introduction
Delta's Panel PCs are low power consumption, high reliability, and fully-sealed fan-less industrial panel PCs combined with aluminium alloy die cast technology on front and real panels for improved heat dissipation.
There are two models with different screen sizes (15" & 19") featured with:

- Intel I5 3337U dual-core processor.
- 15" / 19" TFT LCD resistive touch screen.
- 4GB DDRIII memory equipped as standard (Max. 8GB).
- 512G SSD.
- 4x USB ports / 3x Serial COM ports (2x RS-232, 1x RS-485 / RS-422).
- 1x VGA, 1x HDMI display port.
- 2x RJ45 Gigabit Ethernet LAN.
- 1x Audio port.
- Fully-sealed fan less design, suitable for harsh industrial environment applications
- Supported OS: Windows XP, Windows 7, Windows 10, Linux
- IP65 front panel protection
- Colour: Silver

Ordering Information

Industry PC

Part number	Description
DIAVH-IPC005104	Industry Box PC, Intel® I5 3337U Processor With Windows 7 32 bit pro (English formal version)
DIAVH-IPC005105	Industry Box PC, Intel® I5 3337U Processor With Windows 7 32 bit pro (English trial version)

Panel PC

Part number	Description
DIAVH-PPC155104	15-inch Industry Panel PC, Intel® I5 3337U Processor With Windows 7 32 bit pro (English formal version)
DIAVH-PPC155105	15-inch Industry Panel PC, Intel® I5 3337U Processor With Windows 7 32 bit pro (English trial version)
DIAVH-PPC195104	19-inch Industry Panel PC, Intel® I5 3337U Processor With Windows 7 32 bit pro (English formal version)
DIAVH-PPC195105	19-inch Industry Panel PC, Intel® I5 3337U Processor With Windows 7 32 bit pro (English trial version)

Typical Applications
Delta's IPC and PPC can be widely applied in several industries such as water treatment, HVAC, packaging machinery, metallurgy, central heating control, environmental monitoring, energy management, transportation, smart buildings and others.

On our ftp-site you can find more information.

Industry PC (IPC) & Panel PC (PPC) are on stock and ready to be ordered. Please contact your Sales Manager for the price, and do not hesitate to contact Alejandro Dova (adova@deltaww.com) if you have any questions or requests.

2.4 UPDATE – IIoT solution DIACloud

We are glad to announce new features and tools for Delta's IIoT solution DIACloud.

Below you will find the technical announcement which explains what was added and fixed with new firmware V1.3.3.5 of DX routers. Most of the new features came from the suggestions collected from different customers during the last year.

Is also important to mention the new software tool called "DIADevice" which allows users to scan DX routers connected to PC, it shows an overview of the settings and it also allows to bind DX routers very easily in just 2 steps. In case users want to see all settings, they can always enter into internal configuration via web browser.

In this **link** you can download the FW files, manuals and software such as DIACom, DIADevice or DIACloud App for Android or iOS devices.

Firmware

DX Series

Firmware Name	Description	Supported Device	Issue Date	File
DX-2100RW-WW V1.3.3.5	V1.3.3.5 Firmware released	DX-2100RW-WW	2016/12/02	
DX-2300LN-WW V1.3.3.5	V1.3.3.5 Firmware released	DX-2300LN-WW	2016/12/02	
DX-2100RW-CN V1.3.3.6	V1.3.3.6 Firmware released	DX-2100RW-CN	2016/12/02	
DX-2300LN-CN V1.3.3.6	V1.3.3.6 Firmware released	DX-2300LN-CN	2016/12/02	

Contact Alejandro Dova (adova@deltaww.com) in case you need further assistance or information.

2.5 NEW – New generation of AH500 series CPU (AHCPU5X1)

We are happy to announce the release of the new generation of AH500 series CPU (AHCPU5X1).

Featuring 50% more program capacity and devices the AHCPU5X1 series have 4 times faster operation speed than AHCPU5X0 series CPUs. It also includes built-in Ethernet port and the integrated serial port(RS-232/RS-422/RS-485). Users can easily execute data exchange between the CPU and other devices simply by filling the table in the HWCONFIG settings window via the ISPSoft programming software.

