Automatic Identification and Interface Products

The table below is a product selection and compatibility guide for the automatic identification and interface products in this section. The selection portion of the table briefly describes the differences among the scanners and how to apply them; the compatibility portion of the table lists the decoder(s) you can use with each scanner. Use this table to assist you in putting together a system.

Product Selection and Compatibility Guide

SELECTION				COMPATIBILITY	
				Use with these products ✓	
Product	Application	Cat. no. 2755-	Approximate scan rate per second	Single/Dual headed Enhanced Decoders 2755-DS, -DD (Page 8-10)	Multi-Purpose Bar Code Workstation 2755-DH1 (Page 8-17)
UNATTENDED SCANNERS					
AdaptaScan Bar Code Readers (Page 8-3)	• unattended applications, such as: material handling, work-in-progress, packaging, sorting	-SN3 -SN5 -SN8	300 500 800		
AtomScan+ Bar Code Readers (Page 8-5)	• unattended applications, such as: packaging, labeling, and machine assembly where space is limited	LS7-SA LS7-SB LS7-RA LS7-RB LS7-SBV LS7-RBV	300 to 550	✓ (auxiliary port)	————
AtomScan Bar Code Scanners (Page 8-7)	• unattended applications, such as: pharmaceutical and consumer packaging machines, work-in-process tracking, automatic assembly machines	-L6S -L6R	330	✓	————
High-Performance VLD Bar Code Scanners (Page 8-8)	• unattended applications, such as: verifying labels on boxes and bottles and sorting products for packaging and shipping	-LD4	200	✓	————
		-LD8	500		————
OPERATOR-ASSISTED SCANNERS					
Hand-Held Scanners (Page 8-14)	• industrial environments • reads bar code labels on uneven, textured, curved, and other exposed surfaces	-HxG-4 -HxG-7 -HxG-9	36	✓	✓
Bar Code Scanning Wands (Page 8-15)	• industrial applications • contact scanning • can read through thick overlays, laminates • W1 is for high-density bar codes • W2 is for medium to low-density bar codes • W5 is for high-density bar codes with at least 20% carbon content in printing ink	-W1 -W2 -W5	N/A	————	✓
Slot Scanners (Page 8-16)	• exterior applications, including - security access - time and attendance tracking • B1 is for virtually any type of bar code symbol • B2 is for reading labels printed with carbon-based inks or where immunity to contamination or dirt is required	-B1 -B2	N/A	———— ————	✓

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AdaptaScan Bar Code Readers

(Cat. Nos. 2755-SN3, -SN5, -SN8)

The AdaptaScan™ Bar Code Reader combines an adjustable scanner and decoder in a compact NEMA Type 4 enclosure. The AdaptaScan Reader supports linear and raster scanning. Point-to-point and network communication options let the reader communicate with a variety of devices and networks.

The AdaptaScan Configuration Software, a Windows-based package, performs configuration and monitoring functions quickly and easily. Plus, the autofocus feature automatically adjusts the focus for an application during setup.

Features

- Scanner and decoder in one enclosure

- Linear and raster scanning are supported and can be adjusted on line

- Automatic or manual focus reduces setup time, simplifies installation, and quickly adapts the Reader to line changeovers

- Two true I/O and 128 match events available

- DeviceNet, RS-232, RS-422, and RS-485 communication ports

- Communication Protocols - DeviceNet, DH-485 (master and slave), DF1, dumb terminal

- Windows based programming software for reader configuration and monitoring

- Separate wiring base simplifies installation

- Seven LED indicators provide system status at a glance

Specifications

Electrical	
Voltage	12 to 28V dc
Power	14 Watts maximum
Package Detect	External, +12V dc, @ 100 mA max. 5 mA current sink (minimum)

