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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, data sheets, 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

2 Product update

2.1 UPDATE – C2000 label is corrected

The C2000 heavy-duty rated motor power value on the label is corrected.

The heavy-duty rated output current value itself hasn't changed.

The change took place in 2017 WK45.

230V Old

		230V																		
Frame Size		A			B			C			D			E			F			
Output Rating	NORMAL DUTY	Model VFD-□□□□□□□□	007	015	022	037	055	075	110	150	185	220	300	370	450	550	750	900		
	HEAVY DUTY	Applicable Motor Output (kW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90		
		Applicable Motor Output (HP)	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	125		
		Rated Output Capacity (kVA)	2.0	3.2	4.4	6.8	10	13	20	26	30	36	48	58	72	86	102	138		
		Rated Output Current (A)	5	8	11	17	25	33	49	65	75	90	120	146	180	215	255	346		
		Overload Capacity	120% of rated current: 1 minute for every 5 minutes; 160% of rated current: 3 seconds for every 30 seconds																	
		Max. Output Frequency (Hz)	0.00 ~ 599.00Hz																	
		Carrier Frequency (kHz)	2 ~ 15kHz (default setting 8kHz)						2 ~ 10kHz (default setting 6kHz)						2 ~ 9kHz (default setting 4kHz)					
		Rated Output Capacity (kVA)	1.9	2.8	4.0	6.4	9.6	12	19	25	28	34	45	55	68	81	96	131		
		Rated Output Current (A)	4.8	7.1	10	16	24	31	47	62	71	86	114	139	171	204	242	329		
	Overload Capacity	150% of rated current: 1 minute for every 5 minutes; 180% of rated current: 3 seconds for every 30 seconds																		
	Max. Output Frequency (Hz)	0.00 ~ 300.00Hz																		
	Carrier Frequency (kHz)	2 ~ 6kHz (default setting 2kHz)																		

New

		230V																		
Frame Size		A			B			C			D			E			F			
Output Rating	NORMAL DUTY	Model VFD-□□□□□□□□	007	015	022	037	055	075	110	150	185	220	300	370	450	550	750	900		
	HEAVY DUTY	Rated Output Capacity (kVA)	2.0	3.2	4.4	6.8	10	13	20	26	30	36	48	58	72	86	102	138		
		Rated Output Current (A)	5	8	11	17	25	33	49	65	75	90	120	146	180	215	255	346		
		Applicable Motor Output (kW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90		
		Applicable Motor Output (HP)	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	120		
		Overload Capacity	120% of rated current: 1 minute for every 5 minutes; 160% of rated current: 3 seconds for every 30 seconds																	
		Max. Output Frequency (Hz)	0.00 ~ 599.00																	
		Carrier Frequency (kHz)	2 ~ 15 (default setting 8)						2 ~ 10 (default setting 6)						2 ~ 9 (default setting 4)					
		Rated Output Capacity (kVA)	1.9	2.8	4.0	6.4	9.6	12	19	25	28	34	45	55	68	81	96	131		
		Rated Output Current (A)	4.8	7.1	10	16	24	31	47	62	71	86	114	139	171	204	242	329		
	Overload Capacity	150% of rated current: 1 minute for every 5 minutes; 180% of rated current: 3 seconds for every 30 seconds																		
	Max. Output Frequency (Hz)	0.00 ~ 300.00																		
	Carrier Frequency (kHz)	2 ~ 6 (default setting 2)																		

460V 0.75~30kW Old

		460V																		
Frame Size		A			B			C												
Output Rating	NORMAL DUTY	Model VFD-□□□□□□□□	007	015	022	037	040	055	075	110	150	185	220	300						
	HEAVY DUTY	Applicable Motor Output (kW)	0.75	1.5	2.2	3.7	4.0	5.5	7.5	11	15	18.5	22	30						
		Applicable Motor Output (HP)	1	2	3	5	5	7.5	10	15	20	25	30	40						
		Rated Output Capacity (kVA)	2.4	3.2	4.8	7.2	8.4	10	14	19	25	30	38	48						
		Rated Output Current (A)	3.0	4.0	6.0	9.0	10.5	12	18	24	32	38	45	60						
		Overload Capacity	120% of rated current: 1 minute for every 5 minutes; 160% of rated current: 3 seconds for every 30 seconds																	
		Max. Output Frequency (Hz)	0.00 ~ 599.00Hz																	
		Carrier Frequency (kHz)	2 ~ 15kHz (default setting 8kHz)						2 ~ 10kHz (default setting 6kHz)											
		Rated Output Capacity (kVA)	2.3	3.0	4.5	6.5	7.6	9.6	14	18	24	29	34	45						
		Rated Output Current (A)	2.9	3.8	5.7	8.1	9.5	11	17	23	30	36	43	57						
	Overload Capacity	150% of rated current: 1 minute for every 5 minutes; 180% of rated current: 3 seconds for every 30 seconds																		
	Max. Output Frequency (Hz)	0.00 ~ 300.00Hz																		
	Carrier Frequency (kHz)	2 ~ 6kHz (default setting 2kHz)																		