Spec comparison:

	CPU5X0	CPU5X1
Program capacity	256K Steps	384K Steps
Memory card	2GB	32GB
X device	8192 points	16384 points
Y device	8192 points	16384 points
L device	65536	131072
D device	65536	131072
FB amount	1024	4096/8MB

Performance Comparison:

	CPU5X0	CPU5X1
LD instruction	0.1μs	0.02μs
MOV instruction	0.3μs	0.1μs
Arithmetic operation	3.5μs	0.7μs
Floating operation	6.0μs	1.1μs

Ordering Information/Replacements

To be phased out	Replacement
AHCPU510-RS2	AHCPU511-RS2
AHCPU510-EN	AHCPU511-EN
AHCPU520-EN	AHCPU521-EN
AHCPU530-EN	AHCPU531-EN

Typical applications : Water Treatment , Wind Power ,HVAC , Paper Industry .

Please do also check the product related documentation on our ftp-site.

The AHCPU5XI series CPU's are on stock and ready to be ordered, please contact your Sales Manager for the price and do not hesitate to contact Alejandro Dova (adova@deltaww.com) if you have any questions.

2.6 NEW – DVP-12SE firmware version 1.86

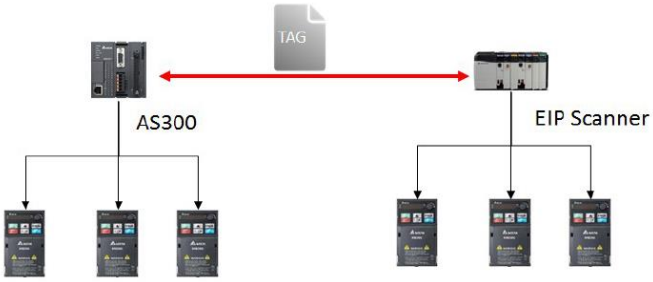
DVP-12SE firmware version 1.86 is released. The functions which are modified and the functions which are added are described as below

1. **Issue:** When a DVP-SE series PLC is connected with more than 3 modules on its right side or the power supply is overloaded, if the 24V power supply drops while a constant communication via the Ethernet port is in process, there will be 1% of possibility that the values in the latched area (device number D3700 or later) cannot be restored.
   Solution 1: Contact the company or the technicians from the agents for a firmware upgrade (V1.83 or later versions).
   Solution 2: Use the device numbers D200~D999 and D2000~D3699 for the latched area.
2. **Issue:** When the connection via the Ethernet port of a DVP-SE series PLC is lost for more than 1 minute, the quantity of connection may be overloaded and the connection for communication will be affected.
   Solution: Contact the company or the technicians from the agents for a firmware upgrade (V1.83 or later versions).
3. **Issue:** When the instruction DZRN is executed but the zero point input X4 is ON, the homing will not be complete.
   Solution: Contact the company or the technicians from the agents for a firmware upgrade (V1.83 or later versions).
4. **Issue:** When a DVP-SE series PLC is without power supply for more than 2 weeks, the real-time clock (RTC) will suffer from power shortage and the RTC will be back to 12-hour clock.
   Solution 1: Go to WPLSoft Software and set up the RTC again.
   Solution 2: Contact the company or the technicians from the agents for a firmware upgrade (V1.83 or later versions).
5. New Function: Add 4 communication codes (0x01, 0x02, 0x05, 0x0F) in bit format to the instruction ETHRW for Ethernet communication. Please refer to the attachment for more details on the instruction ETHRW.
6. New Function: Add a new instruction ETHRS for self-defined Ethernet communication. Please refer to the attachment for more details on the instruction ETHRS. Note: this instruction can only be executed in WPLSoft V2.42.09 and ISPSoft V3.02.17 or later versions.
7. Issue date: January 26th, 2017

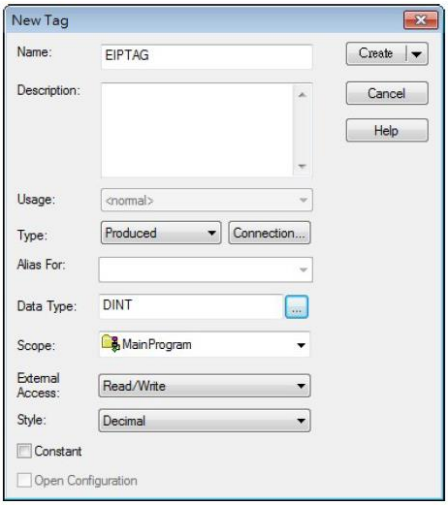
2.7 NEW – EIP Builder software version 1.02

EIP Builder V1.02 is released along with the Delta EtherNet/IP related products. The functions which are modified and the functions which are added are described as below.