Mechanical		
Enclosure	NEMA Type 4 (when used with properly sealed wiring base)	
Connectors	Terminal block (screw terminal) connections in wiring base	
LED indicators	On Symbol	Yellow
	Trigger/Read	Yellow/Green
	I/O 1	Yellow
	I/O 2	Yellow
	Network	Green/Red
	Laser On	Yellow
	Module	Green/Red
Approximate dimensions (Reader and Wiring Base)	136.5 × 184.2 × 104.8 mm (5.4 × 7.3 × 4.1 in)	
Approximate weight (Reader and Wiring Base)	2.1 kg (4.6 lbs)	
Shock		
Operating:	30g	
Non-operating:	50g	
Vibration		
Operating:	2g, 10 to 150 Hz (3 axis)	

Environmental		
Ambient temperature:		
Operating:	0 to 50° C (32 to 122° F)	
Non-operating:	-30 to 70° C (-22 to 158° F)	
Relative humidity	5 to 95% (without condensation)	

Optical		
Light source	660 nmVisible Laser Diode, Thermo-Electric cooled	
Output power	1.0 mW maximum	
CDRH standards	Meets Class II Standards	
Scan rate (nominal)		
	2755-SN3:	300 scans/second
	2755-SN5:	500 scans/second
	2755-SN8:	800 scans/second

Mechanical Scan Angle Adjustment (Default underlined)
2755-SN3: 22°, 29°, 36°, 43°, 50°, <u>58°</u>, 65°, 72°
2755-SN5: 15°, 20°, 25°, 30°, 35°, <u>40°</u>, 45°, 50°
2755-SN8: 15°, 15°, 15°, 18°, 21°, <u>24°</u>, 27°, 30°

Maximum usable scan angle is 80% of mechanical scan angle.

The AdaptaScan Bar Code Readers carry the following caution:

⚠ CAUTION
LASER LIGHT DO NOT STARE INTO THE BEAM
660nm LASER DIODE 1.0 MILLIWATT MAX OUTPUT
CLASS II LASER PRODUCT

For more information, see the AdaptaScan Bar Code Reader Product Data, publication 2755-2.61.

AdaptaScan Bar Code Readers

(Cat. Nos. 2755-SN3, -SN5, -SN8)

Read Ranges

The following tables show tabular read range limits for the three versions of the AdaptaScan Readers.

Minimum Apparent Element Width[2]		2755-SN3 Read Range[1][3]		2755-SN5 Read Range[1][3]		2755-SN8 Read Range[1][3]	
Mils	mm	Inches	Centimeters	Inches	Centimeters	Inches	Centimeters
5	.13	2.5 - 3.6	6.4 - 9.2	2.8 - 3.7	7.1 - 9.4	3.0 - 3.7	9.1 - 9.4
6	.15	2.3 - 4.4	5.9 - 11.2	2.4 - 4.3	6.1 - 11.0	2.8 - 3.9	7.1 - 9.9
7.5	.19	2.0 - 4.6	5.1 - 11.7	2.4 - 4.6	6.1 - 11.7	2.4 - 10.5	6.1 - 26.7
10	.25	1.6 - 11.3	4.1 - 28.7	2.7 - 12.9	6.9 - 32.8	2.0 - 12.9	5.1 - 32.8
13	.33	1.5 - 15.1	3.8 - 38.4	1.7 - 18.0	4.3 - 45.7	1.8 - 19.8	4.6 - 50.3
15	.38	0.9 - 19.6	2.3 - 49.8	1.7 - 21.8	4.3 - 55.4	2.1 - 23.8	5.4 - 60.5
20	.51	0.9 - 25.9	2.3 - 65.8	1.3 - 27.8	3.3 - 70.6	2.6 - 31.6	6.6 - 80.3
30	.75	0.9 - 41.6	2.3 - 105.7	2.2 - 42.0	5.6 - 106.7	5.2 - 44.3	13.2 - 112.6
40	1.02	2.2 - 52.6	5.6 - 133.6	3.0 - 53.2	7.6 - 135.2	7.5 - 55.6	19.1 - 141.3
50	1.27	3.3 - 61.6	8.4 - 156.6	4.3 - 62.2	11.0 - 158.0	10.6 - 56.9	27.0 - 144.6
55	1.40	3.4 - 63.7	8.7 - 161.8	4.9 - 64.3	12.5 - 163.3	11.0 - 61.8	28.0 - 157.0

