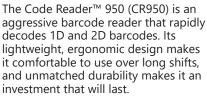


Advanced, cost-effective barcode readers

The Code Reader™ line of advanced barcode readers have been designed to provide reliable data capture in a variety of settings, while maintaining an ergonomic, lightweight form factor. Code has developed the world's best image capture by using a powerful vision sensor and built-in lighting to reliably capture the barcode while not relying on external light sources.

Three models are available. Each of these models can be purchased with a USB or serial communications option.







- · High-speed, omnidirectional reading of 1D and 2D barcode symbologies.
- Manual or automatic triggering. Stand (sold separately) is required for automatic triggering.
- User feedback with LED and audible tone.
- · All-inclusive kits include reader and cable.
- · Reads barcodes on backlit screens such as those found on mobile devices.
- Optional stand (sold separately).



The Code Reader™ 1100 (CR1100) is a compact, corded barcode reader that takes up limited workspace without compromising barcode reading performance. The patented dual-field optical platform of the CR1100 allows users to quickly scan both wide 1D barcodes and small dense 2D barcodes

Features

- · High-speed, omnidirectional reading of 1D and 2D barcode symbologies.
- · Manual or automatic triggering.
- Pre-threaded screw holes to allow for mounting.
- · User feedback with LED and audible tone.
- · Reads barcodes on mobile device screens.
- Efficient power consumption (lowest in its class).
- · Optional stand (sold separately).



The Code Reader™ 6022 (CR6022) is an industrial grade direct part mark (DPM) imager designed to read barcodes of every sort. The CR6022 effortlessly reads laser-etched, embossed, dot peen and low-contrast barcodes and easily decodes dense and extremely small barcodes.

Features

- Reads laser-teched and dot peen markings.
- · Reads color and low-contrast barcodes.
- IP54 housing protects against dust and debris.
- Small form factor for operator comfort.
- Integrated metal hook holder for ease of placement and retrieval.
- User feedback with programmable LED, audible tone and vibrating good read indicators.
- · Operates hands-free or handheld.
- · Optional stand (sold separately).

	Code Handheld Barcode Reader – Selection Chart						
Part Number	Price	Description	Communication Protocol	Corded/ Cordless	Form Factor	Weight (lb [kg])	Dimensional Drawing
CR950-K301-C298	\$153.00	Code barcode scanner, 6ft [1.83 m] USB cable included.	USB	Corded	Handheld	0.25 [0.11]	PDF
CR950-K302-C298	\$177.00	Code barcode scanner, 6ft [1.83 m] RS-232 (DB9) cable and power supply included.	RS232	Corded	Handheld	0.25 [0.11]	PDF
CR1100-K201-C298	\$236.00	Code barcode scanner, 6ft [1.83 m] USB cable included.	USB	Corded	Handheld/ presentation	0.15 [0.07]	PDF
CR1100-K202-C298	\$260.00	Code barcode scanner, 6ft [1.83 m] RS-232 (DB9) cable and power supply included.	RS232	Corded	Handheld/ presentation	0.15 [0.07]	<u>PDF</u>
CR6022-C500-C298	Retired	Code barcode scanner, 6ft [1.83 m] USB cable included.	USB	Corded	Handheld	0.35 [0.16]	<u>PDF</u>
CR6022-C502-C298	Retired	Code barcode scanner, 6ft [1.83 m] RS-232 (DB9) cable and power supply included.	RS232	Corded	Handheld	0.35 [0.16]	<u>PDF</u>



