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## 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.

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

Name and password are included in the link.

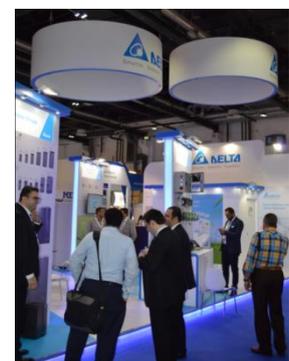
Name: den-eindhoven  
Password: BuPd2175

### 1.2 Delta at MEE

Middle East Electricity is a 3 day event being held from March 1–3, 2016 at the Dubai World Trade Centre in Dubai, United Arab Emirates.

Delta exhibited with:

- The Delta Pump Solution developed by EMEA team
- Elevator Solution
- CNC Solution – CNC controller with two axis – developed by ARPI our partner in UAE
- Drives & Servos
- PLCs
- HMI's
- TPS - Telecom Power Solutions ( DES )
- UPS - Uninterruptable Power Supplies ( DES )



We received in total over 200 visitors with approximately 50 solid leads. Visitors were very interested in our Solutions and possible Building Management Systems.

### 1.3 Discover Delta Electronics at 2016 Hannover Messe!

**Visit us: Hall 11, Stand A49**

25 – 29 April 2016 • Hannover • Germany



#### Smarter Integrated Solutions for Automation & Energy Management

Delta Electronics cordially welcomes you to visit its solutions showcase for integrated industry at the 2016 edition of Hannover Messe from April 25 to 29. Our innovative portfolio of smart solutions, capable of improving the productivity and energy efficiency of industrial platforms will include: 6-axis SCARA industrial robots live demos, automation and visualization solutions for a wide range of industrial applications and green buildings, our newest modular battery energy storage systems, green datacentre infrastructure, solar & wind energy solutions, electric vehicle (EV) charging technology and power infrastructure for telecommunications. Let's realize the dream of sustainability together!! We look forward to meeting you in Hannover!

Yancey Hai  
Chairman  
Delta Electronics, Inc.

[Register now and get your free entrance ticket for Hannover Messe 2016, April 25 – 29, 2016!](#)

#### About Delta

Delta, founded in 1971, is a global leader in power and thermal management solutions. Our mission is "To provide innovative, clean and energy-efficient solutions for a better tomorrow," and our businesses encompass Power Electronics, Energy Management, and Smart Green Life. Delta has sales offices, manufacturing facilities and R&D centres worldwide. In 2014, was ranked at the highest A-level of the Climate Performance Leadership Index of the Carbon Disclosure Project (CDP). Since 2011, Delta is part of the Dow Jones Sustainability Indices (DJSI) World Index. For detailed information about Delta, please visit: [www.deltaww.com](http://www.deltaww.com)

### 1.4 CANopen as remote control for drives

See this article in the CAN Newsletter Online about C/CP2000:  
[CANopen as remote control for drives](#)

### 1.5 BTL listing for CP2000



BACnet is a registered trademark of ASHRAE. ASHRAE does not endorse, approve or test products for compliance with ASHRAE standards. Compliance of listed products to the requirements of ASHRAE Standard 135 is the responsibility of BACnet International (BI). BTL is a registered trademark of BI.

### BACnet Testing Laboratories Product Listing

*This product has been tested at a qualified BACnet Testing Laboratory and found to comply with all the necessary interoperability requirements in place on the published test date. This listing represents the tested capability of the Listed Product. For information on additional functionality that was not covered in the test process, refer to the Manufacturer's PICS statement on the BI website.*

**Listing Information**

<b>Vendor</b>		<b>Listing Status</b>
Delta Electronics, Inc. No. 18, Xinglong Rd., Taoyuan City, Taoyuan County 33068, Taiwan		Listed Product
<b>Test Requirements</b>	<b>BACnet Protocol Revision</b>	<b>Date Tested</b>
Requirements as of August 2012	Revision 7 (135-2008)	June 2014

<b>Product Name</b>	<b>Model Number(s)</b>	<b>Software Version</b>
CP2000	VFD-CP2000	1.04

**Device Profiles**

<b>Profile</b>	<b>Model Numbers</b>
BACnet Application Specific Controller (B-ASC)	All models

**BIBBs Supported**

Data Sharing	ReadProperty-B	DS-RP-B
	WriteProperty-B	DS-WP-B
	ReadPropertyMultiple-B	DS-RPM-B
Device and Network Management	Dynamic Device Binding-B	DM-DOB-B
	Dynamic Object Binding-B	DM-DOB-B
	DeviceCommunicationControl-B	DM-DCC-B

**Object Type Support**

Analog Value	Binary Value	Device
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**Data Link Layer Options**

<b>Media</b>	<b>Options</b>
MS/TP master	9600, 19200, 38400, 76800

**Character Set Support**

ANSI X3.4
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CP2000 is now BTL listed and certified from firmware 1.21 and up.