[1] Read ranges based on Code 39 symbol. Label orientation is on an axis with 5° pitch and 25° skew. Reader set at maximum scan angle.
[2] When scanning labels at an angle, apparent element width is less than the actual element width.
[3] Read ranges measured from front edge of wiring base. Add .015 m (.58 in) for the distance to the scan window.

Symbologies

- Code 39
- Code 128
- UPC-A, -E
- EAN-8, -13
- Interleaved 2-of-5
- Standard 2 of 5
- USPS 2 of 5
- Code 93
- Codabar
- Pharma Code
- Matrix 2 of 5

AtomScan+ Bar Code Readers

(Cat. Nos. 2755-LS7-SA, -SB, -RA, -RB, -SBV, -RBV)

An AtomScan+ Bar Code Reader is a compact integrated scanner and decoder, ideal for applications in the packaging, labeling, and machine assembly industries where space is limited. You can choose either linear or raster scan types with straight ahead or right angle read direction.

The AtomScan+ Bar Code Reader supports direct RS-232 host connectivity. An optional interface is available for either RS-232 or RS-422/RS-485 host connectivity. The interface has a trigger connector for a package detect. In addition, an autoload switch lets you load a new match code in the reader.

Features

- Small compact size

- Linear and raster scan types

- Straight ahead and right angle read directions for vertical and horizontal mounting

- Scan rates of 300 to 550 scans per second

- Two relay pulse outputs for match conditions

- RS-232, RS-422, and RS-485 communication protocols

- Trigger port of package detector and autoload switch on interface

- Default configuration for "out-of-box" operation

- Menu-driven configuration screens for parameter changes using a standard terminal or terminal emulation program

- LED indicators provide system status at a glance

Specifications

Electrical	
Power	+5V dc +/–4% regulated @ 480mA

Mechanical	
Enclosure	NEMA 12, IP 64
LED indicators	GD/RD (Good Read)　Green RDY (Ready)　Green PWR (Power)　Red
Approximate dimensions (Reader and wiring base)	88.1 × 65.7 × 33.5 mm (3.47 × 2.59 × 1.32 in)

Environmental	
Ambient temperature range 　　　　Operating: 　　　　Storage:	 0 to 50°C (32 to 122°F) -29 to 70°C (-20 to 158°F)
Relative humidity	up to 95% (without condensation)

Optical	
Laser cooling	Thermostatically controlled thermocooler
Primary mirror type	Rotating, 10-faceted
Skew tolerance	+/– 40° from normal
Pitch angle	+/– 50° from normal
Maximum element width	177.8 mm (7.0 in)
Print contrast minimum	25% absolute dark/light reflectance differential measured @ 670 nm
Ambient light immunity artificial lighting Sunlight	450 ft candles (indoor: flourescent, incandescent, mercury vapor, and sodium vapor) 1800 ft candles
CDRH standards	Class II
Certifications	cUL, UL, CE, TUV, EN

Symbologies

- UPC-A
- UPC-E
- EAN-8
- EAN-13
- Code 39
- Code 128
- EAN 128
- Interleaved 2-of-5
- Codabar

For more information, see the AtomScan+ Bar Code Reader Product Data, publication 2755-2.67.

