



Automation for a Changing World

Delta Barcode Scanners **DFS/DAH Series** (Fixed-mount Type / Handheld Type)



www.deltaww.com

 **DELTA**
Smarter. Greener. Together.

Wide Target Area, Fast, Precise and Reliable Capture

With the advance of technology today, manufacturing industries are facing a huge transformation. Production lines need more precise and high-speed field devices to help achieve smart manufacturing and IoT worldwide.

To meet the growing demand for barcode reading on production lines, Delta provides a variety of barcode scanning products, including fixed and handheld scanners. These products can efficiently decode a variety of 1D and 2D barcodes on the market using self-developed decoding algorithms.

Delta Barcode Scanners not only can read 1D/2D barcodes, but can also read defective, damaged and DPM barcodes. Delta scanners are suitable for electronics manufacturing, food packaging, as well as logistic industry applications, including communications and production tracking, achieving automation for a changing world for our customers!



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Delta Fixed-mount Barcode Scanner

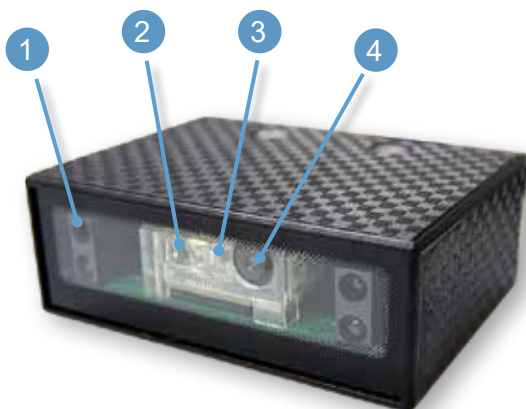
DFS131 Series

Delta Fixed-mount Barcode Scanner DFS131 Series adopts built-in LED indicators and a CMOS Sensor. It ensures product barcodes are effectively detected when passing through a scanning area without manual adjustment, achieving highly accurate barcode reading capability under any lighting conditions. The DFS131 Series is applicable to industrial conveyors and can easily complete scanning through the operating route during manual handling for fully automatic barcode scanning. In addition, the DFS131 Series supports various installations for independent and embedded applications, providing a flexible and highly efficient barcode scanner.

Product Features

- Flexible design, suitable for independent, embedded applications and various installations
- Built-in LED indicators and CMOS Sensor to ensure valid reading under any lighting conditions
- Barcodes attached to products or components can be effectively detected when passing through a scanning area, without manual operation
- Manual-free image trigger function is matched with delivery structures and conveyors to achieve fully automatic barcode reading capabilities

Part Names



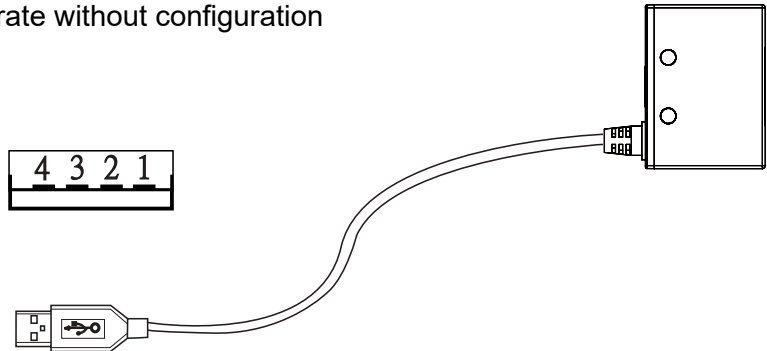
No.	Name
1	IR Sensor
2	LED Light (White)
3	LED Aimer (Red)
4	CMOS Sensor