<http://www.bacnetinternational.net/catalog/index.php?m=139&p=1163>

<http://www.bacnetinternational.net/btl/>

(The software version 1.04 is a BACnet code that is used internally, **not** for our CP2000 firmware version)

### 1.6 Delta is now member of PLCopen

**PLCopen®**  
*for efficiency in automation*

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PO Box 3009, 4200 EA Gorinchem, The Netherlands, Tel: +31.183.660261, Fax: +31.183.664821

Delta Electronics, Inc.  
Attn. Mr. Sean Yee Liang  
Product Manager  
Industrial Automation BG  
No. 18, Xinglong Rd  
Taoyuan Dist., Taoyan City 330-68  
Taiwan

**New Membership** January 14, 2016

Dear Mr. Liang,

Welcome to PLCopen! You have taken an excellent decision by joining the organization.

- Your company will be listed on the PLCopen website as a member. Therefore please send us your company logo (in jpg or gif format) via email, so we can include this on our website.
- We can also add a short company profile to our website. You will find an example on [http://www.plcopen.org/pages/organization/members/voting\\_members/profiles/bosch\\_rexroth.htm](http://www.plcopen.org/pages/organization/members/voting_members/profiles/bosch_rexroth.htm)
- You are now our main contact person within your organization, making you responsible for the distribution of PLCopen information. If you want others to receive our information directly, please fill out the contact form.
- Check regularly [www.PLCopen.org](http://www.PLCopen.org) for information about meetings, minutes etc. As a member you have access to the restricted part of the site. Here you will find a lot of information in computer readable format. You will receive the login details as soon as we have received the payment of the membership fee.
- As a member you can play an active role in the Promotional and Technical Committees. That will not only give you direct influence but also access to informal contacts and exchange of ideas with other members. If you want to be involved in one of the committees, please fill out the contact form.

If you have any further questions, please contact me directly.

Sincerely yours,



Eelco van der Wal  
Managing Director PLCopen  
[evdwal@plcopen.org](mailto:evdwal@plcopen.org)

## 2 Product update

### 2.1 NEW – REG2000 control board connector changed

The 40p connector (control board to power board) has been changed to improve quality.

	Old Part #	New Part #
CTL BD part number	2945458301	2945458302
CTL BD (fully assembled) part number	5502669201	5502669202

New/old CTL BD compatibility	Old CTL BD + Old PWR BD	Old CTL BD + New PWR BD	New CTL BD + Old PWR BD	New CTL BD + New PWR BD
Result	✓ (Refer to maintenance notice)	✗	✗	✓

#### Notice for maintenance:

- If a change of old version control board or old version power board is needed, please change the following items at the same time for compatibility: control board, power board, support plastic object for control board, protection cover for control board, and insulation sheet. Refer to the table below.
- An insulation sheet is required to be placed below the control board. Refer to the table below and the production specification for more detail.

**Starting manufacturing date code:** T1603 (Taoyuan Factory)

FRAME	MODEL NAME	CTL BD		PWR BD		Upper cover	Protection cover for CTL BD	Insulation paper for control BD
		Assembly part number after change	Part number after change	Assembly part number after change	Part number after change	Part number after change	Part number after change	New part number
Frame A	REG075A23A-21	2945458302	5502669202	2945458103	5502667903	3308544904	3308546705	3242805200
	REG110A23A-21			2945457803	5502668303			
	REG075A43A-21			2945458103	5502668003			
	REG110A43A-21				5502668103			
	REG150A43A-21				5502668203			
FRAME B	REG150A23A-21	2945458302	5502669202	2945458204	5502666304	3308545002	3308546705	3242805200
	REG185A23A-21				5502666404			
	REG220A23A-21				5502666504			
	REG185A43A-21				5502666604			
	REG220A43A-21				5502666804			
	REG300A43A-21				5502666704			
FRAME C	REG300A23A-21	2945458302	5502669202	2945459703	5502669303	3308545102	3308546705	3242805200
	REG370A23A-21			2945459603	5502669603			
	REG370A43A-21			2945459703	5502669503			
	REG450A43A-21			2945459503	5502669403			
	REG550A43A-21			2945459503	5502669703			