AtomScan+ Bar Code Readers

(Cat. Nos. 2755-LS7-SA, -SB, -RA, -RB, -SBV, -RBV)

Read Ranges

Catalog Number	Minimum Bar Code Width		Read Range		Maximum Scan Width	
	Mils	mm	Inches	Centimeters	Inches	Centimeters
2755-LS7-SA, **2755-LS7-RA**	5.0	0.13	2.0 to 3.1	5.08 to 7.87	2.1	5.33
	7.5	0.19	2.0 to 4.0	5.08 to 10.2	3.6	9.14
2755-LS7-SB **2755-LS7-RB**	7.5	0.19	2.5 to 5.5	6.35 to 14.0	4.0	10.2
	10.0	0.25	2.0 to 6.5	5.08 to 16.5	5.0	12.7
	15.0	0.38	2.0 to 7.5	5.08 to 19.0	6.0	15.2
	20.0	0.51	2.0 to 10.0	5.08 to 25.4	7.0	17.8
	30.0	0.76	2.0 to 10.0	5.08 to 25.4	7.0	17.8
	40.0	1.02	2.0 to 10.0	5.08 to 25.4	7.0	17.8
2755-LS7-SBV, **2755-LS7-RBV**	7.5	0.19	1.25 to 4.0	3.18 to 10.2	4.0	10.2
	10.0	0.25	1.0 to 5.0	2.54 to 12.7	5.0	12.7
	15.0	0.38	1.0 to 6.0	2.54 to 15.2	6.0	15.2
	20.0	0.51	1.0 to 8.5	2.54 to 21.6	7.0	17.8
	30.0	0.76	1.0 to 8.5	2.54 to 21.6	7.0	17.8
	40.0	1.02	1.0 to 8.5	2.54 to 21.6	7.0	17.8

AtomScan Bar Code Scanners

(Cat. Nos. 2755-L6S, -L6R)

The AtomScan™ Bar Code Scanner is a small unattended bar code scanner that connects to the Enhanced Decoder. This visible laser diode scanner is available in linear or raster versions.

The compact size of the scanner is well-suited for space challenged applications in the packaging, labeling, and machine assembly industries.

The power of the Enhanced Decoder coupled with the scanner's small size and bar code reading performance provides a system for pharmaceutical customers to meet their automatic package and label verification requirements.

Features

- Small compact scanner
- Raster or linear scanner
- 60° usable scan range
- 330 scans per second scanning sweep rate

Compatibility

The scanner is compatible with the family of Enhanced Decoders:

- Single-Head Decoders (cat. nos. 2755-DS1A, -DS4A)
- Dual-Head Decoders (cat. nos. 2755-DD1A, -DD4A)

The AtomScan Bar Code Scanners carry the following caution:

⚠ CAUTION
LASER LIGHT DO NOT STARE INTO THE BEAM
660nm LASER DIODE 1.0 MILLIWATT MAX OUTPUT
CLASS II LASER PRODUCT

Specifications

Electrical	Receives power from decoder
Mechanical	
Approximate weight	0.23 kg (8.0 oz.)
Approximate dimensions	5.7 × 5.7 × 5.7 cm (2.25 × 2.25 × 2.25 in)
Optical	
Light source	Visible Laser Diode 670 nm (nanometer) nominal
CDRH Standards	Meets Class II Standards
Scan sweep rate	330 scans/second
Scan sweep angle	60°
Environmental	
Ambient temperature range Operating: Storage:	0 to 40°C (32 to 104°F) -50 to 75°C (-58 to 167°F)

Read Ranges

The following table illustrates the estimated reading range for each AtomScan version (label quality dependent).

2755-L6S, -L6R Scanners (330 Scans Per Second)

NBW (narrow bar width) ①	Inches	Centimeters	Catalog Number
.127 mm (.005 in)	2 - 3	5.08 - 7.62	2755-L6SA
.191 mm (.0075 in)	1 - 4.5	2.54 - 11.43	2755-L6RA
.191 mm (.0075 in)	2 - 5	5.08 - 12.7	2755-L6SB
.254 mm (.010 in)	2.75 -7	6.99 - 17.78	2755-L6RB
.508 mm (.020 in)	1.25 - 8	3.18 - 20.32	
.762 mm (.030 in)	4 - 9.5	10.16 -24.13	
1.02 mm (.040 in)	4 - 9.5	10.16 - 24.13	
1.27 mm (.050 in)	5 - 10	12.7 - 25.4	

① NBW is the measure of the width of the smallest bar code element.