	Code Handheld Barcode Scanners	Decode Capabi	lity	
	Decode Capability	CR950-xxx-C298	CR1100-xxx-C298	CR6022-xxx-C298
	BC412	✓	✓	✓
	Codabar	✓	✓	✓
	Code 11	✓	✓	✓
	Code 32	✓	✓	✓
	Code 39	✓	✓	✓
	Code 39 Extended		✓	✓
	Code 93	✓	✓	✓
	Code 128	✓	✓	✓
	GS1 Databar	✓	✓	✓
	Hong Kong 2 of 5	✓	✓	✓
1D	IATA 2 of 5	✓	✓	✓
	Interleaved 2 of 5	✓	✓	✓
	Matrix 2 of 5	✓	✓	✓
	MSI Plessey	✓	✓	✓
	NEC 2 of 5	✓	✓	✓
	Pharmacode		✓	✓
	Straight 2 of 5	✓	✓	✓
	Telepen	✓	✓	✓
	Trioptic	✓	✓	✓
	UK Plessey	✓	✓	✓
	UPC/EAN/JAN	✓	✓	✓
	Codablock F		✓	✓
	Code 49		✓	✓
Stacked 1D	GS1 Composite (CC-A/CC-B/CC-C)	✓	✓	✓
Stacked ID	GS1 DataBar Expanded Stack	✓	✓	✓
	MicroPDF	✓	✓	✓
	PDF417	✓	✓	✓
	Aztec Code	✓	✓	✓
	Data Matrix	✓	✓	✓
	GoCode		✓	✓
	Grid Matrix		✓	✓
2D	HanXin		✓	✓
	Maxicode		✓	✓
	Micro QR Code	✓	✓	✓
	QR Code	✓	✓	✓
	QR Model 1		✓	✓
	Australian Post		✓	✓
	Canada Post		✓	✓
	Japan Post		✓	✓
	KIX Code		✓	✓
Postal Codes	Korea Poast		✓	✓
า บงเลา บบนธง	UK Royal Mail		✓	✓
	UPU ID Tags		✓	✓
	USPS Intelligent Mail		✓	✓
	USPS Planet		✓	✓
	USPS Post-net		✓	✓



Code	Code Handheld Barcode Scanners Typical Working Range (in [mm])					
Circ and Type of Daysonda (in Immi)	CR950-)	xx-C298	CR1100-xxx-C298		CR6022-xxx-C298	
Size and Type of Barcode (in [mm])	Min	Max	Min	Max	Min	Max
3 mil Code 39	_	_	3.3 [84]	4.3 [109]	1 [25]	2 [50]
7.5 mil Code 39	2 [50]	9.6 [245]	1.9 [47]	7 [177]	0.8 [20]	5.9 [150]
10.5 mil GS1 DataBar	1.4 [35]	8.9 [225]	0.6 [16]	7.7 [196]	0 [0]	5.9 [150]
5.8 mil PDF417	3.3 [85]	14.6 [370]	-	-	-	-
6.7 mil PDF417	2.6 [65]	6.1 [155]	-	-	-	-
13 mil UPC	1.6 [40]	6.9 [175]	1.3 [33]	11.3 [286]	0.6 [15]	7.9 [200]
4.2 mil Data Matrix	_	_	-		0.6 [15]	1.8 [45]
5 mil Data Matrix	3.0 [75]	3.5 [90]	1.9 [48]	4.8 [121]	0.6 [15]	2.4 [60]
6.3 mil Data Matrix	2.8 [70]	5.3 [135]	1.4 [35]	5.6 [142]	0.2 [5]	3 [75]
10 mil Data Matrix	2.0 [50]	8.1 [205]	0.6 [14]	7.2 [182]	0 [0]	3.9 [100]
20.8 mil Data Matrix	1.2 [30]	15.7 [400]	1.0 [25]	12.6 [319]	0.4 [10]	7.5 [190]
	Low Contrast Data Matrix DPM					
Laser Marks		_	-	-	0 [0]	1.4 [35]
Dot Peen Marks					0 [0]	2.8 [70]

Note: Working ranges may vary depending on barcode quality and reading environment. The above numbers are a combination of both the wide and high density fields. All samples were high quality barcodes and were read along a physical center line at a 10 degree angle. Distances are measured from the front of the reader. Default automatic gain control settings were used with regular office lighting. Accuracy= +/- 10%. Test conditions may affect working ranges.

	Code Handheld Barcode Scanners – Specifications				
	CR950-xxx-C298	CR1100-xxx-C298	CR6022-xxx-C298		
Power Requirements	5VDC (USB versions are powered from the host device) (RS232 versions utilize a 120VAC-to-5VDC power adapter)				
Sensor	CMOS 1.2 megapixel monochrome	CMOS 1.2 megapixel monochrome CMOS 1.2 megapixel monochrome			
Operating Temperature	-20 to 50°C [-4 to 122°F]	-20 to 55°C [-4 to 131°F]	-20 to 55°C [-4 to 131°F]		
Storage Temperature	-30 to 65°C [-22 to 150°F]	-30 to 65°C [-22 to 150°F]	-30 to 65°C [-22 to 150°F]		
Humidity	5% to 95% non-condensing	5% to 95% non-condensing	5% to 95% non-condensing		
		High Density (used for small/dense barcodes) and Wide Field (used for long barcodes)			
Field of View	Field of View 51° horizontal by 39.4° vertical High Density: 30° horizontal by 20° vertical Wide Field 50° horizontal by 35.5° vertical 30° horizontal by 33.5°		30° horizontal by 33.5° vertical		
Focal Point	Approximately 130mm [5.12 in]	High Density: ~100mm [3.94 in] Wide Field ~115mm [4.53 in]	~50mm [1.97 in]		
Optical Resolution	1280 x 960	High Density: 960 x 640 Wide Field: 960 x 640	High Density: 960 x 640 Wide Field: 960 x 640		
Pitch	± 65° (from front to back)	± 65° (from front to back)	± 65° (from front to back) (varies with DPM)		
Skew		$\pm~60^{\circ}$ from plane parallel to symbol (side to side)			
Rotational Tolerance		±180°			
Symbol Contrast		15% minimum reflectance difference			
Target Beam	Single, blue targeting bar				
Ambient Light Immunity	Sunlight: Up to 9,000 ft candles				
Shock		Withstands multiple drops of 6ft [1.8 m] to concrete			
IP Rating	IP54	Not tested	IP54		
Agency Approval		CE			