Installation

USB Connection

1. Connect the barcode scanner to a computer
2. The barcode scanner can directly operate without configuration

Pin	Signal
1	+5VCC
2	Data -
3	Data +
4	GND



System Interface

Supports 2 types of USB interfaces: USB HID/VCPB

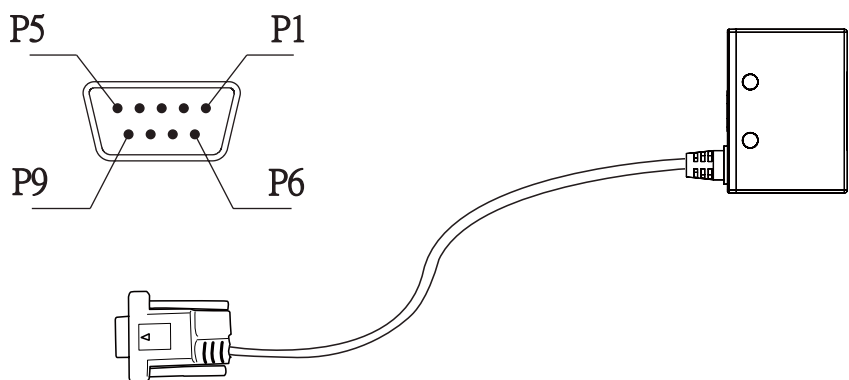
1. HID keyboard as default input (USB HID)
2. User can switch between USB HID/USB VCP modes
3. Provides free USB VCP drivers (please refer to Delta's official website or contact local distributors to download)
4. Software triggers: only supported by USB VCP

RS-232 Connection

1. Connect the barcode scanner to a computer
2. Supply power to pin 9, or install a power adapter to a DC terminal

RS-232 (D-Sub 9 female terminal)

Pin	Signal
2	TXD (Out)
3	RxD (In)
5	GND
7	CTS (In)
8	RTS (Out)
9	+5VCC



System Interface

1. The default communication format is 9600-8-N-1
 2. RS232 interface supports a software trigger
- Different communication interfaces (USB/RS232) or modes (USB HID/VCP) are set with the EZU software tool.

Delta Handheld Barcode Scanner

DAH1000S/DAH2000 Series

Delta's latest handheld barcode scanner DAH Series offers high sensing and fast capture capabilities with high-end barcode reading algorithms. With advanced and stable reading ability, it can easily capture 1D and 2D barcodes within the range of 5-20 cm without the need for manual interference to fulfill the application demands for various environments. In addition, the DAH1000S Series is anti-static and provides high-precision and high-speed reading capabilities.

The DAH Series adopts a lightweight and ergonomic design with a comfortable grip, for engaging in prolonged operations. With the built-in centralized aimer, beeper, and indicator lights, it can precisely locate any barcodes and provide real-time operating feedback to users. It is especially suitable for harsh industrial environments such as machining, electronics, and energy industries, as well as in the common service, logistics and medical industries.

Product Features

- Fast code capture speed without aiming precisely
- Easy to read barcodes under low contrast, optical noise, uneven exposure or damaged conditions
- Easy commands for users to set up functions such as:
 - Manual illumination adjustment based on various environments
 - Single and multiple trigger modes
 - Selective barcode types based on user requirements
 - Self-defined exported content of the scanning codes for flexible data acquisition
- Stable and reliable operation for high-speed image capturing with no need for manual interference or aiming in precise barcode direction
- No detached components, saving maintenance cost
- Robust design: drop impact resistance at 1-1.5 m high
- Lightweight and ergonomic design
- The DAH1000S Series features an anti-static function