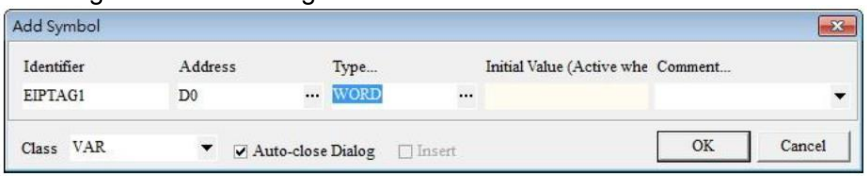
EIP Builder V1.02 now supports EtherNet/IP data exchange via tags for AS300 series.
EtherNet/IP scanners can be connected to one another via the Produced Tag and Consumed Tag. Users can set the Produced Tag and Consumed Tag in the global variables from ISPSoft forAS300 series and connect to other (brand) EtherNet/IP scanners via the data mapping function in EIP Builder.



<u>The steps to connect to other EtherNet/IP devices via tags:</u>
A. Creating a Produced Tag in other brands' software
Below is an example from Rockwell Studio 5000.



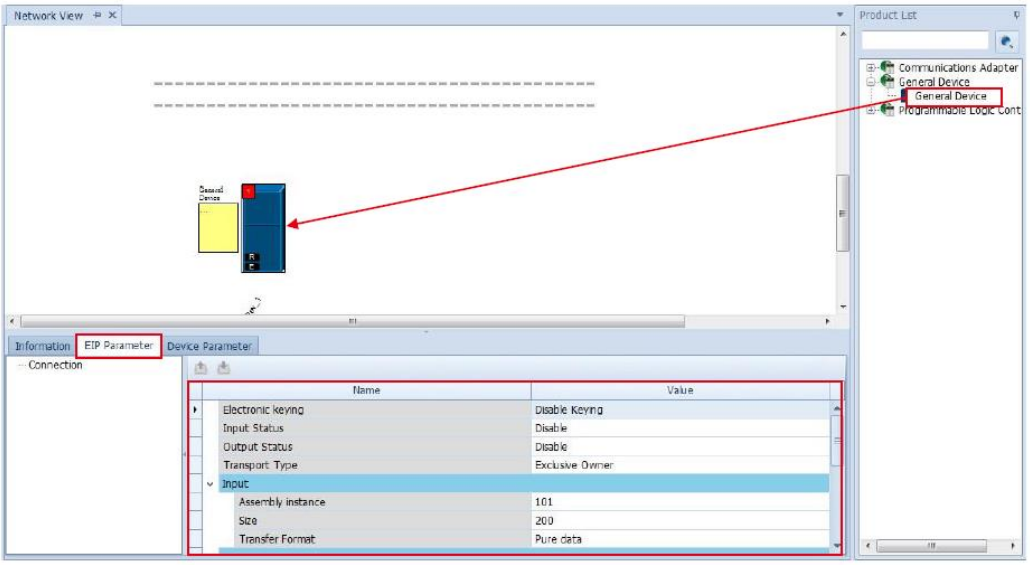
B. Creating a Consumed Tag in Delta's ISPSoft.



C. With the data mapping function in EIP Builder, once the Produced Tag and Consumed Tag are created, users can connect to EtherNet/IP scanners from other brands via the created tags.

Creating a General Device

If the EDS file cannot be obtained, users can select General Device in EIP Builder to create a EtherNet/IP device and then connect devices via the data mapping function.