### 2.2 UPDATE – VFD-EL upgraded from 1.13 to 1.14

#### Correcting Functions

	Version 1.13 problem	Version 1.14 correction
1	When using fixed quantity control of multi-pump control mode (Pr. 10-35=2), and the operation command of master pump is given by external terminals, the master and salve pump won't operate in the status that external terminal is on after Lv momentary power loss	When recovering from Lv, the drive will operate depending on if the run command of external terminal still exists or not and the setting of Pr. 02.05 (The source of Power-On command and Running command modifies the operating control of the VFD)
2	When Pr. 02-00 (Source of First Master Frequency Command) is set as 3 (RS-485 (RJ-45) communication), and Pr. 02.18 (User-defined Value 2 Setting) is set as not 0, the SE2 is shown when copying and re-writing the parameters.	Copy and rewriting parameters works normally
3	Pr. 02.12 (Communication Frequency Command) is not updated to communication address 2001H after power on, so the value of 2001H is 0 after power on.	Pr. 02.12 (Communication Frequency Command) will be updated to 2001H after power on.
4	Output frequency decreases to 0 and cannot hold in lower limit frequency under PID control when setting Pr.01.08 (Output Frequency Lower Limit)	When frequency command of PID controller is lower than Pr.01.08 (Output Frequency Lower Limit), the PID controller will hold output frequency at lower limit, and integration value will hold at output frequency lower limit

#### Modifying Functions

1. To comply with the rules and regulation in Taiwan, China, the United States, European Union, and Japan government regarding international strategic products import/export, the maximum frequency of Delta EL series motor drive will be modified from 600Hz to 599Hz.

The following parameters are affected:

Parameter	Function	Setting	Factory Setting
01-00	Maximum Output Frequency (Fmax)	50.00~599.00 Hz	60.00
01-01	Maximum Voltage Frequency (Fbase)	0.10~599.00 Hz	60.00
01-03	Mid-Point Frequency (Fmid)	0.10~599.00 Hz	1.5
01-05	Minimum Output Frequency (Fmin)	0.10~599.00 Hz	1.5
01-20	Simple Positioning Stop Frequency 0	0.00~599.00 Hz	0.00
01-21	Simple Positioning Stop Frequency 1	0.00~599.00 Hz	5.00
01-22	Simple Positioning Stop Frequency 2	0.00~599.00 Hz	10.00
01-23	Simple Positioning Stop Frequency 3	0.00~599.00 Hz	20.00
01-24	Simple Positioning Stop Frequency 4	0.00~599.00 Hz	30.00
01-25	Simple Positioning Stop Frequency 5	0.00~599.00 Hz	40.00
01-26	Simple Positioning Stop Frequency 6	0.00~599.00 Hz	50.00
01-27	Simple Positioning Stop Frequency 7	0.00~599.00 Hz	60.00
02-11	Keypad Frequency Command	0.00~599.00 Hz	60.00
02-12	Communication Frequency Command	0.00~599.00 Hz	60.00
02-15	Initial Frequency Setpoint (for keypad & RS485)	0.00~599.00 Hz	60.00
03-02	Desired Frequency Attained	0.00~599.00 Hz	60.00
05-00	1st Step Speed Frequency	0.00~599.00 Hz	0.00
05-01	2nd Step Speed Frequency	0.00~599.00 Hz	0.00
05-02	3rd Step Speed Frequency	0.00~599.00 Hz	0.00
05-03	4th Step Speed Frequency	0.00~599.00 Hz	0.00
05-04	5th Step Speed Frequency	0.00~599.00 Hz	0.00
05-05	6th Step Speed Frequency	0.00~599.00 Hz	0.00
05-06	7th Step Speed Frequency	0.00~599.00 Hz	0.00
05-07	8th Step Speed Frequency	0.00~599.00 Hz	0.00
05-08	9th Step Speed Frequency	0.00~599.00 Hz	0.00
05-09	10th Step Speed Frequency	0.00~599.00 Hz	0.00
05-10	11th Step Speed Frequency	0.00~599.00 Hz	0.00
05-11	12th Step Speed Frequency	0.00~599.00 Hz	0.00
05-12	13th Step Speed Frequency	0.00~599.00 Hz	0.00
05-13	14th Step Speed Frequency	0.00~599.00 Hz	0.00
05-14	15th Step Speed Frequency	0.00~599.00 Hz	0.00
08-03	Start-Point for DC Brake	0.00~599.00 Hz	0.00
08-09	Skip Frequency 1 Upper Limit	0.00~599.00 Hz	0.00
08-10	Skip Frequency 1 Lower Limit	0.00~599.00 Hz	0.00
08-11	Skip Frequency 2 Upper Limit	0.00~599.00 Hz	0.00
08-12	Skip Frequency 2 Lower Limit	0.00~599.00 Hz	0.00
08-13	Skip Frequency 3 Upper Limit	0.00~599.00 Hz	0.00
08-14	Skip Frequency 3 Lower Limit	0.00~599.00 Hz	0.00
10-11	Source of PID Set point	0.00~599.00 Hz	0.00
10-15	Sleep Frequency	0.00~599.00 Hz	0.00
10-16	Wakeup Frequency	0.00~599.00 Hz	0.00