Code Handheld Barcode Reader Accessories				
Part Number	Price	Description	Weight (lb [kg])	Dimensional Drawing
CRA-C501-C298	\$14.50	6ft straight USB cable	0.15 [0.07]	N/A
CRA-C501-C298	\$14.50	CR1100-K201-C298	0.35 [0.16]	N/A
CRA-C502-C298	\$14.50	6ft straight RS232 cable	0.20 [0.09]	N/A
CRA-C508-C298	\$14.50	8ft coiled USB cable	0.25 [0.11]	N/A
CRA-C519-C298	\$14.50	6ft straight DB9-RJ12 RS232 cable	0.20 [0.09]	N/A
CRA-US3-C298	\$26.00	Flexible stand for CR950, CR1100 in dark gray	0.85 [0.39]	<u>PDF</u>
CRA-US4-C298	Retired	Flexible stand for CR6022 in dark gray	0.85 [0.39]	<u>PDF</u>
CRA-US9-C298	\$17.50	Rigid stand for CR950, CR1100 in dark gray	0.20 [0.09]	PDF
CR2AG-P1-C298	\$26.00	Power supply for RS232 readers	0.10 [0.05]	N/A

RS232 Accessories









CRA-C501-C298

CRA-C502-C298

CR2AG-P1-C298

CRA-C519-C298

USB Cables







Stands





CRA-C500-C298

CRA-C508-C298

CRA-US3-C298

CRA-US4-C298

CRA-US9-C298



	Compatibility				
Scanner	C-more EA7*	C-more EA9	Productivity PLC	CLICK PLC	BRX PLC
CR950-K301-C298	Yes	Yes	No	No	No
CR950-K302-C298	No	No	Yes	Yes	Yes
CR1100-K201-C298	Yes	Yes	No	No	No
CR1100-K202-C298	No	No	Yes	Yes	Yes
CR6022-C500-C298	Yes	No	No	No	No
CR6022-C502-C298	No	No	Yes	Yes	Yes

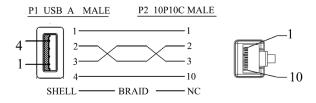
^{*} Please note that the C-more EA7 is no longer in active production.

System Assembly Options

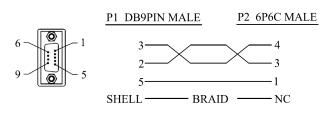


Connection Diagrams

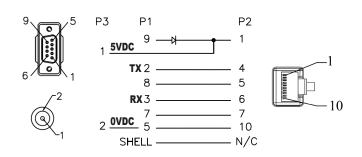
USB Connections (CRA-C500-C298, CRA-C508-C298)



DB9 to RJ12 (CRA-C519-C298)



RS232 Connections (CRA-C501-C298, CRA-C502-C298)





Datalogic Smart-VS Vision Sensor





959971320

The Smart-VS is a smart vision sensor. It can be set up as easily as a basic photoelectric sensor but provides enhanced functionality. This self-contained vision sensor provides an elegant solution for applications requiring presence and/or orientation object detection. The Smart-VS is built around a powerful multiprocessor platform featuring embedded artificial intelligence technology. The user can step through the simple teach procedure to obtain a GOOD or NO-GOOD (pass or fail) result.