New

		460V																		
Frame Size		A			B			C												
Output Rating	NORMAL DUTY	Model VFD-□□□□□□□□	007	015	022	037	040	055	075	110	150	185	220	300						
	HEAVY DUTY	Rated Output Capacity (kVA)	2.4	3.2	4.8	7.2	8.4	10	14	19	25	30	38	48						
		Rated Output Current (A)	3.0	4.0	6.0	9.0	10.5	12	18	24	32	38	45	60						
		Applicable Motor Output (kW)	0.75	1.5	2.2	3.7	4.0	5.5	7.5	11	15	18.5	22	30						
		Applicable Motor Output (HP)	1	2	3	5	5	7.5	10	15	20	25	30	40						
		Overload Capacity	120% of rated current: 1 minute for every 5 minutes; 160% of rated current: 3 seconds for every 30 seconds																	
		Max. Output Frequency (Hz)	0.00 ~ 599.00																	
		Carrier Frequency (kHz)	2 ~ 15 (default setting 8)						2 ~ 10 (default setting 6)											
		Rated Output Capacity (kVA)	2.3	3.0	4.5	6.5	7.6	9.6	14	18	24	29	34	45						
		Rated Output Current (A)	2.9	3.8	5.7	8.1	9.5	11	17	23	30	36	43	57						
	Overload Capacity	150% of rated current: 1 minute for every 5 minutes; 180% of rated current: 3 seconds for every 30 seconds																		
	Max. Output Frequency (Hz)	0.00 ~ 300.00																		
	Carrier Frequency (kHz)	2 ~ 6 (default setting 2)																		

460V 37~450kW Old

		460V													
Frame Size		D0	D	E	F	G	H								
Output Rating	NORMAL DUTY	37	45	55	75	90	110	132	160	185	220	280	315	355	450
	HEAVY DUTY	50	60	75	100	125	150	175	215	250	300	375	425	475	600
Model VFD-□□□□□□□□															
Applicable Motor Output (kW)															
Applicable Motor Output (HP)															
Rated Output Capacity (kVA)															
Rated Output Current (A)															
Overload Capacity		120% of rated current: 1 minute for every 5 minutes; 160% of rated current: 3 seconds for every 30 seconds													
Max. Output Frequency (Hz)		0.00 ~ 599.00Hz													
Carrier Frequency (kHz)		2 ~ 10kHz (default setting 6kHz) / 2 ~ 9kHz (default setting 4kHz)													
Rated Output Capacity (kVA)															
Rated Output Current (A)															
Overload Capacity		150% of rated current: 1 minute for every 5 minutes; 180% of rated current: 3 seconds for every 30 seconds													
Max. Output Frequency (Hz)		0.00 ~ 300.00Hz													
Carrier Frequency (kHz)		2 ~ 6kHz (default setting 2kHz)													

New

		460V													
Frame Size		D0	D	E	F	G	H								
Output Rating	NORMAL DUTY	37	45	55	75	90	110	132	160	185	220	280	315	355	450
	HEAVY DUTY	50	60	75	100	125	150	175	215	250	300	375	420	475	600
Model VFD-□□□□□□□□															
Rated Output Capacity (kVA)															
Rated Output Current (A)															
Applicable Motor Output (kW)															
Applicable Motor Output (HP)															
Overload Capacity		120% of rated current: 1 minute for every 5 minutes; 160% of rated current: 3 seconds for every 30 seconds													
Max. Output Frequency (Hz)		0.00 ~ 599.00													
Carrier Frequency (kHz)		2 ~ 10 (default setting 6) / 2 ~ 9 (default setting 4)													
Rated Output Capacity (kVA)															
Rated Output Current (A)															
Applicable Motor Output (kW)															
Applicable Motor Output (HP)															
Overload Capacity		150% of rated current: 1 minute for every 5 minutes; 180% of rated current: 3 seconds for every 30 seconds													
Max. Output Frequency (Hz)		0.00 ~ 300.00													
Carrier Frequency (kHz)		2 ~ 6 (default setting 2)													

2.2 UPDATE – MS300 firmware updated from 1.06 to 1.07

Function correction

Issues found in V1.06	Solutions provided in V1.07
1. As the motor drive's frequency decreases to zero and goes into the standby mode, if the RUN/STOP commands constantly switch quickly, there is a risk that the motor's frequency will stay at its lowest Fmin(0.5Hz)	We have improved the programs in standby mode. So that when switching between RUN and STOP command at the standby mode, the motor drive won't stay at the lowest frequency Fmin(0.5Hz).
2. If there is a strong interference while using RS485 communication, the motor drive goes into program burning mode and the keypad displays DELTA.	A new protection mechanism is added to RS485 to enhance its anti-interference ability.