Part Names and Functions



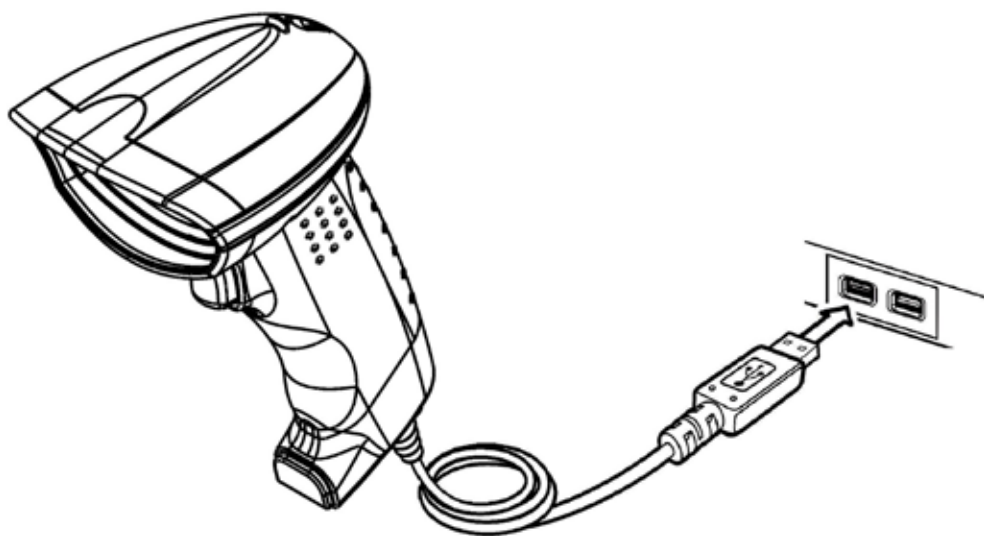
DAH2000 Series

DAH1000S Series

No.	Name	Description
1	Centralized aimer	Barcode reading
2	Trigger	Press and hold to read
3	Handle	Gripping point
4	Cable	USB communication

Installation

Direct USB connection to PCs, no installing configuration required



Applications

- Retail



- Logistics



- Manufacturing



- Medical Services



Specifications

DFS131 Series

Optics & Performance	Light Source	White LED LED red dot aiming
	Sensor	Area image sensor
	Resolution	5 mil (1D barcode) / 6.67 mil (2D barcode)
	Scan Rate	30 frame/sec.
	Scan Angle	Horizontal 37.8° / Vertical 28.8°
	Contrast Ratio	30%
Product Spec.	Dimensions	56 x 41 x 20 mm (W x H x D)
	Weight	120g
	Material	ABS (housing), PC (back side)
	Communication Interface	USB/RS-232
	Cable	90 cm
	Trigger	Automatic induction; command trigger
	Indicators	LED, buzzer
Power Supply	Power Operation Voltage	5V _{DC} ± 5%
	Working Current	< 320 mA
	Standby Current	< 130 mA
Environment	Operating Temperature	-10~55°C
	Storage Temperature	-20~65°C
	Humidity	0%~95%RH (non-condensing)
Certifications	IP Rating	IP55
	Ambient Light	30,000 Lux (sunlight)
	Regulatory ESD	Functional after 4KV contact, 8KV air discharge
		FCC Part 15B Class B, CE EN55024/32
	Safety Certification	EN/IEC62471 (exempt group)
Environmental Safety Certification	WEEE, RoHS 2.0	

Specifications

DAH1000S Series

Optics & Performance	Light Source	640 nm visible red LED / 5000K CCT White LED
	Sensor	Area image sensor
	Resolution	5 mil (Code39 / 1D barcode) / 6.67 mil (PDF417 / 2D barcode)
	Scan Rate	30 frames/sec.
	Scan Angle	Horizontal 37.8° / Vertical 28.8° / Pitch angle ±45° / Skew angle ±45° / Roll angle 360°
	Print Contrast Ratio	30%
	Width of Field	116mm (13mil Code39)
Product Spec.	Dimensions	71 x 166 x 84 mm (W x L x H)
	Weight	172g
	Color	Black & Gray
	Material	ABS
	Connector	USB Type A
	Cable	2.1 M
	Trigger	Scan button
	Indicators	LED, buzzer, vibrator
Power Supply	Operation Voltage	5V _{DC} ±5%
	Working Current	< 210mA
	Standby Current	< 85mA
Connectivity	Interface / Profile	USB HID / USB VCP
Environment	Operating Temperature	-10~40°C
	Storage Temperature	-20~65°C
	Humidity	0%~95% RH (non-condensing)
	Drop Durability	1.5 M
	IP Rating	IP42
	Ambient Light	100,000 Lux (sunlight)

Specifications

DAH2000 Series

Product Spec.	Dimensions	74 mm x 186 mm x 91 mm (W x H x D)
	Weight	300 g
Power Supply	Power Voltage	5 V _{DC} ± 10%
	Rated Current Consumption	500 mA
Optics & Performance	Light Source Aimer	650 nm laser diode (LD)
	Light Source	White LED
	Field of View	21.2° (V) x 32.9° (H)
Connectivity	Communication Interface	USB 2.0
	Sensor	1280 x 960 global shutter sensor
	Indicators	LED and beeper
Environment	Certifications	CE
	Operating System	Windows XP, Windows 7 or above
	Operating Temperature	0°C ~ 50°C
	Storage Temperature	-40°C ~ 85°C
	Relative Humidity	30% ~ 90% RH (non-condensing)
	Operating Height	Below 2000 m
	Vibration	No error: 3-axis; 10 ~ 50 Hz; 10 m/s ² (1.0 G); 10 minutes No damage: 3-axis; 10 ~ 50 Hz; 20 m/s ² (2.0 G); 2 hours
	Drop Impact Resistance	Drop at 1 m/5 ft on concrete