Features

- · Machine learning assisted setting
- No vision tools programming experience required
- · No inspection threshold adjustment
- Fast and easy set-up
- Deterministic response time 50ms
- Reduced cost of ownership and maintenance
- TEACH button and comprehensive UI with 5 status LEDs
- · Electronic focus control
- 50-150 mm operating distance
- Bright and highly visible red LED pointer
- Built-in white polarized light illuminator
- Green/red LED spot for GOOD/NO GOOD part
- Ethernet point-to-point communication available for configuration
- Easy and intuitive WEB server GUI for maintenance and job setting
- Easy photosensor-style output interface
- Cable exit connections can be rotated to accommodate a variety of installation configurations.

Applications

- Processing and packaging machinery
- Transport and handling lines
- · Assembly lines
- Food and beverage
- · Bottling lines
- Machines for the cosmetic and pharmaceutical sectors

Agency Approvals

• CE and CSA





Datalogic Smart-VS Smart Vision Sensor Selection Guide						
Part Number	Price	Operating Distance	Resolution	Illuminator	I/O	Drawing
959971320	\$967.00	50 to 150 mm [1.97 to 5.91 in]	320 x 240	Polarized white LED	2 inputs and 3 outputs	PDF

The Smart-VS System

The Smart-VS system teaches the sensor GOOD and NO GOOD object conditions. This allows the Smart-VS system to be used in an effective and reliable way for detecting the presence/absence of object features for side orientation of objects, referring to proper object attributes.

This makes the sensor setting independent of the type, material, or color of the object that needs to be detected.





Datalogic Smart-VS Vision Sensor

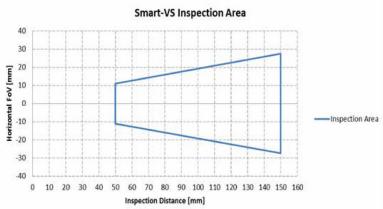


Datalogic Sm	Datalogic Smart-VS Smart Vision Sensor Specifications				
Supply Voltage	10 to 30 VDC				
Communication Interface (Ethernet) ¹	10/100 Mbit/s				
Inputs	Opto-coupled and polarity insensitive				
Maximum Voltage	30VDC				
Maximum Input Current Consumption	0.4 to 0.14 A (4.2 W)				
Output Type	Push-pull, NPN or PNP. Short circuit protected. Default is push-pull.				
Outputs	3 outputs (DATA VALID, GOOD, NO GOOD)				
$V_{out}(I_{load} = 0mA) Maximum$	30VDC				
V _{out} (I _{load} = 100mA) Maximum	3VDC				
I _{load} Maximum	100mA				
Operating Distance	50 to 150 mm [1.97 to 5.91 in]				
View Angle	19°				
Field Of View Area @ 50 mm	22mm (H) x 16mm (V) [0.87 in (H) x 0.63 in (V)] (Refer to field of view diagram below)				
Field Of View Area @ 150 mm	55mm (H) x 41mm (V) [2.17 in (H) x 1.61 in (V)] (Refer to field of view diagram below)				
Response Time	50ms from input trigger				
Maximum Reference Images (GOOD+NO GOOD)	6 images				
Maximum Inspection Rate	20 per second				
Active Area Resolution	320x240 pixels				
Illuminator	White LED polarized				
Weight	173g [6.1 oz]				
Material	Aluminum with plastic PMMA protective window				
Operating Temperature ²	-10° to 50°C [14° to 122°F]				
Storage Temperature	-20° to 70°C [-4° to 158°F]				
Maximum Humidity	90% non-condensing				
Vibration Resistance	14mm [0.55 in] @ 2 to 10 Hz; 1.5 mm [0.06 in] @ 13 to 55 Hz; 2 g @ 70 to 500 Hz (2 hours on each axis)				
Shock Resistance	30g; 11ms; 3 shocks on each axis				
Protection Class ³	IP65 and IP67				
Agency Approvals	CE, CSA				

¹⁾ The embedded Ethernet interface is intended for configuration only through connection to the device IP. Point-to-point connection is recommended. The IP address is factory set to 192.168.3.100.

2) High ambient temperature applications should use metal mounting bracket for heat dissipation. 3) When correctly connected (fully tightened) to IP67 cables with seals.