Production

Version	Series number	Version	Series number
V1.07	Taiwan T1833	V1.07	WJ T1831

2.3 PHASE OUT – DTD Temperature Controller

Please be informed about DTD discontinuation by the end of this year.

- Last order date: January 2019
- Discontinuance date: July 2019

Natural replacement for DTD will be DTK, see table below for specific model replacement:

Size	Phase out	Replacement
1/16 DIN	DTD4848R0	DTK4848R01
	DTD4848V0	DTK4848V01
1/8 DIN	DTD4896R0	DTK4896R01
	DTD4896V0	DTK4896V01
72 x 72	DTD7272R0	DTK7272R01
	DTD7272V0	DTK7272V01

2.4

2.4 NEW – CliQ III Power supplies

Delta Electronics launches the 24V 120W/240W/480W CliQ III Series of DIN rail power supply. The new high power density product has a wide operating temperature range of -25°C to +70°C, providing full power up to +60°C. It can successfully start up at extremely low temperature of -40°C. Like the rest of the CliQ family of DIN rail products, conformal coating is applied on the PCBAs to protect against common dust and chemical pollutants found in industrial applications. The product is encased in rugged yet lightweight and full corrosion resistant aluminium casing.



Major safety approvals include IEC/EN/UL 60950-1 for Information Technology Equipment (ITE) and UL 508 for Industrial Control Equipment (ICE); EMI comply with EN 55032, Class B and fully compliant with RoHS Directive 2011/65/EU for environmental protection.

The DRP-24VxxxW1CAN has built-in active PFC with high power conversion of up to 91% efficiency. The universal AC input product is also certified for DC input. Some other features include compliance with harmonic current IEC/EN 61000-3-2, Class A, power boost 150% up to 5 seconds and built-in DC OK relay contact. The intelligent overload protection in constant current mode makes the power supply suitable for battery charging applications.

Highlights & Features

- Universal AC input voltage range
- Built-in constant current circuit for charging application
- High efficiency of up to 91% at 230Vac
- Power Boost of 150% for 5 seconds
- SEMI F47 compliance at 120Vac
- Extreme low temperature cold start at -40°C
- Built-in DC OK Contact and LED indicator for DC OK

2.5 **NEW** – DX series 3G/WAN VPN router: DX-3001H9

We are happy to announce the release of the DX series 3G/WAN VPN router, the DX-3001H9.

The DX-3001H9 allows users to connect any devices to the Internet via wire and 3G cellular networks so that users can remotely access the devices for monitoring, maintenance, data collection and product performance analysis. It can also communicate with other devices without human intervention through the Internet in manufacturing facilities. By means of its dual-SIM and wired Internet connection, it offers a triple-redundant connectivity. In case one link is down, there are still two available to keep the connection alive. With its flexible installation, it can be applied in various applications namely; pumping stations, wind farms, machinery OEM and Telecom Remote Management.



The DX-3001H9 is on stock and ready to be ordered.

2.6 **NEW** – Vision Sensors: VIS 100 series

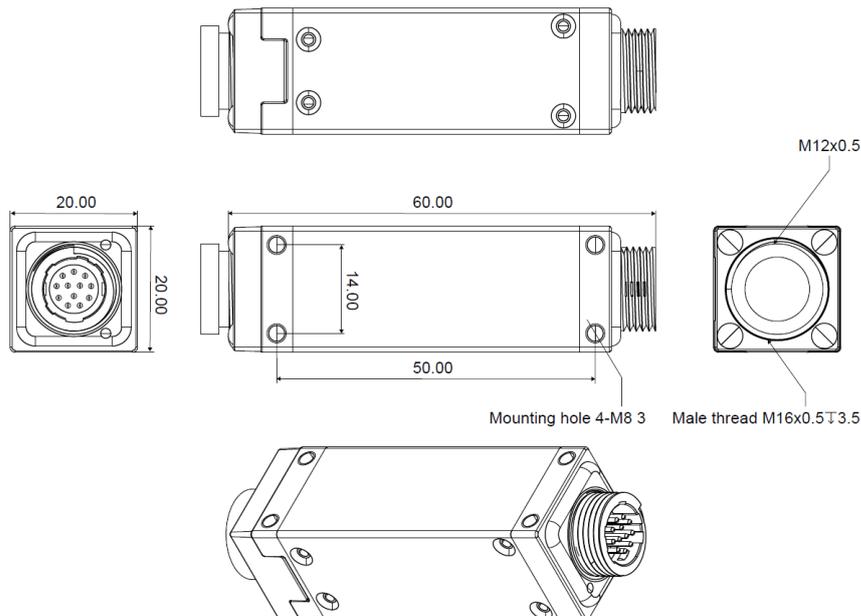
The Vision Sensor is usable for automated quality inspection for packaging, electronic manufacturing, product assembly etc. The Vision Sensor has built-in multi-functional Vision development tool modules for bar code reading, object positioning and detection.