High-Performance VLD Bar Code Scanners

(Cat. Nos. 2755-LD4, -LD8)

The high-performance scanners (cat. nos. 2755-LD4, -LD8) use a visible-laser diode (VLD) for non-contact scanning applications.

Equipped with either a NEMA Type 1 or Type 4 connector, their environmentally sealed enclosure is suitable for a variety of applications. Each scanner has a permanently attached 3 m (10 ft) cable for connecting to a decoder and a 0.29 m (11.5 in) package detector cable. Extension cables increase the scanner-to-decoder distance to 7.6 or 15.2 m (25 or 50 ft).

Features

- Visible-laser-diode scanners
- NEMA Types 1 or 4 connectors
- External package detect connection
- 4 read ranges (2755-LD4); 3 read ranges (2755-LD8)
- 200 scans per second (2755-LD4); 500 scans per second (2755-LD8)

Compatibility

The high-performance scanners are compatible with the Enhanced Decoders:

- Single-Head Decoders (cat. nos. 2755-DS1A, -DS4A)
- Dual-Head Decoders (cat. nos. 2755-DD1A, -DD4A)

The High-Performance VLD Bar Code Scanners carry the following caution:

CAUTION
LASER LIGHT – DO NOT STARE INTO BEAM
670 nm LASER LIGHT – 1.0 MILLIWATT MAX OUTPUT
CLASS II LASER PRODUCT

Read Ranges

2755-LD4 Read Ranges [1]

Minimum Element Width		Read Range		Catalog Number
Mils	Millimeters	Inches	Centimeters	
4	.10	4.0 - 5.25	10.2 - 13.3	2755-LD4A1 2755-LD4A4
5	.13	3.0 - 6.0	7.6 - 15.2	
7.5	.19	2.5 - 6.5	6.4 - 16.5	
10	.25	2.5 - 7.25	6.4 - 18.4	
13	.33	2.5 - 8.0	6.4 - 20.3	
20	.51	2.5 - 9.75	6.4 - 24.8	
30	.76	2.5 - 12.0	6.4 - 30.5	
6	.15	8.0 - 11.5	20.3 - 29.2	2755-LD4B1 2755-LD4B4
7.5	.19	7.25 - 12.75	18.4 - 32.4	
10	.25	6.25 - 14.5	15.9 - 36.8	
13	.38	5.0 - 16.0	12.7 - 40.6	
20	.51	5.0 - 19.0	12.7 - 48.3	
30	.76	5.0 - 19.0	12.7 - 48.3	
35	.89	5.0 - 19.0	12.7 - 48.3	
9	.23	14.0 - 21.0	35.6 - 53.3	2755-LD4C1 2755-LD4C4 [2]
10	.25	13.25 - 22.75	33.6 - 57.8	
13	.38	10.75 - 28.25	27.3 - 71.7	
20	.51	7.5 - 36.0	19.0 - 91.4	
30	.76	6.0 - 42.25	15.2 - 107.3	
35	.89	6.0 - 45.5	15.2 - 115.6	
40	1.02	6.0 - 48.5	15.2 - 123.2	
50	1.07	6.0 - 50.0	15.2 - 127.0	
20	.51	38.0 - 58.0	96.5 - 147.3	2755-LD4E1 2755-LD4E4 [2]
25	.64	36.0 - 68.0	91.4 - 170.0	
30	.76	34.0 - 71.5	86.4 - 181.6	
35	.89	32.0 - 74.5	81.3 - 189.2	
40	1.02	30.0 - 78.0	76.2 - 198.1	
45	1.14	28.0 - 80.0	71.1 - 203.2	
50	1.27	26.0 - 82.0	66.0 - 208.3	
55	1.40	24.0 - 84.0	61.0 - 213.4	