Date codes of production: T1612 and W1611

### 2.3 **NEW** – New models for Sync series power supplies



The Sync DIN rail power supply series can be your answer to help you save space in a tight cabinet. Delta expands the competitively priced Sync series to 50W and 100W output power. The Sync series requires less installation space with its ultra-compact body measuring just 75mm tall and only 30mm wide for the DRS-50W model and 45mm wide for the DRS-100W model. The single output products are available in 12V/4A and 24V/2.1A for the 50W model (DRS-

12V50W1N□, DRS-24V50W1N□) and at 24V/3.8A for the 100W model (DRS-24V100W1N□). The Sync series provides output circuit in compliant with NEC Class 2 (UL 60950-1) and Limited Power Source (IEC/EN 60950-1), except for 24V/4.0A (DRS-24V100W1A□). DC OK relay contact option is also available. All the models in the series are able to start at the extreme low temperature of -40°C. Safety approvals include IEC/EN/UL 60950-1 (ITE) and UL 508 (Industrial). All Delta industrial power supplies are fully compliant with RoHS Directive 2011/65/EU for environmental protection and major international safety standards.

### Highlights & Features

- Ultra-compact body measuring only 75mm tall
- Universal AC input voltage and full power from -10°C to +50°C operation
- Low earth leakage current < 0.5mA @ 264Vac
- Galvanic isolation up to 3.0KVac between input to output and input to ground
- NEC Class 2/ Limited Power Source (LPS) certified
- Overvoltage/ overcurrent/ over temperature protections

## 2.4 UPDATE – VFD-VL upgraded from 1.11 to 1.12

### A. Modified Function

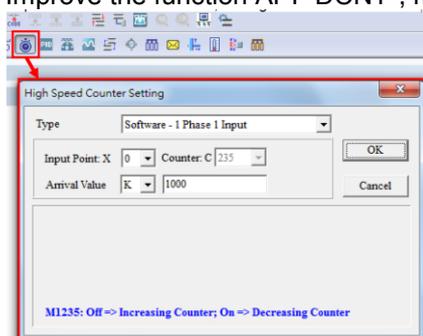
	Problems found in v.1.11	Solutions in v.1.12
1	The elevator shakes in low speed when continuous switching from RUN and STOP within 0.5sec	The elevator will work normally in low speed when continuous switching from RUN and STOP within 0.5sec

Version 1.12 went in production in 2016 WK10, date code 1610.

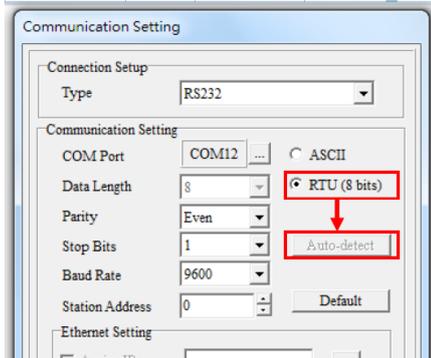
## 2.5 UPDATE – WPLSoft version 2.42 is released

### Changes:

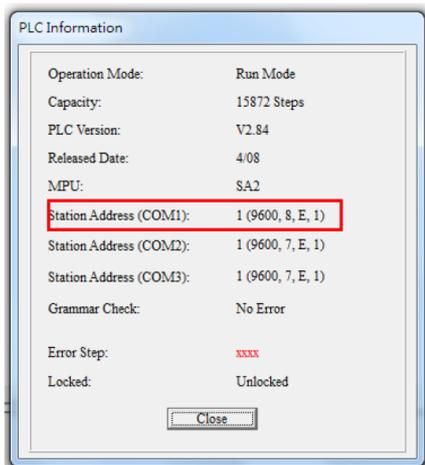
1. Support MS300/MH300
2. Improve the function API “DCNT”, making it easier for users to set up.