Features

- Metal case, strong structure
- Enclosure rating: IP55
- Compact in size for flexible installation
- Advanced embedded system for high speed inspection capabilities
- User friendly interfaces for easy setup
- Build-in LED lighting
- CE certification
- Application: Food & Beverage, Pharmaceutical industry, Electronic devices, Plastic Industry etc.

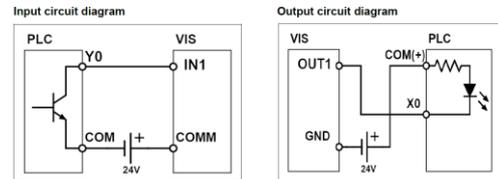
Dimensions (in mm)



Pin layout

Serial No.	Color	Signal	Description
1	Red	V24+	Voltage Supply Positive Pole
2	Yellow	V24-	Voltage Supply Negative Pole
3	Black	COMM	Common contact
4	Grey	IN1	Input 1
5	Brown	IN2	Input 2
6	White	OUT1	Output 1
7	Green	OUT2	Output 2
8	Orange	GND	ISO_GND

Wiring specification



Electrical Specifications

VIS 100	Vision Sensor	
Category	Item	Description
Processor	CPU	Dual-core ARM CORTEX A9 866 MHz
	Operating System	Linux 3.6
Hard Drive	Storage	DDR3 512 MB & 4 GB Flash
	Resolution	640 x 480 / 1280 x 960
Sensor	Sensor	1/3" CMOS
	Frame rate	640 x 480: 90 fps / 1280 x 960: 45 fps
	Dynamic range	63 dB
	Port Type	2 inputs, 2 outputs
I/O	Ethernet Speed	10 / 100Mbit
	Protocol	TCP / UDP
Lighting	Build in LED Lighting	
Power	Voltage	9-30 Vdc
	Current	24 Vdc: 0.1 A / 12V: 0.2 A
Operating Environment	Operating Temperature	-20 - 55 °C
Product Specifications	Dimensions	20 x 20 x 60 mm
	Camera	M12
	Case	Metal
	IP rating	IP55
	Weight	50 g.
User Interface	Web Browser	

Ordering information

Model Name	Model Function	Resolution	Interface			
			Identification	Object Inspection	Positioning	Edge Matching
VIS100-30G12D	1D/2D Barcode Identification	0.3 MP	O			
VIS100-30GBLD	BLOB,Location,Matching	0.3 MP		O	O	O

Model Name	Description	Length
	Standard with delivering	0.33 m
VIS-CA02I	Extension cable	2 m
VIS-CA04I	Extension cable	4 m

2.7 UPDATE – Firmware of DVP-12SE is updated from V1.90 to V1.92

Series	Models	Firmware Version	Release Date
DVP	DVP-12SE11T	V1.92	2018.07.30
	DVP-12SE11R	V1.92	(W1831)

Changes

- Added new special devices (D1229-D1231) to show MAC address. For instance, if the MAC address (in hexadecimal format) is 12:34:56:78:9A:BC, D1229=H'1234, D1230=H'5678, D1231=H'9ABC.
- Added a new parameter K15 for the DTM instruction (API68). You can use K15 to calculate the local time for sunrise and sunset. Refer to the info on ftp-site for more details.
- Added a new function to auto-identify if the slave supports the communication codes that read/write synchronously during data mapping through Ethernet. So that you do not need to change the function code after you found out the codes that read/write synchronously cannot be supported by the slave.
- Added a new communication mode (receive only) for the ETHRS instruction (API337). You can use more communication modes for more Ethernet applications. Refer to the attachment (marked in blue) for S₂ explanation in descriptions of the ETHRS instruction.

2.8 NEW – VFDSOFT 1.58

On the ftp-site you can find VFDSOFT 1.57 and the latest 1.58.

Changes 1.57

- Support new device IED2 , M300_L , M300_F

Changes 1.58

- Support new device IMD, CHPD, M300-L, M300-F, ME300, M300-HS,C2000-HS

2.9 NEW – DOP-103BQ and DOP-107EG.

We are happy to announce the release of the new DOP-100 models, the DOP-103BQ and DOP-107EG.

These two DOP-100 models are compatible with the DOP-B panel cut-out, making it more convenient if you want to change to DOP-100 series HMI. It is also very easy to change DOP-B software program to DOP-100 program by updating the HMI program from DOPSoft 2.xx to DOPSoft 4.xx.