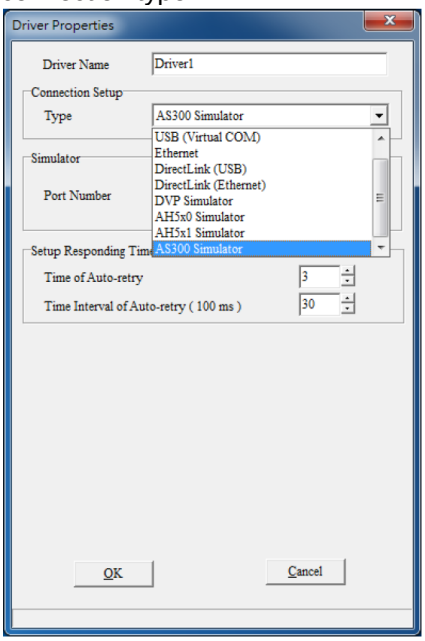


For more information on EtherNet/IP setups, please refer to EtherNet/IP Operation Builder manual. Download the software from our ftp-site.

2.8 NEW – COMMGR software version 1.07

COMMGR software version 1.07 is released. The functions which are modified and the functions which are added are described as below.

1. Fixed the issue that some COM ports cannot be scanned.
2. Fixed the issue that COMMGR sometimes cannot receive responses while the communication is via Ethernet.
3. Fixed the issue that when the resolution of the monitor is set too low, the window of AH5x0 simulator and AH5x1 simulator cannot be displayed.
4. Fixed the issue that the search result of Ethernet Search shows duplicated contents in the list.
5. Fixed the issue that when the connection type is set to RS232/422/485, and the settings are incorrect. COMMGR will auto-detect the communication mode. When RTU mode is scanned and set, the communication cannot work.
6. Fixed the issue that after sorting the IP address list by IP Address, Port, Comment or Device and then clicking Del button to remove a selected device from the list, the system will delete a wrong device instead of the selected one.
7. COMMGR software V1.07 now supports AS300 series and adds the AS300 Simulator in the connection type.



You can download the software from ou ftp-site.

2.9 NEW – VFD-EL firmware updated to V1.150

VFD-EL firmware is up[dated from 1.14 to 1.15 with the following corrections and new functions.

Correcting Functions

	Issues in V1.140	Corrections in V1.150
1	When the acceleration / deceleration time unit is set to the second digit of the decimal point (Pr01.19=1) and the Pr01.17 (S curve acceleration time) or Pr01.18 (S curve deceleration time) is set to be greater than 1, the warning code CF2.0 will pop up (memory read abnormal warning) after turn power off and then on.	When the program of a motor drive is initialized after repowering, the program still uses first decimal point to check Pr01.17 and Pr01.18. Once the setting value of Pr01.17 or Pr01.18 is greater than 1, the limit value will be exceeded and the warning code CF2.0 will pop up. An update is done on V1.150 to fix this bug.
2	The input voltage range of VFD-EL 460V models is ± 10% (342V to 528V). Considering the worst cases such as the hardware tolerance and the minimum voltage 342V, the motor drive LV (low voltage alarm) may not automatically be canceled because the input voltage is lower than the Low Voltage alarm return level.	Decrease the Low Voltage alarm return level. So that when considering the worst cases, the minimum input voltage is still greater than the alarm return level, the alarm can be automatically canceled.

New Functions

1. **Add fire mode function.** When the inverter is installed in an air conditioning or exhaust system, in the event of a fire accident, the motor drive can be operational to switch the frequency setting under fire mode via enable fire mode function. When the inverter is under the fire mode, it will ignore the overload and overheat protection functions until the hardware protection is activated or the motor drive is damaged to provide the stable airflow, to minimize the casualty and to increase the evacuation time. The operating direction and frequency can be set under the fire mode. Read the descriptions below for more information on the parameter settings.

(1) Description of Parameter settings:

08-23 Fire mode

Factory Setting : 0

Settings 0 : No function
1 : Forward operation
2 : Reverse operation

This parameter needs to work with multi-input function terminal #27 or #28 and multi-output function terminal #25.
Setting is 0: Fire mode is disabled
Setting is 1: Fire is enabled and motors will operate clock wisely (U, V.W).
Setting is 2: Fire is enabled and motors will operate counter-clock wisely.

08-24 Operating Frequency when running Fire Mode

Factory Setting : 60.00

Settings 0.00~599.00Hz

This parameter is to set up the drive' s frequency when the fire mode is enabled.