Reading Range

Model	Type	Operating Distance
DFS131	5 mil Code39	45 mm ~ 154 mm
	10 mil Code39	65 mm ~ 270 mm
	13 mil EAN/UPC	64 mm ~ 313 mm
	6.67 mil PDF417	52 mm ~ 136 mm
	10 mil Data Matrix	45 mm ~ 135 mm
	20 mil QR Code	47 mm ~ 246 mm
DAH1000S	5 mil Code39	50 mm ~ 120 mm
	20 mil Code39	55 mm ~ 370 mm
	13 mil UPC	55 mm ~ 270 mm
	6.67 mil PDF417	50 mm ~ 115 mm
	10 mil DataMatrix	50 mm ~ 120 mm
	20 mil QR Code	40 mm ~ 220 mm
DAH2000	9 mil Barcode	60 mm ~ 100 mm
	11 mil Barcode	50 mm ~ 140 mm
	14 mil Barcode	50 mm ~ 160 mm
	40 mil Barcode	40 mm ~ 280 mm
	116 mil Barcode	150 mm ~ 430 mm

Symbologies - 1D Barcodes

Application		Barcode Type		DAH1000S	DAH2000	DFS131
Industrial Automation & Manufacturing	General industrial manufacturing	Code 93	 ABC-1234-/+	O	O	O
	General industrial manufacturing/internal management system	Full ASCII Code 39	 Aa-1234	O	X	O
	General industrial manufacturing/package exterior labeling	Interleaved 2 of 5	 1234567890	O	O	O
	Logistics/packaging industries	Code 128	 ABC-abc-1234	O	O	O
	General industrial manufacturing/logistics management	Industrial 2 of 5	 12345678	O	X	O
Retail Market	International retail markets	EAN-13	 9 780201 379824	O	O	O
		EAN/JAN-13	 9 780201 379824	O	X	O
	General merchandise retailers in the United States & Canada	UPC-A	 7 25272 73070 6	O	O	O
	Small packaged merchandise in retail markets in the United States & Canada	UPC-E	 0 123456 5	O	O	O
	International retail markets/small packaged merchandise	EAN-8	 9031 1017	O	O	O
		EAN/JAN 8	 9031 1017	O	X	O
	Merchandisers with additional information (e.g. serial numbers, expiry dates, batch numbers, and more)	GS1 Databar	 (01)01234567890128	O	X	O

Symbologies - 1D Barcodes


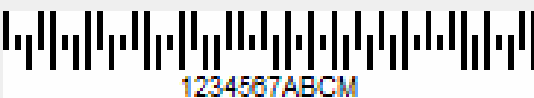







Application		Barcode Type	DAH1000S	DAH2000	DFS131
Warehousing & Logistics	Dispatching, product tracking, and distribution point receiving	EAN/UCC 128 	O	X	O
	Air cargo management	IATA Code 2 of 5 	O	X	O
	Aeronautic industry & warehouse equipment for inventory	Matrix 2 of 5 	O	X	O
	Warehousing for inventory	MSI 	O	X	O
Medical/ Services Books/ Telephones	Italian pharmaceuticals	Code 32 	O	X	O
	Libraries, blood banks, small parcel delivery	Codabar 	O	X	O
	Telephone	Code 11 	O	X	O

Symbologies - 2D Barcodes

Application	Barcode Type	DAH1000S	DAH2000	DFS131
Industrial automation, blood banks	Codablock A 	O	X	O
Small labels	Codablock F 	O	X	O
Industrial automation, electronics	PDF417 	O	X	O
Objects of small site area	MicroPDF417 	O	X	O
Hospital (e.g. patient identification, medicine labels, IV, specimens, and more)	Aztec Code 	O	X	O
Occasions that can damage barcode easily (e.g. special environment of high temperature or parts contacted with chemical cleaners)	Data Matrix 	O	O	O
United States postal tracking services	MaxiCode 	O	X	O
Media	QR Code 	O	O	O
	Micro QR Code 	O	X	O
Encrypted data & information	Chinese Sensible (Han Xin) Code 	O	X	O