Please see below for the main features of DOP-100 series:

- FTP and Cloud are both available for accessing historical data and recipes
- VNC remote monitoring: users can monitor register via smart devices and web browser
- User/password access system: operations to log
- PDF reader available
- Quick program compiling and downloading
- Improved picture library
- New functions on History curve, including zoom in/out function and scroll bar
- Enhanced recipe and alarm management function
- Animated gif available

Please see below for the DOP-B models that can be replaced by the new DOP-100 models:

- DOP-B03S211 can be replaced by DOP-103BQ
- DOP-B05S111, DOP-B07E515 and DOP-B07S515 can be replaced by DOP-107EG

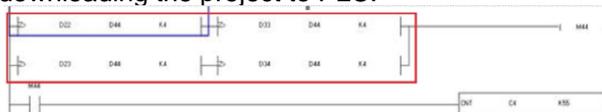
Both DOP-103BQ and DOP-107EG models are on stock and ready to be ordered.

2.10 UPDATE – DVP-ES2/EX2/ES2-C firmware updated from V3.48 to V3.60

Issues and solutions:

All the issues below can be fixed by upgrading firmware to V.3.49 or later.

1. Issue: When using DHSCS instruction to work with high-speed comparison interrupts, it is not possible to change values for comparison during the execution of DHSCS instruction.
Before firmware upgrade, what users can do: Stop DHSCS instruction and then change the values for comparison; after the values for comparison are changed, re-execute DHSCS instruction.
2. Issue: When executing instructions that comparing the absolute results (e.g., LDZ instructions) in a ladder diagram program, the same way as the red block shown below, a syntax error will occur, after downloading the project to PLC.



Before firmware upgrade, what users can do: Use instructions that comparing not the absolute results such as LD> and LD< instead.

3. Issue: Use DVP-ES2-C to execute CANopen INITC instruction, but it cannot initialize Delta servo drives.
4. Issue: Use DVP-ES2-C to execute CANopen DPLSVC instruction, but it cannot stop outputting immediately.

5. Issue: Use DVP-ES2-C to execute CANopen DPLSVC and DDRVIC instructions, if you stop and then start executing these instructions repeatedly, the instructions may stop executing all together.

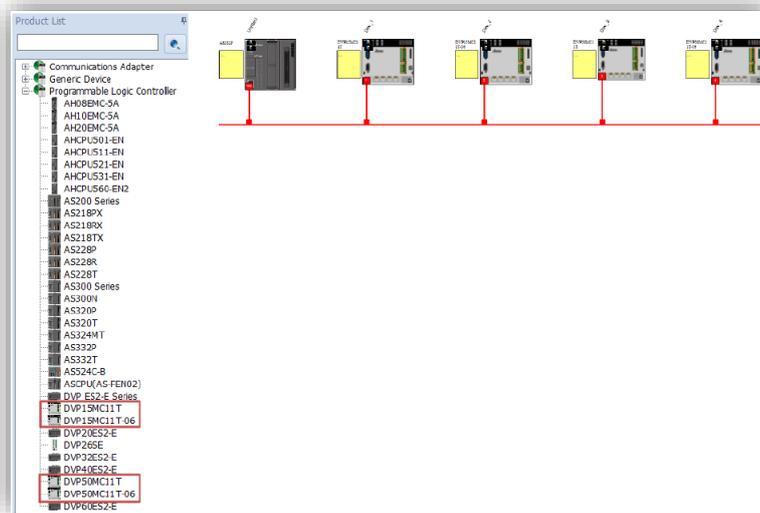
New instructions and new functions

1. XCMP instruction: Setting up to compare the inputs of multiple work stations YOUT instruction: Comparing the outputs of multiple work stations.
Refer to [DELTA_ES2_EX2_V3.60_T_EN_20180814-ATT1.pdf](#) on ftp-site for more information.
2. Added a new marking function: You can set number of deceleration pulses after marking to less than 0 (<0) and when marking is done, the output stopped immediately.
Refer to [DELTA_ES2_EX2_V3.60_T_EN_20180814-ATT2.pdf](#) on ftp-site for more information.
3. New masking functions (associated with the marking functions):
When the masking number is
-1 in the front masking area, it indicates masking occurs in the acceleration area
-2 in the front masking area means masking occurs in the areas of acceleration and full-speed
-3 (only available for DCLLM instruction) in the front masking area means masking occurs in the areas of acceleration, full-speed and deceleration.
Refer to DCLLM instruction for reference.
4. New alignment mark function: when M1156 (the masking and alignment marking function) is enabled, if the target number of output pulse is too small, the function is cancelled automatically. But once upgraded to V3.49, the mask and alignment marking function will not be cancelled automatically even if the target number of output pulse is too small.
5. Added new function to REF instruction: refreshing high-speed pulse position immediately.
Refer to [DELTA_ES2_EX2_V3.60_T_EN_20180814-ATT1.pdf](#) on ftp-site for more information.
6. When the PLC is experiencing unstable power, you can set M1019 to ON and the PLC will not keep trying to RUN, and will enter the error state. An error LED indicator will blink rapidly every 0.2 seconds. This function can warn personnel on site that unstable power or short circuit may occur and they need to clear up the problem.
7. Added a new parameter K15 for the DTM instruction (API68). You can use K15 to calculate the local time for sunrise and sunset.
Refer to [DELTA_ES2_EX2_V3.60_T_EN_20180814-ATT1.pdf](#) on ftp-site for more information.
8. Added new instructions and functions for CANopen communication modes of DVP-ES2-C:
 - Now supports new Delta servo drive, ASDA-A3
 - ZRNM instruction: Setting the homing mode for Delta servo drive
 - DZRNC instruction: Servo homing
 - COPWL instruction: Writing multiple CANopen parameter values
 - RSTD instruction: Sending Reset or NMT command
 - EMER instruction: Reading Emergency message
 - CANRS instruction: User-defined CAN communication sending and receiving in DS301 mode
 - Heartbeat function: When a heartbeat error occurs, you can set M1617 to OFF to have all the drives go OFF (default: M1617=OFF) or set M1617 to ON to have only the defective one go OFF.
Refer to [DELTA_ES2_EX2_V3.60_T_EN_20180814-ATT3.pdf](#) on ftp-site for more information.