Field of View Diagram

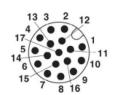


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Datalogic Smart-VS Vision Sensor



Connections



	M12 17-F	Pin Power and I/O	Connector Pinout
Pin	Name	Color*	Function
1	Vdc	Brown	Power supply input voltage +
2	GND	Blue	Power supply input voltage -
Connector Case	Chassis	-	Connector case provides electrical connection to chassis
6	I1A	Yellow	I1A Trigger Input A (polarity insensitive)
5	I1B	Pink	I1B Trigger Input B (polarity insensitive)
13	I2A	Green	I2A Remote Teach A (polarity insensitive)
3	I2B	White	I2B Remote Teach B (polarity insensitive)
9	01	Red	Data Valid (default is push-pull)
8	O2	Gray	GOOD Output (default is push-pull)
16	O3	Black	NO GOOD Output (default is push-pull)

^{*} The wire colors refer to cables part numbers CAB-GD03 and CAB-GD05



M12 8-	Pin Standard Eth	ernet Network Connector Pinout
Pin	Name	Function
1	TX+	Transmit data (positive pin)
2	TX-	Transmit data (negative pin)
3	RX+	Receive data (positive pin)
4	RX-	Receive data (negative pin)
5	NC	Not connected
6	NC	Not connected
7	NC	Not connected
8	NC	Not connected

Datalogic Smart-VS Vision Sensor Mounting Bracket



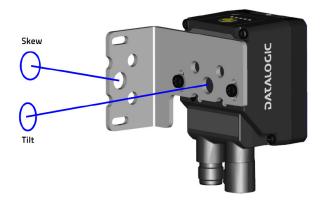
Datalogic Smart-VS Smart Vision Sensor Mounting Bracket Selection Guide				
Part Number	Price	Description	Drawing	
BK-22-000	\$40.00	Replacement mounting bracket, stainless steel	<u>PDF</u>	



BK-22-000

Mounting and Positioning the Smart-VS Vision Sensor

Smart-VS mounting brackets are fabricated with slots which allow for easy rotation. This permits precise setting of skew and tilt. When using Smart-VS mounting brackets, you have the ability to rotate the sensor on two axes, as shown in the accompanying diagrams.



Smart-VS Vision Sensor Mounting Options

The Smart-VS Vision Sensor can be attached to the mounting bracket in several ways. Cable exit connections can be rotated to accommodate a variety of installation configurations.



Side mounting with vertical cable exit



Top mounting with vertical cable exit (Horizontal cable exit is also possible)



Side mounting with horizontal cable exit

Datalogic X-Coded Ethernet Cables



	Datalogic X-Coded Ethernet Cables Selection Guide				
Part Number	Price				
CAB-ETH-X-M01	\$101.00	Datalogic cable, Ethernet, PVC jacket, shielded, 1m [3.28 ft] cable length, M12 8-pin male X-coded to RJ45			
CAB-ETH-X-M03	\$111.00	Datalogic cable, Ethernet, PVC jacket, shielded, 3m [9.84 ft] cable length, M12 8-pin male X-coded to RJ45			
CAB-ETH-X-M05	\$134.00	Datalogic cable, Ethernet, PVC jacket, shielded, 5m [16.40 ft] cable length, M12 8-pin male X-coded to RJ45			

Note: Ethernet cable jacket color may vary.



CAB-ETH-X-M01

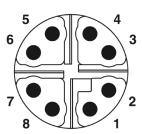


CAB-ETH-X-M03

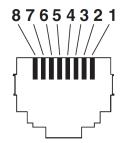


CAB-ETH-X-M05

Diagrams



Pin assignment M12 male connector, 8-pin, X-coded, male side



Connector pin assignment plug RJ45

www.automationdirect.com

Datalogic 17-Pin M12 Cables ◆DATALOGIC

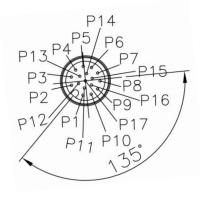


Datalogic 17-Pin M12 Cables Selection Guide						
Part Number	Price					
CAB-GD03	\$94.00	Datalogic cable, M12 axial female to pigtail, 17-pin, PVC, 9.8 ft [3m] cable length.				
CAB-GD05	\$125.00	Datalogic cable, M12 axial female to pigtail, 17-pin, PVC, 16.4 ft [5m] cable length.				





Diagrams



Wire Run List								
AWG	CONN 1	Color						
	1	Brown						
	2	Blue						
	3	White						
	4	Not connected						
	5	Pink						
	6	Yellow						
	7	Not connected						
	8	Gray						
26	9	Red						
	10	Not connected						
	11	Not connected						
	12	Not connected						
	13	Green						
	14	Not connected						
	15	Not connected						
	16	Black						
	17	Not connected						

<u>1-800-633-0405</u>

Contrinex Read-Write Modules IO-Link Capable RFID (13.56 MHz)



RFID

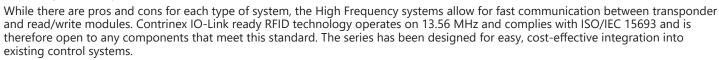
RFID (Radio Frequency IDentification) technology is useful in a wide range of automation and logistics applications.