08-25 Number of fire mode actions

Factory Setting : Read only

As long as the fire mode is activated for more than 4 minutes, this inverter will record number of actions of fire mode of this inverter, regardless of whether the drive is running or not. This parameter is read only. Warranty is void if this parameter is not zero. As long as the fire mode is activated for more than 4 minutes, the inverter will record number of actions of fire mode, regardless of whether the drive is running or not. This parameter is read only. Warranty is void if this parameter' s value is not zero.

(2) **Enabling External terminals:** Multifunction input terminal Pr04.05 to Pr04.08 (MFI) Added function 27 and 28.

Settings	Function	Description
27	Enable fire mode (with RUN Command)	Enable this function under fire mode to force the drive to run (while there is RUN COMMAND).
28	Enable fire mode (without RUN Command))	Enable this function under fire mode to force the drive to run (while there isn' t RUN COMMAND).

(3) **Multi-function output terminal:** New function of Pr03-00 ,#25: Fire mode indication.

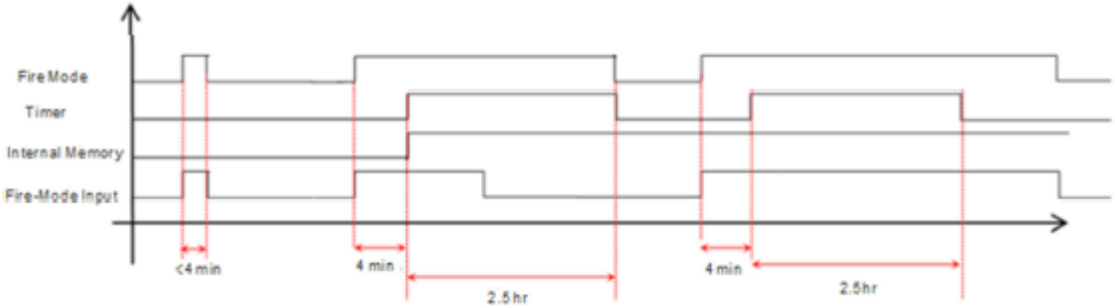
Settings	Function	Description
25	Fire mode indication	When #27 or #28 is enabled, this function will work.

(4)**Modbus communication parameters:** Upper device can communicate via Modbus to enable the fire mode at the following address.

Content	Address	Function	
Fire mode enable	2002H	Bit5	00B : No function
			01B : Fire mode enable (Does not contain run commands)

(5) **Fire mode end processing :**

- When the fire mode is enable via multi-function terminal or Modbus communication, as long as fire mode enable time for more than 4 minutes, even if multi-function terminal state is OFF or communication 2002H, bit5 = 0, starting the 4 minute of the fire mode, the counter will start to record the fire mode and the inverter will continue to run under fire mode for 2.5 hours before goes back to the normal mode. Once the inverter runs at normal mode, it will follow the original setting to stop or continue to run to reach normal operating frequency.
- If the fire mode enabling time is less than 4 minutes, the inverter will directly return to normal mode to stop running or to continue to run to normal operating frequency in accordance with the original input setting.



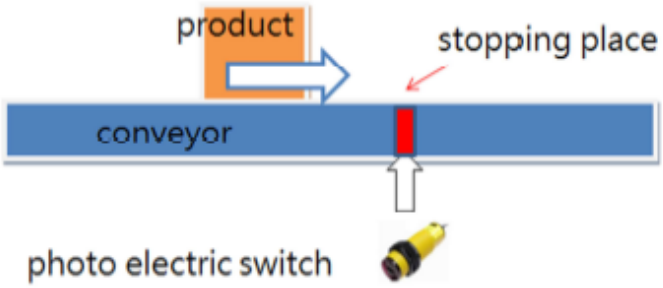
(6) Error detection under Normal mode and Fire mode:

Code	Error name	Normal mode	Fire mode
1	Over current (oc)	V	V
2	Over voltage(ov)	V	V
3	Over heat 1 (oH1)	V	Not-detectable
4	Over heat 2 (oH2)	V	Not-detectable
5	Over Load (oL) (150% 1Min · Inverter)	V	Not-detectable
6	Internal electronic overload trip (oL1)	V	Not-detectable
7	Motor over load (oL2)	V	Not-detectable
8	External fault (EF)	V	V
9	Over current during Acceleration (ocA)	V	V
10	Over current during Deceleration (ocD)	V	V
11	Overcurrent during normal speed (ocN)	V	V
12	Ground Fault (GFF)	V	V
13	Low voltage (LV)	V	V
14	Input phase loss (PHL)	V	V
15	base block (bb)	V	V
16	Auto accel/decel failure(cFA)	V	V
17	Software protection failure(code)	V	V
18	Internal EEPROM can' t write (cF10)	V	V
19	Internal EEPROM can' t read(cF20)	V	V
20	Hardware NMI (HPF1)	V	V
21	Hardware OV (HPF2)	V	V
22	Hardware GFF(HPF3)	V	V