Symbologies - Postal Codes

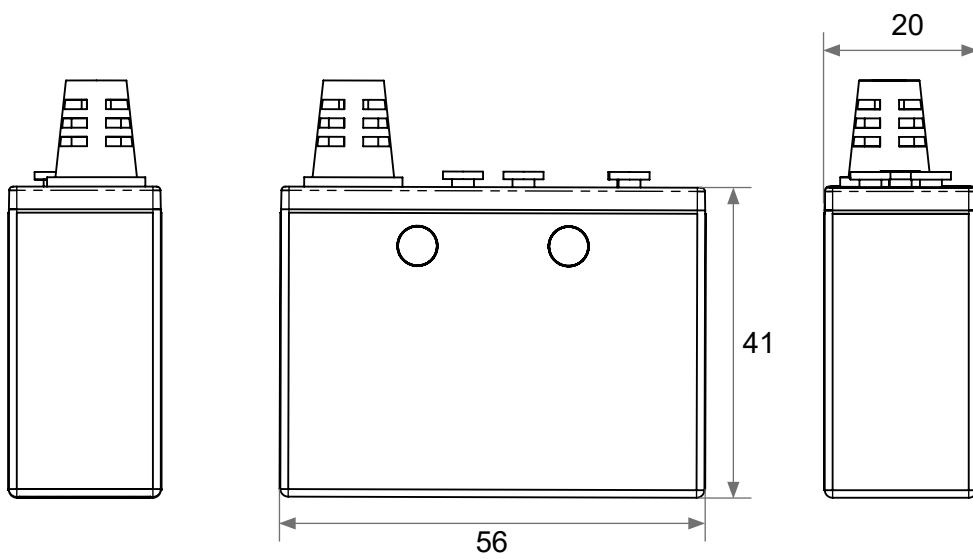
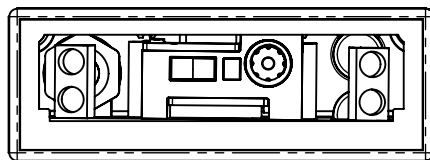
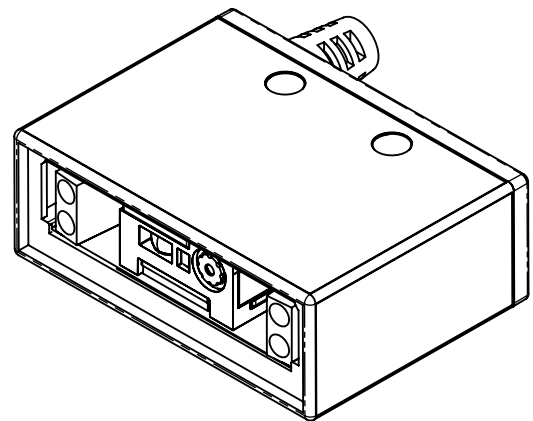
(Supported by DFS131/DAH1000S Series)

Country	Barcode Type	
Australia		
United Kingdom		
Canada		
China		
Japan		
Korea		
Netherlands		
United States	Postal Alpha Numeric Encoding Technique (PLANET) Code	
	(Postal Numeric Encoding Technique) POSTNET Code	