This technology allows objects to be identified by means of electronic labels (also known as tags or transponders). Compared to more traditional approaches such as bar codes or laser marking, RFID technology offers a number of significant advantages. For example:

- A direct line of sight between the tag and the read/write module is not needed to read or write data.
- Information stored in the tag can be added, modified or replaced.
- Human error is reduced while increasing reliability, flexibility and traceability.

There are three standard frequencies of RFID:

- Low-Frequency (30 to 300 KHz most are 125 to 134.2 Khz). Various application-specific standards apply
- High-Frequency (13.56 MHz) (ISO/IEC 15693)
- Ultra High-Frequency (860 to 960 MHz) (ISO/IEC 18000-63)

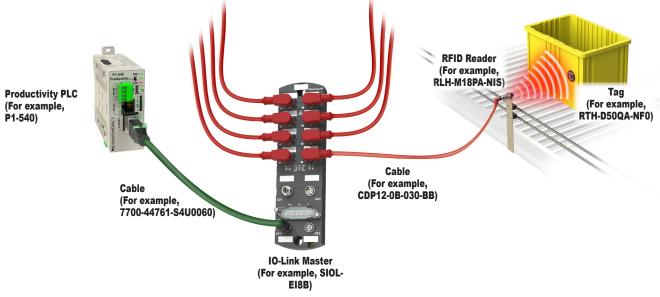


Simplicity of IO-Link

IO-Link is a standardized protocol (IEC 61131-9) that enables connection of intelligent devices, similar to the Contrinex RFID Read-Write Modules, to an automation system.

Communication takes place between an IO-Link master and one or more IO-Link devices. IO-Link is a point-to-point communication system and is not a fieldbus. A master module has one or more ports, and one device can be connected to each port.

The IO-Link master module serves as the interface between the IO-Link devices and the controller (PLC or Computer). The example below uses an IO-Link Master to communicate using EtherNet/IP.







Contrinex RHL Read/Write Units

Once the RLH unit is attached to the IO-Link master, the SIO functions of the device can be configured. Note that the SIO outputs will only be active if the IO-Link is not active. After the RLH unit is attached to the PLC using IO-Link, a lot more data will be available to the PLC.

- Read the identification of the Read-Write unit (for example: Manufacture, Firmware Version, Part Number, etc.)
- How long the RFID tag has been present
- Tag history
- Diagnostics
- Write to the tag
- Read the tag

And many more functions.



Contrinex Read-Write Modules IO-Link Capable RFID (13.56 MHz)







RLH-M30PA-NIS

Applications

- Track and trace
- Production automation
- · Process control
- · Automatic sorting systems
- Logistics and distribution
- Access control
- Machine tools
- Robotics
- · Packaging System
- · Automotive Industry
- Pharmaceutical



RLH-M18PA-NIS

Features

- IO-Link for greatly simplified RFID integration
- Available in M18 and M30 barrel sizes as well as 44mm cubic housing
- IO-Link compatible (V 1.1).
- IO-Link Class A device
- Simple I/O (SIO) mode available
- IP68/IP69K option available
- Complies with ISO/IEC 15693 (High Frequency) 13.56 MHz

Agency Approvals

• CE, UL (E239373)





Simple I/O (SIO) Mode

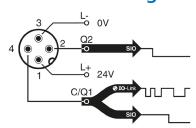
If the Read/Write unit has a simple task, then the device may be able to be used in Simple I/O Mode.

Out of the box, the read/write module is configured to simultaneously trigger both of its outputs upon tag detection. The two outputs can be individually reconfigured for data block comparison, tag IN-RANGE time over threshold, or tag is too far from reader (RSSI is below threshold) via an IO-Link master.

Full functionality is available when the module is used as an IO-Link device.