23	Hardware OC(HPF4)	V	V
24	Hardware IU (CF30)	V	V
25	Hardware IV (CF31)	V	V
26	Hardware IW(CF32)	V	V
27	Hardware Dcbus(CF33)	V	V
28	Hardware Temperature (CF34)	V	Not-detectable
32	Analog signal Error (AErr)	V	V
34	Motor overheat protect(PTC)	V	V
35	Analog feedback error (FBE)	V	V
36	Deviation error(DEV)	V	V

2. New functions for conveyor application:

(1)**Delay time of Multi-Function Input Terminal Turn-On &Turn-Off.** During the testing process of automatic production line, the transmission belt will use the photoelectric switch as a trigger switch to reach a position. When an item is arrives at the specific position, position error may occur while via the photoelectric switch to stop transmission belt. Therefore to facilitate tuning stopping place through setting inverter, this delaying function is added.



Description of Parameter settings:

04-29 Delay Time of Multi-function Input Terminal(MI1) Turn On

Factory Setting : 0.00

Settings 0.00 to 360.00Hz

04-30 Delay Time of Multi-function Input Terminal(MI1) Turn Off

Factory Setting : 0.00

Settings 0.00~360.00Hz

04-31 Delay Time of Multi-function Input Terminal(MI2) Turn On

Factory Setting : 0.00

Settings 0.00~360.00Hz

04-32 Delay Time of Multi-function Input Terminal(MI2) Turn Off

Factory Setting : 0.00

Settings 0.00~360.00Hz

04-33 Delay Time of Multi-function Input Terminal(MI3) Turn On

Factory Setting : 0.00

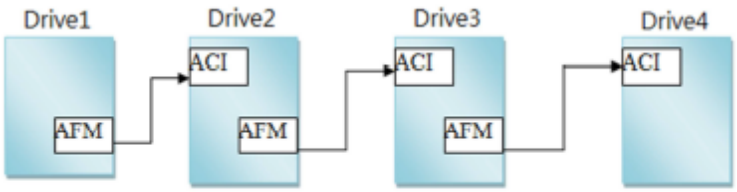
Settings 0.00~360.00Hz

04-34 Delay Time of Multi-function Input Terminal(MI3) Turn Off

Factory Setting : 0.00

Settings 0.00~360.00Hz

(2)AFM analog output signal bias. There might be several motor drives installed on an automatic production line. A motor drive' s frequency comes from another motor drive' s AFM analog out. In order to make sure that all these motor derives can start and stop at the same time, also to prevent not reporting on analog signal loss at zero speed, this AFM Analog Output Signal Bias function is added.



Description of Parameter settings:

03-14 AFM analog output signal bias

Factory Setting : 0.00

Settings 0.0~10.0V

In production

Version	Series number	
V1.150	WJ	W1705

2.10 NEW – AS300 is ready to go !

We are glad to announce the new generation of Delta PLC AS300! With this powerful new device we invite you all to enter to the next level of Delta Industrial Automation products.

- IEC61131 compatible with Structured Text programming language included (ISPSoft).
- 40 times better performance than SV2/EH3 CPU´s
- Ethernet and USB and 2 RS485 port embedded by default in the CPU.
- 2 function card slots with RS458, RS232, RS422 and CANopen DS301 cards available.
- Capable of managing 6 pulse control axis and 8 CANopen DS301 axis.
- 16 Hardware interruption Digital Inputs.
- Easy module plug in/out with Delta patented double subjection clamp.
- Expansion modules with screw-less connectors.