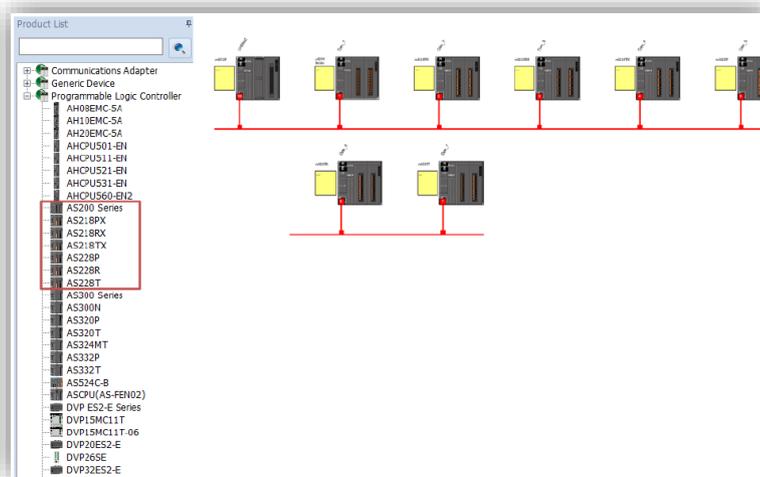
Firmware V3.60 release date: 20-8-2018 (W1833)

2.11 UPDATE – EIP Builder V1.05 is released

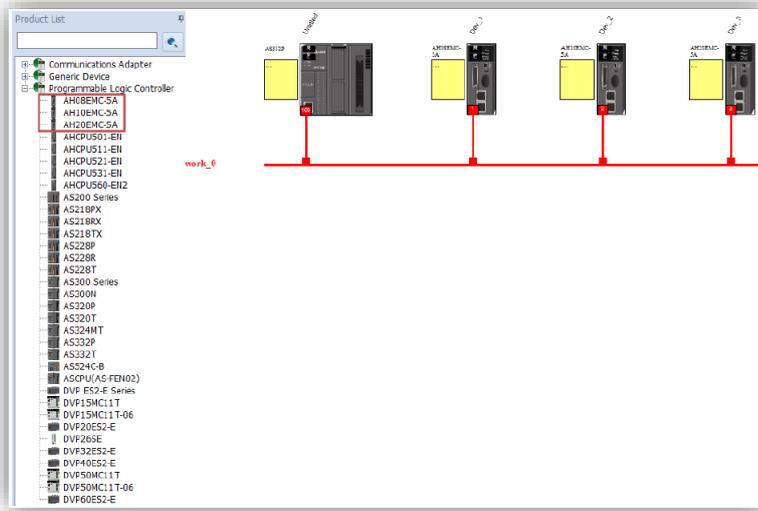
1. EIP Builder V1.05 now supports DVP15MC series, DVP50MC series and EtherNet/IP slaves.



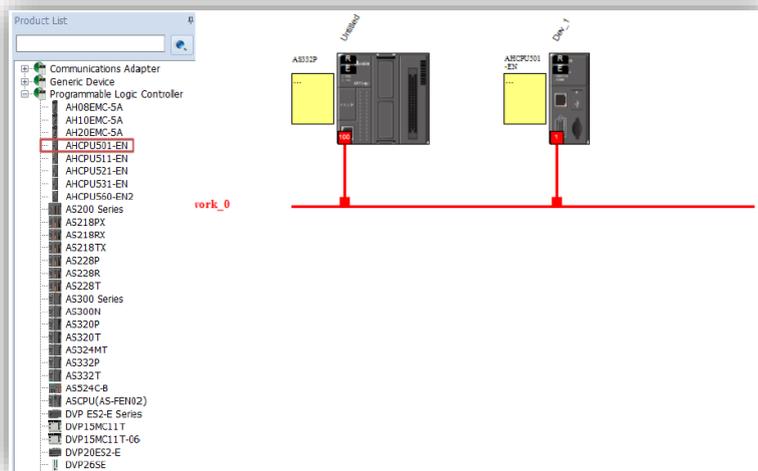
2. EIP Builder V1.05 now supports AS200 series and EtherNet/IP masters and slaves