2755-LD8 Read Ranges [1]

Minimum Element Width		Read Range		Catalog Number
Mils	Millimeters	Inches	Centimeters	
4	.10	3.5 - 4.5	8.9 - 11.4	2755-LD8A1 2755-LD8A4
5	.15	3.25 - 5.5	8.3 - 14.0	
7.5	.19	2.75 - 6.25	7.0 - 15.9	
10	.25	2.75 - 6.75	7.0 - 17.1	
13	.33	2.5 - 7.5	6.4 - 19.0	
20	.51	3.25 - 9.25	8.3 - 23.5	
30	.76	5.25 - 10.25	13.3 - 26.0	
6	.15	7.0 - 11.75	17.8 - 29.8	2755-LD8B1 2755-LD8B4
7.5	.19	7.0 - 12.5	17.8 - 31.8	
10	.25	6.75 - 14.0	17.1 - 35.6	
13	.33	6.75 - 16.0	17.1 - 40.6	
20	.51	6.75 - 20.0	17.1 - 50.8	
30	.76	6.0 - 20.0	15.2 - 50.8	
35	.89	5.5 - 20.0	14.0 - 50.8	
9	.23	14.5 - 19.5	36.8 - 49.5	2755-LD8C1 2755-LD8C4 [2]
10	.25	14.25 - 22.75	36.2 - 57. 8	
13	.38	13.75 - 26.75	34.9 - 67.9	
20	.51	12.75 - 36.0	32.4 - 91.4	
30	.76	11.0 - 41.75	27.9 - 106.0	
35	.89	10.0 - 44.5	25.4 - 113.0	
40	1.02	10.0 - 47.5	25.4 - 120.6	
50	1.07	10.0 - 50.0	25.4 - 127.0	

[1] Read ranges are based on 4 character, Code 39 labels with a wide to narrow band ratio of 2.6 to 1 and a print contrast ratio of 0.75 or better. Read ranges will vary with bar code symbol quality.

[2] The glare that results from the laser striking reflective objects (conduit, metal conveyors) may affect performance of the scanners when used at long ranges. To minimize this effect, mask the area behind the symbol with a non-glossy material (flat black paint) or reduce the scan line to avoid reflective objects. Reducing the scan line will affect reading distances of the scanner.

Specifications

Electrical	Receives power from decoder
Mechanical	
Enclosure	NEMA Type 4
Connectors	NEMA Type 1 (Subminiature DB15)
	NEMA Type 4 (Cannon KPT series)
Package detect	NEMA Type 4 Micro-mini connector (Crouse-Hinds)
	NEMA Type 4 Micro-change connector (Brad Harrison)
	External, 12V dc @ 100 mA (max)
	5 mA current sink (min)
LED indicators	
POWER ON:	Amber
VALID READ:	Green
Approximate weight	1.8 kg (4.0 lbs)
Dimensions	
Millimeters:	78.7 (H) $\times$ 96.5 (W) $\times$ 116.8 (D)
Inches:	3.1 (H) $\times$ 3.8 (W) $\times$ 4.5 (D)
Shock	
Operating:	30g
Non-operating:	50g
Vibration	
Operating:	2.5g; 5 to 2,000 Hz (3 axis)
Non-operating:	5g; 5 to 2,000 Hz (3 axis)
Environmental	
Ambient temperature	
Operating:	0 to 40° C (32 to 104° F)
Storage:	-30 to 70° C (-22 to 158° F)
Relative humidity	5 - 95% (without condensation)
Optical	
Light source	680 nm Visible-Laser Diode
Average output power	1.0 mW max
CDRH standards	Meets Class II Standards
Scan rate (nominal)	
2755-LD4:	200 scans per second
2755-LD8:	500 scans per second
Maximum usable scan angle	
2755-LD4:	36°
2755-LD4E:	30°
2755-LD8:	25°

For more information, see High Performance VLD Scanners Product Data, publication <u>2755-2.45</u>

Single- and Dual-Headed Enhanced Decoders

(Cat. Nos. 2755-DS, -DD)

The enhanced decoders can accommodate one or two unattended or attended scanners. Since the Dual-Head Decoders are compatible with attended scanners, users can manually scan symbols in the event that the bar code label cannot be read by the unattended bar code scanner.