And last but not least, Ethernet/IP scanner and adapter by default in all available CPU´s.
We would also like to announce that EIP (Ethernet/IP) will become the new Delta field bus for field control, and all new Delta components to be released will be compatible with it.
According to this concept, new AH500 CPU´s, new inverters like MS300 and even servo drives, will have EIP , by default.
Another new concept for this product is that we follow brand new internal protocol called NPI.
This means that we have been doing internal endurance tests for this product for 6 months in Europe, according to this we are confident that AS300 is bug free.
In other words, this is the first milestone from Delta to become first line competitor on Industrial Automation market, and we are glad to have you all in our team.

Feel free to download all the related documentation in our usual web channel: Delta Website
And please feel free to go to our ftp site for your documentation .
We will provide regular training in the Eindhoven IA Headquarters for AS300 and Ethernet/IP for all distributors interested.
As for any technical challenges, do not hesitate to send your questions to iatechnicalsupport@deltaww.com

All CPU´s and modules are available and on stock in the NL.
Please ask your sales contact for prices , and contact us for specific training, in case it is needed.

3 Application

3.1 NEW – Application Notes

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

- Fluid Industry Notification-IoT Solution for Air Compressor.pdf
- Electronics Industry Notification- Automatic Squaring Machine.pdf
- Construction and Materials Equipment Industry-Intelligent Mudjacking Equipment.pdf
- CNC Industry Notification-CNC Lathe.pdf
- Fluid Industry Notification-IoT Solution for Air Compressor.pdf
- The Rubber&Plastic Industry Notification-Automatic Coiling Machine.pdf
- Woodworking Industry Notification-Woodworking punching machine.pdf
- Food & Pharmaceuticals Industry Notification-Automatic pizza vending machine.pdf
- Energy Industry Notification-Delta Solution for Wireless Meter Reading System.pdf

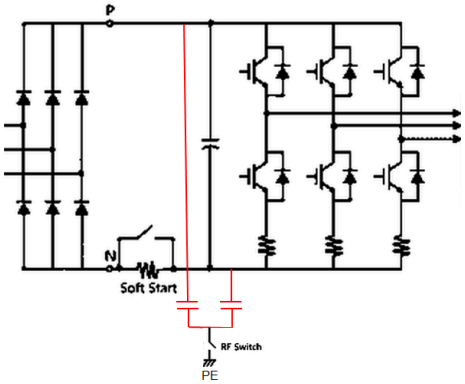
4 FAQ

4.1 VFD-series AC Motor drives

VFD series

Q **Why do we measure voltage on PE?**

A *See diagram:*



When PE is left open, both red capacitors (the so-called Y-capacitors) act as a voltage divider.
The same happens because of capacitors in the built-in filter.

Therefore at PE you will find about half the mains voltage.
When PE is connected (which is very strongly recommended) you will have no problem.

VFD-E

Q **Does MKE-EP fit on all VFD-E?**

A *MKE-EP only fits on Frame A, B, C. It does not fit on Frame D*

Q **2101h bit assignment?**

A *Bit 7 shows "reserved" in the manual but its assignment is Operation via External Terminals.*
When Bit7=1, operation is via external terminals.
The other bits "reserved" are not assigned.

Q **VFD-E brake units**

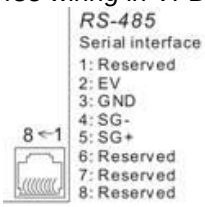
A *In the user manual the brake units are stated as VFDB. This is an error. It should be BUE.*

230V Series									
Applicable Motor HP [kW]	Ac Drive Part No.	125% Braking Torque 10%ED*					Max. Brake Torque**		
		Full Load Torque KG-M***	Brake Unit [VFDB]	Resistor or Value spec. for each Ac motor Drive	Braking Resistor series for each Brake Unit ****	total Braking current (A)	Min. resistor value (Ω)	Max.Total Braking current (A)	Peak Power (kW)

VFD-EL

Q **What cable to use for the multi-pump function?**

A *See user manual page Pr-group 10.*
The RS-485 wiring in VFD-EL as below:



EV is supply voltage to external keypad
GND is for communication cable shielding
SG+ & SG- are for RS-485 communication wiring

For multi-pump communication application, we could only connect SG+ ,SG- ,GND(option) with customized RJ45 or RJ11 cable, or use CAT5 cable cutting off pin2(EV)

CAT5 A or B cross-over cables cannot work.