- When the communication is in RTU mode, the Auto-detect function is disabled



- Correct the Station Address (COM1) information of DVP SA2 series shown in the PLC information.

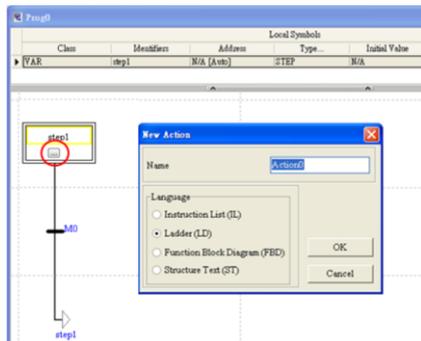


WPLSoft 2.42 is available on our ftp-site.

## 2.6 UPDATE – ISPSOFT version 2.06 is released

- ISPSOFT now can work with the following 6 new models, AHCPU511-EN, AHCPU511-RS2, AHCPU521-EN, AHCPU531-EN, TP70PIO and TP70P-RM.
- New function blocks are added for HVAC DVP and AH Series. Please refer to the Help file on ISPSOFT for detailed descriptions the newly added function blocks.
  - DFB\_AirDewPoint (ver. 1.00)
  - DFB\_AirEnthalpy (ver. 1.00)
  - DFB\_AirHumRatio (ver. 1.00)
  - DFB\_AirPsychrometrics (ver. 1.00)
  - DFB\_AirVolume (ver. 1.00)
  - DFB\_AirWetBulb (ver. 1.00)
  - DFB\_CompPower (ver. 1.00)
  - DFB\_RefrigerantP2T (ver. 1.00)
- AH Module:  
AH08DA 08DA -5A module is newly added.
- Newly added instructions:  
New instructions are added for DVP ES2, including INITC, ASDON, CASD, DDRVIC, DDRVAC, PLSVC, ZRNC, CANWR, CANRD and COPRW. Please refer to the option “PLC instruction and Special Registers Reference” in the Help section on ISPSOFT.
- The specifications of the editor and compiler are modified.
  - All series: The first character of the variables name cannot be numeric or compiler will send errors.
  - All series: The use of label is not allowed on the section instruction MCR or the compiler will send errors.

- DVP series: The basic instructions are added to support the qualifying operands, e.g. LDP M0@E0.
  - AH series: The instruction RST is added to support the qualifying operands, e.g. RST M1000@E0.
  - AH series: Up to 32 pieces of the variables identifiers are available in the function block.
  - AH series: The instructions TMR, TMRH, CNT and DCNT are added to support the qualifying operands.
  - AHCPU511: Instead of using the S device in the variables of the STEP type, the SFC compiler will use the internal memory in the device.
6. The editor of SFC is optimized.  
New actions can be created more quickly by clicking on the ... button in the step as the image shown below.



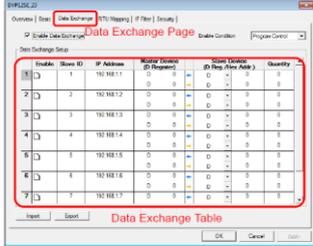
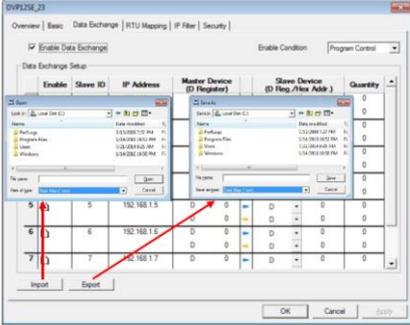
7. For ES/EC2/EC3 series with firmware V8.20 and above, password now can be edited and changed to increase the protection.  
Attention: After a new password is set via ISPSOft with new firmware V2.06, the password cannot be changed by ISPSOft with old firmware V2.05 or any previous versions.
8. For DVP series, users can add and reset the RTC functionality from the calendar window in ISPSOft

ISPSOft 2.06 is available on our ftp-site.