Contrinex HF RFID Read-Write Module Selection Guide								
Part Number	Price	Housing Size	IP Rating	Weight (g [oz])	Drawing			
RLH-C44PA-NIS	\$169.00	40 x 40 x 67 mm [1.57 x 1.57 x 2.64]	IP68/IP69K	105g [3.7 oz]	PDF			
RLH-M30PA-NIS	\$169.00	30mm [1.18 in] diameter 63.5 mm [2.5 in] length	IP67	87g [3.1 oz]	<u>PDF</u>			
RLH-M18PA-NIS	\$158.00	18mm [0.71 in] diameter 63.5 mm [2.5 in] length	IP67	37g [1.3 oz]	<u>PDF</u>			

Connection Diagram



Standard HF RFID Read-Write Module Specifications								
	<u>RLH-C44PA-NIS</u> <u>RLH-M30PA-NIS</u> <u>RLH-M18PA-NIS</u>							
Supply Voltage		11-32 VDC						
Maximum Current		≤ 50mA (with no load)						
Maximum Output Current		≤ 200mA (per output)						
Maximum Operating Temperature		-25° to 80°C [-13° to 176°F]						
Maximum Storage Temperature		-25° to 80°C [-13° to 176°F]						
Maximum Cable Length		20m [65.62 ft]						
Housing Material	PBTP (polybutylene terephthalate polymer) Chrome-plated brass Chrome-plated bra							
Sensing Face Material	PBTP (polybutylene terephthalate polymer)							
Tightening Force	0.6 N•m [0.4 lb•ft] (on M12 connector)	70 N•m [51.6 lb•ft]	25 N•m [18.4 lb•ft]					

Contrinex 13.56 MHz HF RFID Tags CONTRIN



Standard HF RFID Tags







RFID tags (also known as transponders) are electronic devices that store data. Each tag has fixed memory which stores a unique preset number (i.e., an identifier) as well as user memory which can be written to for storing data. Writeable data may include, for example, the object's history or the parameters of operations to which it will be subjected.

EEPROM Tag Features

- · Unlimited read cycles
- 100,000 write cycles
- · 4 bytes per block
- Fully complies with ISO/IEC 15693 (High Frequency) 13.56 MHz

FRAM Tag Features

- · Unlimited read cycles
- 10¹² write cycles
- · Larger amount of memory
- 8 bytes per block

Applications

- Track and trace
- Production automation
- · Process control
- Automatic sorting systems
- Logistics and distribution
- Access control

Agency Approvals

• CF



	Standard HF RFID Tag Selection Guide											
Part Number	Price	Pack Size	Diameter (mm [in])	Memory Type	User Memory Size	IP Rating	Component Material	Operating Temperature	Storage Temperature	Tightening Torque	Weight (g [oz])	Drawing
RTH-D09RA-NF0-901	\$50.00	10	9 [0.35]	EEPROM	316 bytes	IP67	Epoxy + PPS -20° to 85°C	85°C -20° to 110°C	0.25 g [0.01 oz]	<u>PDF</u>		
RTH-D16RA-NF0-901	\$45.00	10	16 [0.63]	EEPROM	316 bytes	IP67	(Polyphenylene sulfide)	[-4° to 185°F]	[-4° to 230°F]	NA	0.75 g [0.03 oz]	<u>PDF</u>
RTH-D20QA-NF0-901	\$80.00	10	20 [0.79]	EEPROM	316 bytes	IP68 IP69K			3° to [-40° to	1 N•m [0.74 lb•ft]	1.3 g [0.05 oz]	<u>PDF</u>
RTH-D20QA-ND0	\$11.00	1	20 [0.79]	FRAM	2000 bytes	IP68 IP69K					1.3 g [0.05 oz]	PDF
RTH-D30QA-NF0-901	\$80.00	10	30 [1.18]	EEPROM	316 bytes	IP68 IP69K	PPA	-25° to 80°C			3g [0.11 oz]	<u>PDF</u>
RTH-D30QA-ND0	\$17.50	1	30 [1.18]	FRAM	2000 bytes	IP68 IP69K	(Polyphthalamide)	[-13° to 176°F]			3g [0.11 oz]	<u>PDF</u>
RTH-D50QA-NF0	\$9.50	1	50 [1.97]	EEPROM	316 bytes	IP68 IP69K					9.5 g [0.34 oz]	PDF
RTH-D50QA-ND0	\$19.50	1	50 [1.97]	FRAM	2000 bytes	IP68 IP69K					9.5 g [0.34 oz]	<u>PDF</u>

High-Temperature HF RFID Tag

High-temperature RFID tags feature 100% silicone-free construction and thermal cycling reliability of 1000 hours (or 1000 cycles). Passive tags from the high-temperature family are ideal for use in paintshops and other high-temperature environments. Tags are insensitive to dirt, and their housings have an IP68 and IP69K enclosure rating. They are also fully ISO/IEC 15693-compliant. Tags are made from PPS (polyphenylene sulfide).