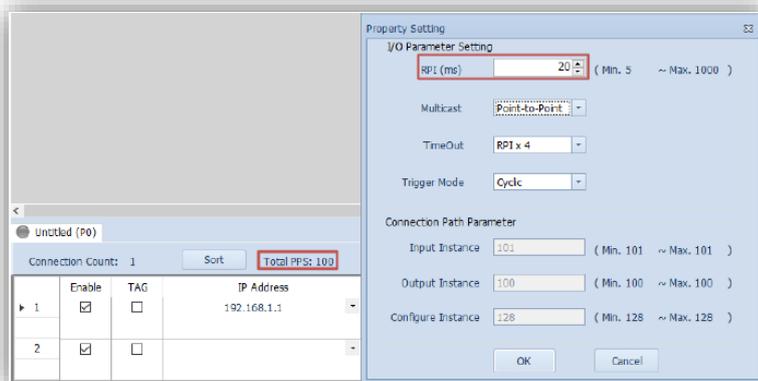
3. EIP Builder V1.05 now supports AH08EMC, AH10EMC, AH20EMC and EtherNet/IP slaves



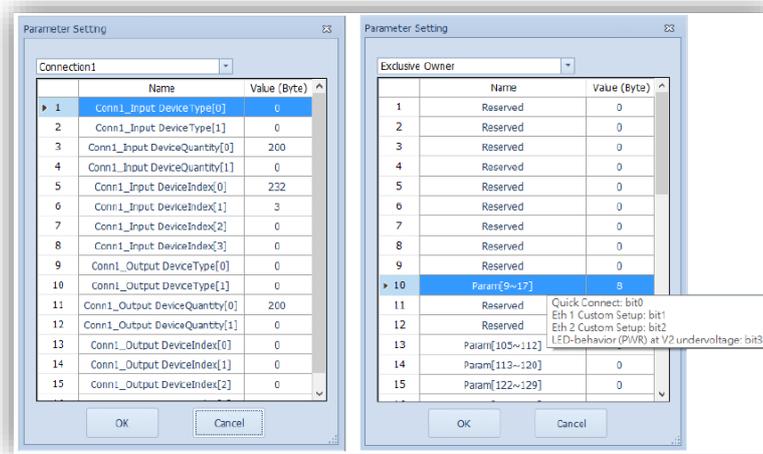
4. EIP Builder V1.05 now supports AH501EN and EtherNet/IP masters and slaves



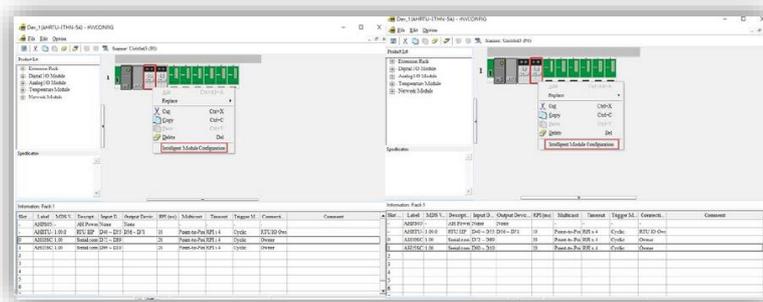
5. Added PPS (Packet Per Second) in data mapping - Property Setting page



6. Added descriptions of parameter name and parameter number in the Parameter Setting page



7. AHRTU now supports AH10SCM and AH15SCM. And Intelligent Module Configuration is also available



You can download EIP Builder V1.05 from our ftp-site.

2.12 UPDATE – ASDA-Soft updated to V5.3.4

For the following models: ASD-A2, ASD-B2, ASD-M, ASD-S and ASD-A2R.

Amended functions

- In the E-Cam file saving function, it automatically saves the diameters of the rotary shear cutter and encoder to fix the cutting length overrange warning.
- E-Cam intermittent printing table: fix the error that occurs when you enter the same value for both the Printing range and Blank range.
- Change the driver of CP210x.
- Accelerate the curve drawing speed of the scope.
- Add the system identification function for the ASD-M-R models. (Firmware Version V3009)
- Fix the system identification error of the B2-F models in DMCNET mode (0x0B).
- Add the E-Cam phase alignment function [0x35] for the DI.
- Fix the data precision error of the PR mode option [0x08] Write the specified parameter to the specified path.
- Modification for the Scope button behaviors is as follows:

Blue button: all channels use the same coordinate system and automatically scale the display.