### 2.7 UPDATE – DCISoft V1.14 and DVPEN01-SL V2.14 are released

DCISoft V1.14 is released with the following updates:

1. Add a new function to import and export the data exchange settings on the data exchange page.

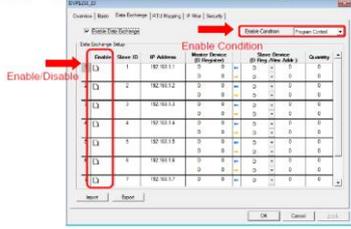
<p>Before</p>	<p>DVPEN01-SL and DVP12SE allow users to set up master/slave to exchange data on the data exchange page in DCISoft. But users cannot copy and save the data exchange settings for future use.</p> 
<p>After</p>	<p>DVPEN01-SL and DVP12SE allow users to set up master/slave to exchange data on the data exchange page in DCISoft. <b>And users can import and export the data exchange settings (.CSV) for future use.</b></p> 
<p>Application</p>	<p>This function allows users to do one-time data exchange setup. Users can simply export the data exchange settings from the already set device and import the settings to apply them to new DVPEN01-SL, DVP12SE to improve time efficiency.</p>

2. Virtual COM now supports Windows 7/8:

<p>Before</p>	<p>An error occurred during file-saving in Virtual COM in Windows 7/8.</p>
<p>Bug fixed</p>	<p>The path to save files in Virtual COM is under Program Files, but users cannot save files to this path without administrator privileges in Windows 7/8. Check if the Virtual COM version is V2.03; in this version the path to save files has changed from Program Files to the user account. (Virtual COM can be upgraded along with the upgrade of the DCISoft V2.14.)</p> 

### DVPEN01-SL V2.14 is released with the following updates:

1. Add a new function to enable/disable the data exchange in slaves individually.

Before	Users can enable the data exchange function or select the condition "Controlled by program" to exchange data, but users cannot select individual slave to exchange data.																																																																																												
After	<p>Select "Program Control" from the Enable Condition drop-down list and via the instruction API 79 TO to modify CR20 and CR21, the slaves can be enabled/disabled to exchange data individually.</p>  <p>Correspondence table for control registers:</p> <table border="1"> <thead> <tr> <th colspan="14">CR21</th> </tr> <tr> <th>b15</th><th>b14</th><th>b13</th><th>b12</th><th>b11</th><th>b10</th><th>b9</th><th>b8</th><th>b7</th><th>b6</th><th>b5</th><th>b4</th><th>b3</th><th>b2</th><th>b1</th><th>b0</th> </tr> </thead> <tbody> <tr> <td>No.16</td><td>No.15</td><td>No.14</td><td>No.13</td><td>No.12</td><td>No.11</td><td>No.10</td><td>No.9</td><td>No.8</td><td>No.7</td><td>No.6</td><td>No.5</td><td>No.4</td><td>No.3</td><td>No.2</td><td>No.1</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="14">CR20</th> </tr> <tr> <th>b15</th><th>b14</th><th>b13</th><th>b12</th><th>b11</th><th>b10</th><th>b9</th><th>b8</th><th>b7</th><th>b6</th><th>b5</th><th>b4</th><th>b3</th><th>b2</th><th>b1</th><th>b0</th> </tr> </thead> <tbody> <tr> <td>Reserved</td><td>No.24</td><td>No.23</td><td>No.22</td><td>No.21</td><td>No.20</td><td>No.19</td><td>No.18</td><td>No.17</td><td colspan="7"></td> </tr> </tbody> </table>	CR21														b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0	No.16	No.15	No.14	No.13	No.12	No.11	No.10	No.9	No.8	No.7	No.6	No.5	No.4	No.3	No.2	No.1	CR20														b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0	Reserved	No.24	No.23	No.22	No.21	No.20	No.19	No.18	No.17							
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Reserved	No.24	No.23	No.22	No.21	No.20	No.19	No.18	No.17																																																																																					

2. Add a new function to set up TCP/IP Retransmission Timeouts (RTO)

Before	The default value of RTO is 20ms in the V2.12 and the previous versions.
After	Users can use the instruction API 79 TO to modify CR22 and the RTO range can be set between 20-3000ms in the V2.14 version.
Application	When connected to a Wi-Fi or 3G router/gateway, the latency of Ethernet transmission will be increased for the PLC. Increase the timeout value to reduce the data resending frequency caused by timeouts.