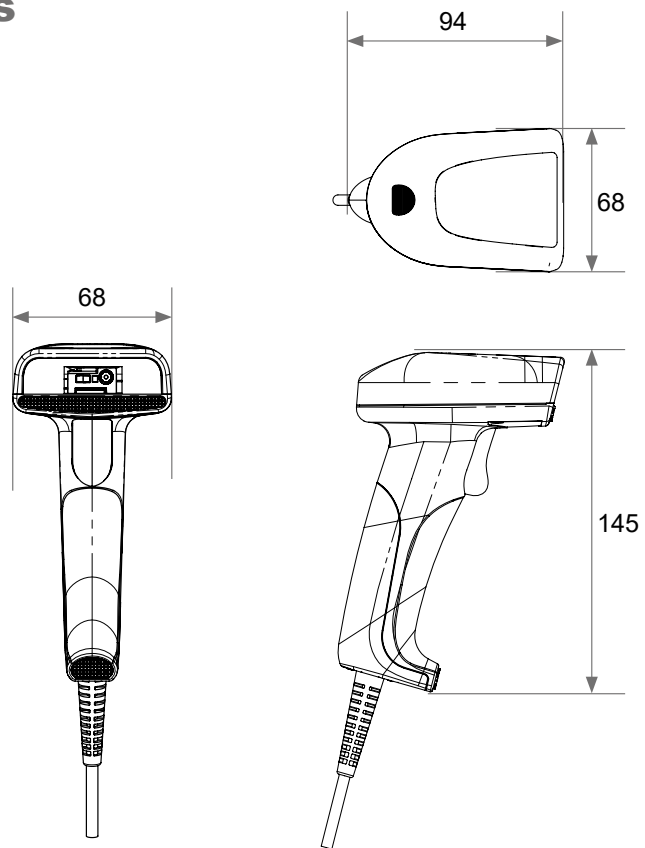
Dimensions

DFS131 Series

Unit: mm

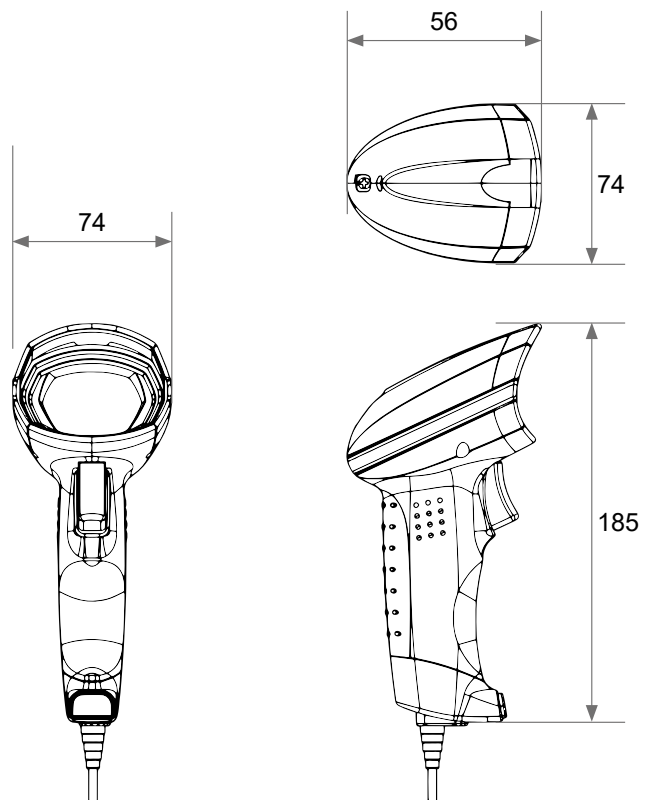


DAH1000S Series



Unit: mm

DAH2000 Series



Unit: mm

Ordering Information

Product Series	Model	Communication Interface
DFS131	DFS131-USB	USB
	DFS131-232	RS-232
DAH1000S	DAH1000S-USB	USB
DAH2000	DAH2000-USB	USB



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Industrial Automation Headquarters

Delta Electronics, Inc.

Taoyuan Technology Center
No.18, Xinglong Rd., Taoyuan District,
Taoyuan City 33068, Taiwan
TEL: 886-3-362-6301 / FAX: 886-3-371-6301

Asia

Delta Electronics (Shanghai) Co., Ltd.

No.182 Minyu Rd., Pudong Shanghai, P.R.C.
Post code : 201209
TEL: 86-21-6872-3988 / FAX: 86-21-6872-3996
Customer Service: 400-820-9595

Delta Electronics (Japan), Inc.

Tokyo Office
Industrial Automation Sales Department
2-1-14 Shibadaimon, Minato-ku
Tokyo, Japan 105-0012
TEL: 81-3-5733-1155 / FAX: 81-3-5733-1255

Delta Electronics (Korea), Inc.

Seoul Office
1511, 219, Gasan Digital 1-Ro., Geumcheon-gu,
Seoul, 08501 South Korea
TEL: 82-2-515-5305 / FAX: 82-2-515-5302

Delta Energy Systems (Singapore) Pte Ltd.

4 Kaki Bukit Avenue 1, #05-04, Singapore 417939
TEL: 65-6747-5155 / FAX: 65-6744-9228

Delta Electronics (India) Pvt. Ltd.