These decoders are available in a variety of configurations providing application flexibility. They are available with NEMA Type 1 or Type 4 enclosures and with one or two scanner ports. Additionally, digital I/O modules and an LCD display are available as decoder options. Allen-Bradley offers a complete line of accessories to support the decoders including scanners, package detectors, and cables.

Operate the decoders in a host-controlled data-collection environment or in a stand-alone mode using the optional discrete I/O system. These decoders can also be used in an Allen-Bradley local area network in a point-to-point mode (RS-232/422) or a multi-drop network (DH-485) with the 2760-RB module.

There are two scanning modes:

- Coordinated
- Independent

There are three decoding modes:

- Continuous
- Continuous/Unique
- Triggered

Features

- *Dual Scanner Ports* can capture data from one or two scanners depending upon the requirements of the application. The scanners can also operate independently using separate triggers or in a coordinated mode sharing the same trigger

- *Built-in Setup Screens* simplify configuration and include monitoring and system-status functions

- *Five Languages* (English, French, German, Italian, and Spanish) to select from during configuration

- *Dual-purpose Auxiliary Terminal Port* lets you switch between configuration operations and manual data entry. This port also supports communication between a host device and local display or ASCII device

- *Host port* supports RS-232, RS-422, and DH-485 and allows the exchange of commands and data between the decoder and a host computer or PLC processor.

- *Optional Digotal I/O System* provides control of external (ac or dc) devices or signal conditions that are programmed using the configuration software

- *Optional LCD Display* lets you view bar code data, output counter values, and decoder performance values

Symbologies

- Code 39
- Code 128
- Codabar
- Interleaved 2-of-5
- UPC-A, -E (with or without optional supplements)
- EAN-8, -13 (with or without optional supplements)
- Pharmacode in "P" version decoders

See pages 8-11 through 8-13 for more information.