3. Fix the communication long lost problem when using DHCP

Before	DHCP mode: when the DHCP lease expires, the device will request a renewal or a new IP address. Once the DVPEN01-SL receives the same IP address, the IP Reset will be executed and the communication will be lost.
After	DHCP mode: when the DHCP lease expires, the device will request a renewal or a new IP address. <b>Once the DVPEN01-SL receives the same IP address, the IP Reset will NOT be executed and the communication will NOT be lost.</b>
Remark	This problem only happens when using DHCP to obtain IP addresses, no problem for static IP addressing.

DCISoft V1.14 and DVPEN01-SL V2.14 are available on our ftp-site.

## 2.8 UPDATE – DOPSoft 2.00.05

Applicable models: DOP-B / DOP-W / DOP-H / HMC series:

- Firmware version of DOP-B model: 3.0092
- Firmware version of DOP-W model: 3.0073
- Firmware version of DOP-H model: 3.0092
- Firmware version of HMC model: 3.0160

### Corrected items in software/firmware:

1. HMI is lagging when switching language
2. Changes on "CSV Format" option cannot be stored
3. HMI shows communication error after connecting to PLC for a while
4. HMI's screen is frozen after connecting to multiple PLCs over network for a while
5. Customized Modbus TCP Server port cannot be used
6. WPL V2.40 file format is not supported
7. Screen data printed in horizontal direction by ePrinter is skew
8. HMI cannot get IP address while it is running already
9. HMI cannot retain recipe data after power down and up when non-volatile storage is set to HMI
10. Certain operations performing writing data to USB storage will cause HMI screen frozen, e.g. exporting recipe to USB storage and copying files from HMI to USB in "System Menu"
11. Executing "Alarm Moving Sign" in "Alarm Setup" or "Alarm Moving Sign" element will cause HMI screen frozen
12. After user switch language and examine "Alarm History Table", entering "System Menu" or downloading projects will cause HMI failed
13. "Auto Update" cannot function on "B03S211" and "B03E211" when booting

14. Position offset is observed when pressing on HMI screen
15. Executing macro "EXHISTORY" will cause HMI fail when "Non-volatile" storage of "History Buffer" is set to HMI and "Export CSV File" is checked
16. When HMI macro accesses controller Allen Bradley Ethernet IP (Controllogix, Compactlogix) (Use Tags)'s address, HMI will have "Run out of Mem" error
17. HMI fails when controller Siemens S7 200 SMART (ISO TCP)'s address Q0.0 is set ON
18. When HMI runs as PLC in "Online Simulation Mode" with wrong connection setup, it shows "Run out of memory" error
19. FlashTransfer shows errors when it reads data whose size is more than 16 words in "Historical Buffer"
20. Change DOP-W into system menu method

#### Newly added functions in software/firmware:

1. FTP Server function
2. Advanced alarm function
3. The alarm export and import file format now supports Excel
4. Button of Sound Setting is now available in DOP-W series HMI
5. Full screen and Time slider control
6. Tag function is now supported by element and macro
7. When entering the password in DOP-W series HMI, users no longer need to select the security level
8. After scanning the barcode, there is no need to write the data into its address by pressing the Enter button
9. DOP-B10VS511 VGA Input supports scanning frequency of 60 Hz
10. Number of M device supported by HMC series HMI increases to 8192
11. DVP 12SE and DVP EH3 / DVP EH3-L models support PLC upload/download function
12. Network type HMIs, including DOP-B, DOP-H and HMC support HMI Doctor function for online self-verification
13. Add PLC Controllers

DOPSoft 2.00.05 is available on the ftp-site

## 3 Application

### 3.1 NEW – Application Notes

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

- [Machine Tool Industry Notification - Electric Screw Press.pdf](#)
- [Packaging Industry Notification - Wood Screw Automatic Seal Rolling Machine.pdf](#)
- [CNC Industry Notification - Glass Engraving Machine.pdf](#)
- [Pharmaceuticals Industry Notification - Aluminium PVC Blister Packaging Machine.pdf](#)

### 3.2 CP2000 PID set-point via RS485

#### Example

- Set-point via comm. 0-16bar
- Feedback via ACI 4-20mA = 0-16bar
- Start/stop via keypad (but this is not important)

Connect the sensor to ACI. It depends on the sensor how it is connected. It can be a 2-point or 3-point sensor.