Plot No.43, Sector 35, HSIIDC Gurgaon,
PIN 122001, Haryana, India
TEL: 91-124-4874900 / FAX : 91-124-4874945

Delta Electronics (Thailand) PCL.

909 Soi 9, Moo 4, Bangpoo Industrial Estate (E.P.Z),
Pattana 1 Rd., T.Phraksa, A.Muang,
Samutprakarn 10280, Thailand
TEL: 66-2709-2800 / FAX : 662-709-2827

Delta Energy Systems (Australia) Pty Ltd.

Unit 20-21/45 Normanby Rd., Notting Hill Vic 3168, Australia
TEL: 61-3-9543-3720

Americas

Delta Electronics (Americas) Ltd.

Raleigh Office
P.O. Box 12173, 5101 Davis Drive,
Research Triangle Park, NC 27709, U.S.A.
TEL: 1-919-767-3813 / FAX: 1-919-767-3969

Delta Greentech (Brasil) S/A

São Paulo Office
Rua Itapeva, 26 – 3º Andar - Bela Vista
CEP: 01332-000 – São Paulo – SP - Brasil
TEL: 55-11-3530-8642 / 55-11-3530-8640

Delta Electronics International Mexico S.A. de C.V.

Mexico Office
Vía Dr. Gustavo Baz No. 2160, Colonia La Loma,
54060 Tlalnepanlta Estado de Mexico
TEL: 52-55-2628-3015 #3050/3052

EMEA

Headquarters: Delta Electronics (Netherlands) B.V.

Sales: Sales.IA.EMEA@deltaww.com
Marketing: Marketing.IA.EMEA@deltaww.com
Technical Support: iatechnicalsupport@deltaww.com
Customer Support: Customer-Support@deltaww.com
Service: Service.IA.emea@deltaww.com
TEL: +31(0)40 800 3800

BENELUX: Delta Electronics (Netherlands) B.V.

De Witbogt 20, 5652 AG Eindhoven, The Netherlands
Mail: Sales.IA.Benelux@deltaww.com
TEL: +31(0)40 800 3800

DACH: Delta Electronics (Netherlands) B.V.

Coesterweg 45, D-59494 Soest, Germany
Mail: Sales.IA.DACH@deltaww.com
TEL: +49(0)2921 987 0

France: Delta Electronics (France) S.A.

ZI du bois Challand 2, 15 rue des Pyrénées,
Lisses, 91090 Evry Cedex, France
Mail: Sales.IA.FR@deltaww.com
TEL: +33(0)1 69 77 82 60

Iberia: Delta Electronics Solutions (Spain) S.L.U

Ctra. De Villaverde a Vallecas, 265 1º Dcha Ed.
Hormigueras – P.I. de Vallecas 28031 Madrid
TEL: +34(0)91 223 74 20

Carrer Llacuna 166, 08018 Barcelona, Spain

Mail: Sales.IA.Iberia@deltaww.com

Italy: Delta Electronics (Italy) S.r.l.

Ufficio di Milano Via Senigallia 18/2 20161 Milano (MI)
Piazza Grazioli 18 00186 Roma Italy
Mail: Sales.IA.Italy@deltaww.com
TEL: +39 02 64672538

Russia: Delta Energy System LLC

Vereyskaya Plaza II, office 112 Vereyskaya str.
17 121357 Moscow Russia
Mail: Sales.IA.RU@deltaww.com
TEL: +7 495 644 3240

Turkey: Delta Greentech Elektronik San. Ltd. Sti. (Turkey)

Şerifaii Mah. Hendem Cad. Kule Sok. No:16-A
34775 Ümraniye – İstanbul
Mail: Sales.IA.Turkey@deltaww.com
TEL: + 90 216 499 9910

GCC: Delta Energy Systems AG (Dubai BR)

P.O. Box 185668, Gate 7, 3rd Floor, Hamarain Centre
Dubai, United Arab Emirates
Mail: Sales.IA.MEA@deltaww.com
TEL: +971(0)4 2690148

Egypt + North Africa: Delta Electronics

511 Cairo Business Plaza, North 90 street,
New Cairo, Cairo, Egypt
Mail: Sales.IA.MEA@deltaww.com