Green button: all channels use different coordinate systems and automatically scale



2.13 NEW – AS300 series CPUs: AS300N-A, AS320P-B and AS320T-B

We are happy to announce the release of the new AS300 series CPUs: AS300N-A, AS320P-B and AS320T-B.



The AS300N-A is the AS300 series CPU without built-in I/O point, which is useful and flexible when your I/O requirement does not fit with our standard CPU I/O combinations. As for the AS320T-B and the AS320P-B, they are the standard CPUs with built-in 8 digital inputs and 12 digital outputs and with spring type I/O connectors.

These three new CPUs all have Delta patented easy-to-install system, have built-in EtherNet/IP Network and it is possible to add AS300 available function cards. Please see below for the technical information:

Model	AS332T-A	AS332P-A	AS324MT-A	AS320T-B	AS320P-B	AS300N-A
Built-in I/O	Digital Inputs: 16 Digital Outputs: 16		Digital Inputs: 12 Digital Outputs: 12	Digital Inputs: 8 Digital Outputs: 12		-
Output	NPN	PNP	Differential	NPN	PNP	-
I/O Connectors	MIL High density (Special connector needed)			Spring type connector		-
High-speed I/O	6 axes 200 kHz 6 channels 200 kHz		2 axes + 4 axes (200 kHz) 2 + 4 channels (200 kHz)	6 axes 200 kHz 6 channels 200 kHz		-

All AS300 series CPUs are now on stock and ready to be ordered. You can find more info on our ftp-site.

3 Application

3.1 NEW – Application Notes

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

- [MS300 pulse train.pdf](#)
- [Food and Beverage Industry Notification - Process Cooling Water Control.pdf](#)
- [Robotics Industry Notification - Delta IA Product Automatic ICT Test Machine Application.pdf](#)
- [Delta Electric Vehicle Motor Electric Dynamometer Solution.pdf](#)
- [Boneless Coil Winding Machine Solution.pdf](#)
- [Water Treatment Industry Notification - UF System.pdf](#)
- [Electronics Industry Notification - Automatic PCB Labeling Machine Solution.pdf](#)
- [Robotics Industry Notification - Delta IA Product Vehicle Seat Belt Assembly Application.pdf](#)
- [Fluid Industry Notification - Steam Flow Monitoring System.pdf](#)
- [Industry Notification - Application of Delta C2000-HS on High-Speed Air Levitation Gas Turbine.pdf](#)

3.2 Frequency command by pulse train on MS300

See application note: MS300 pulse train.pdf

Summary:

- Connect pulse train signal to MI7.
- Set Pr00-20=4, Pr02-07=0, Pr10-00=5, Pr10-16=5
- Pr11-42=0 (Pr10-22 has no effect)

$$F_{out} = \left(\frac{F_{MI7}}{Pr10 - 01} \right) * \left(\frac{Pr10 - 17}{Pr10 - 18} \right) * \left(\frac{1/2 (Pr05 - 04)}{4} \right)$$

where F_{out} =Output frequency of the drive in Hz
 F_{MI7} =Frequency of signal on MI7 in Hz

- Pr11-42 Bit11=1 (Pr10-22 enabled)
Pr11-42=2048dec (=800hex=1000000000000bin)
Set Pr10-22=0 (Output frequency)

$$F_{out} = \left(\frac{F_{MI7}}{Pr10 - 01} \right) * \left(\frac{Pr10 - 17}{Pr10 - 18} \right) * 2$$

where F_{out} =Output frequency of the drive in Hz
 F_{MI7} =Frequency of signal on MI7 in Hz

- Pr11-42 Bit11=1 (Pr10-22 enabled)
Pr11-42=2048dec (=800hex=1000000000000bin)
Set Pr10-22=1 (Motor shaft frequency)

$$F_{out} = \left(\frac{F_{MI7}}{Pr10 - 01} \right) * \left(\frac{Pr10 - 17}{Pr10 - 18} \right) * (Pr05 - 04)$$

$$F_{shaft} = \frac{F_{out}}{Pr05 - 04}$$

where F_{out} =Output frequency of the drive in Hz
 F_{MI7} =Frequency of signal on MI7 in Hz
 F_{shaft} =Frequency of the motor shaft in Hz

4 FAQ

4.1 VFD Series AC Motor Drives

C/CP2000

Q Why has Pr02-33 no effect in CP2000?

A Pr02-33 Output Current Level Setting for Multi-function Output Terminals (Pr02-13 / 02-14 / 02-15).

Before firmware version 2.02, Pr02-33 was set as integer.

In firmware version 2.02 and 2.03, Pr02-33 is set as floating xx.xx%.

But internally it is still an integer in calculations.

If you set Pr02-33=50.00%, internally it is 5000%. Therefore the current level will never be reached.

This will be corrected in firmware version 2.04.

Until that time (in 2.02 and 2.03) please set Pr02-33=0.50% if you want 50% level, etc.