#### Parameter settings

- Do reset to 50Hz defaults Pr00-02=9
- Do autotuning etc if needed.
- Pr00-20=1 for frequency command via comm (therefore also for set-point)

- Pr00-21=0 for Start/Stop via keypad. Can be changed.
- Pr03-00=0 for AVI no function (not really required now, but just to be sure)  
Same for Pr03-02.
- Pr03-01=5 for PID Feedback on ACI  
(check switch SW4 on terminal board to be in position 0-20mA/4-20mA)
- Pr00-04=10 to show PID feedback on display (not necessary but convenient)
- Pr08-00=1 for PID enable with negative feedback on analogue input (acc. to Pr03-00 to 03-02 setting 5, so in this case ACI)

**Now your basic PID is ready.**

- Set-point 0-50Hz = 0-16bar --> 10bar=31.25Hz
- Feedback in % (0-10% = 0-16bar) --> 10bar=62.50%

You can press RUN to start the drive to check PID.

**Setting and feedback display in bar**

- Pr00-25=0162hex (to have bar in 2 decimals). Please refer also to the manual. Assumed that 2 decimals are enough.
- Pr00-26=16.00 (to scale setpoint and feedback to 0-16.00bar)

Press RUN and watch the display.

- The setpoint can be set to 10.00bar by sending frequency command 1000d to address 2001h. For 8bar send 800d, for 6bar send 600d. Feedback will go to 10.00bar (or 8bar or 6bar).
- The actual output frequency can be read on the display.

**Remarks**

- P,I,D settings can be changed in Pr08-01 to 08-03. This is really application dependent so we cannot give values. Try first with the default settings.
- In general set Pr01-12/01-13 (Acc/Dec Time) as low as possible without having OC or OV. These times are in the PID loop and cause delays (which can be unwanted). It is not mandatory. Just from experience.

(For 3 decimals, set Pr00-25=0163h and Pr00-26=16.000. Then for 9.000bar, send 9000h to 2001h. I noticed the last decimal may be slightly different)

## 4 FAQ

### 4.1 VFD-series AC Motor drives

**VFD-E****Q How to set the PLC registers D1041 and 1042?**

A The PLC registers D1041 (AO1) and D1042 (AO2) can be set as follows:

Set switch to 0~10V:

D1041 = 0000hex → AO1 will output 0V

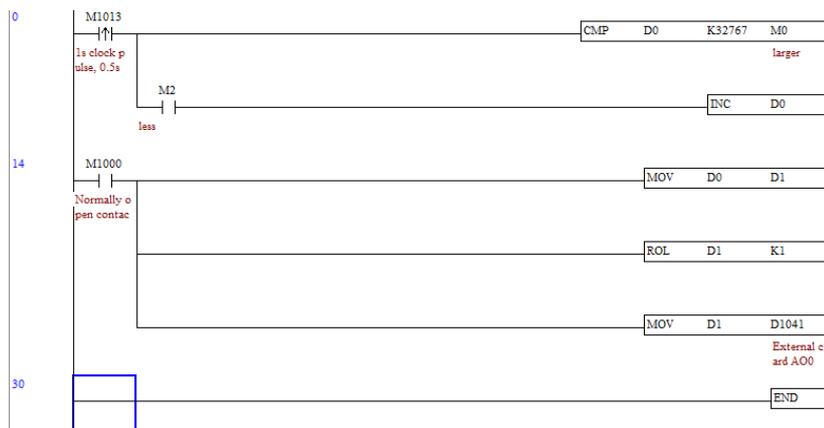
FFFFhex → AO1 will output 10V

Set switch to 0~20mA:

D1041 = 0000hex → AO1 will output 0mA

FFFFhex → AO1 will output 20mA

Here's an example program showing how to set values >32767:



**Q How to set Pr10-00 for PID set-point?**

**A** In VFD-E Pr10-00=1 means it follows Pr02-00 setting.

Pr10-01=1 and:

- Pr02-00=0: Setpoint via keypad UP/DOWN
- Pr02-00=1: Setpoint AVI (same as Pr10-00=2)
- Pr02-00=2: Setpoint ACI (same as Pr10-00=3)
- Pr02-00=3: Setpoint via comm
- Pr02-00=4: Setpoint via front potmeter

**VFD-EL**

**Q How to set Pr10-00 for PID set-point?**

**A** In VFD-EL Pr10-00=1 means it follows Pr02-00 setting.

Pr10-01=1 and:

- Pr02-00=0: Setpoint via keypad UP/DOWN
- Pr02-00=1: Setpoint AVI (same as Pr10-00=2)
- Pr02-00=2: Setpoint ACI/AVI2 (same as Pr10-00=3)
- Pr02-00=3: Setpoint via comm
- Pr02-00=4: Setpoint via front potmeter