High-Temperature HF RFID Tag Selection Guide										
Part Number	Part Number Price Diameter (mm [in]) Type Memory User Memory IP Rating Operating Temperature Tightening Weight Operating Temperature Tightening Operating Temperature Tightening Operating Operating Temperature Tightening Operating Operat						Drawing			
RTP-0263-020	\$20.00	26 [1.97]	EEPROM	160 bytes	IP68 IP69K	-25 to 180°C [-13 to 356°F]	-40 to 180°C [-40 to 356°F]	1 N•m [0.74 lb•ft]	3.3 g [0.12 oz]	<u>PDF</u>



RTP-0263-020

Contrinex 13.56 MHz HF RFID Tags CONTRINE



Working Distance Tables

Typical Working Distances When Using RLH-C44PA-NIS									
Transponder Type S_{max} (mm [in]) S_0 (mm [in]) D_0 (mm [in])									
Ø 9 <u>RTH-D09RA-NF0-901</u>	24 [0.94]	9 [0.35]	32 [1.26]						
Ø 16 <u>RTH-D16RA-NF0-901</u>	40 [1.57]	20 [0.79]	44 [1.73]						
Ø 20 <u>RTH-D20QA-NF0-901</u>	40 [1.57]	18 [0.71]	44 [1.73]						
Ø 20 <u>RTH-D20QA-ND0</u>	38 [1.50]	17 [0.67]	42 [1.65]						
Ø 26 <u>RTP-0263-020</u>	38 [1.50]	17 [0.67]	44 [1.73]						
Ø 30 <u>RTH-D30QA-NF0-901</u>	44 [1.73]	21 [0.83]	48 [1.89]						
Ø 30 <u>RTH-D30QA-ND0</u>	46 [1.81]	23 [0.91]	52 [2.05]						
Ø 50 <u>RTH-D50QA-NF0</u>	64 [2.52]	32 [1.26]	68 [2.68]						
Ø 50 <u>RTH-D50QA-ND0</u>	58 [2.28]	26 [1.02]	66 [2.60]						

Typical Working Distances When Using RLH-M30PA-NIS									
Transponder Type S_{max} (mm [in]) S_{o} (mm [in]) D_{o} (mm [in])									
Ø 9 <u>RTH-D09RA-NF0-901</u>	17 [0.67]	5.5 [0.22]	24 [0.94]						
Ø 16 <u>RTH-D16RA-NF0-901</u>	28 [1.10]	13 [0.51]	31 [1.22]						
Ø 20 <u>RTH-D20QA-NF0-901</u>	26 [1.02]	12 [0.47]	30 [1.18]						
Ø 20 <u>RTH-D20QA-ND0</u>	26 [1.02]	11.5 [0.45]	31 [1.22]						
Ø 26 <u>RTP-0263-020</u>	33 [1.30]	15 [0.59]	36 [1.42]						
Ø 30 <u>RTH-D30QA-NF0-901</u>	30 [1.18]	13 [0.51]	38 [1.50]						
Ø 30 <u>RTH-D30QA-ND0</u>	34 [1.34]	15 [0.59]	38 [1.50]						
Ø 50 <u>RTH-D50QA-NF0</u>	46 [1.81]	19 [0.75]	54 [2.13]						
Ø 50 <u>RTH-D50QA-ND0</u>	44 [1.73]	18 [0.71]	54 [2.13]						

Typical Working Distances When Using RLH-M18PA-NIS									
Transponder Type	S _{max} (mm [in])	S _o (mm [in])	D _o (mm [in])						
Ø 9 <u>RTH-D09RA-NF0-901</u>	11 [0.43]	3.5 [0.14]	15 [0.59]						
Ø 16 <u>RTH-D16RA-NF0-901</u>	19 [0.75]	8.5 [0.33]	22 [0.87]						
Ø 20 <u>RTH-D20QA-NF0-901</u>	18 [0.71]	8 [0.31]	21 [0.83]						
Ø 20 <u>RTH-D20QA-ND0</u>	17 [0.67]	6 [0.24]	21 [0.83]						
Ø 26 <u>RTP-0263-020</u>	15 [0.59]	4 [0.16]	21 [0.83]						
Ø 30 <u>RTH-D30QA-NF0-901</u>	22 [0.87]	9 [0.35]	28 [1.10]						
Ø 30 <u>RTH-D30QA-ND0</u>	19 [0.75]	5 [0.20]	28 [1.10]						
Ø 50 <u>RTH-D50QA-NF0</u>	24 [0.94]	6 [0.24]	42 [1.65]						
Ø 50 <u>RTH-D50QA-ND0</u>	20 [0.79]	0 [0]	44 [1.73]						