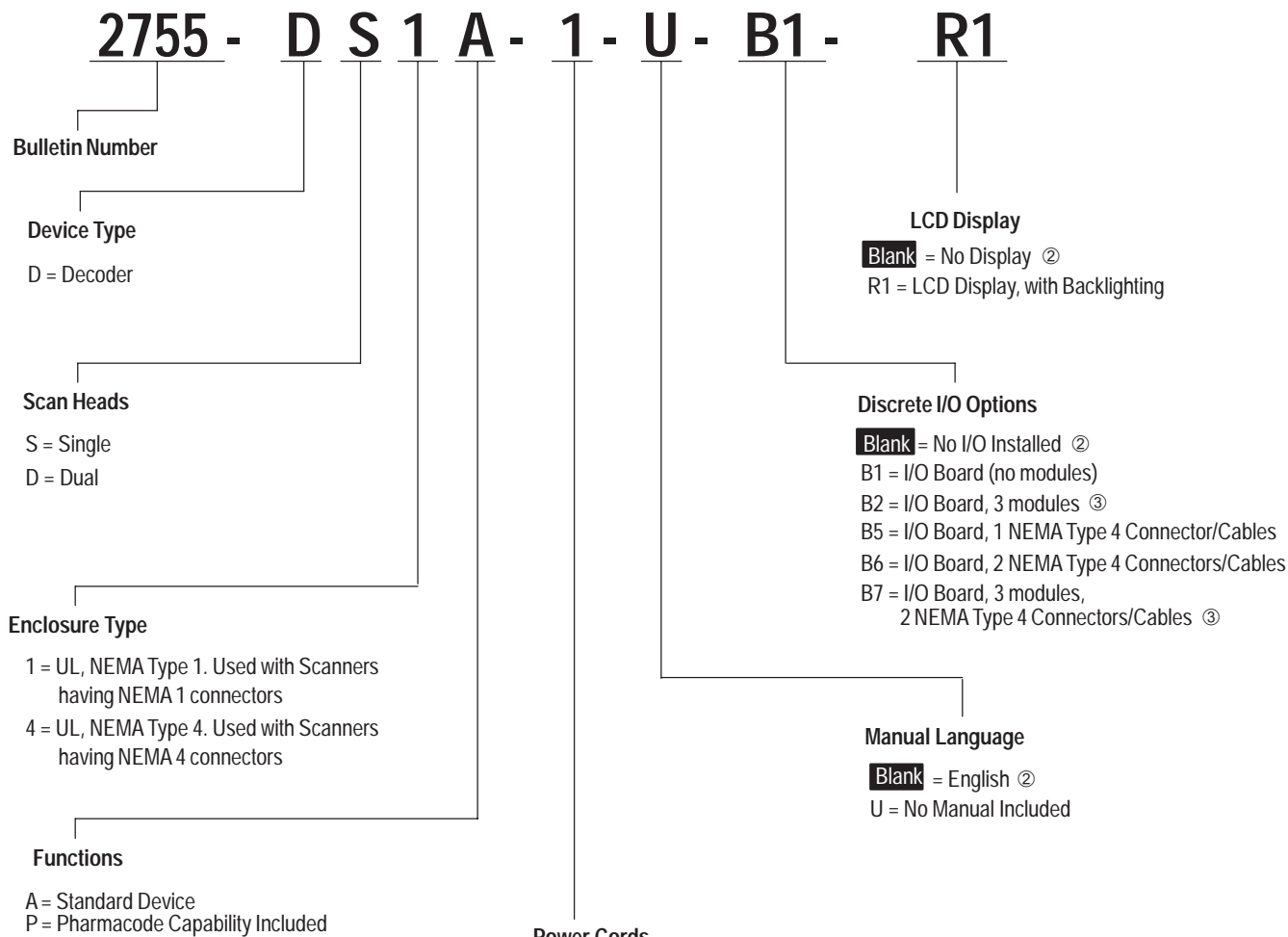*For more information, see Enhanced Decoder Product Data, publications 2755-2.43 and 2755-2.47.*

Allen-Bradley

Specifications

Electrical	
Input line voltage	85 (min) to 264V ac max
Input line frequency	47 (min) to 63 Hz max
Power	
2755-DS1A, -DS4A	55VA
2755-DD1A, -DD4A	80VA (max)
Output module voltage	
2755-OB5S:	3-60V dc 0.5A max
2755-OA5S:	12-140V ac 0.5A max
2755-OM5S:	24-280V ac 0.5A max
Input module voltage	
2755-IB5S: 2755-IA5S: 2755-IM5S:	3.3-32V dc 90-140V dc/rms 180-280V dc/rms
Communication	
Host port	
Electrical standards:	RS-232, RS-422, RS-485
Protocols:	ASCII (RS-232, RS-422, DH-485) PCCC (DH-485 only)
Connector (NEMA Type 1):	25-pin female D-shell
Connector (NEMA Type 4):	19-pin male Cannon KPT
Communication rate:	300, 1200, 2400, 4800 9600, 19200, 38400 bit/s
Parity:	None, odd, even
Data bits:	8 or 7
Stop bits:	1 or 2
Flow control:	None, Xon/Xoff, RTS/CTS
Auxiliary terminal port	
Electrical standard:	RS-232
Connector (NEMA Type 1):	25-pin female D-shell
Connector (NEMA Type 4):	19-pin male Cannon KPT
Communication rate:	9600 bit/s
Parity:	None
Data bits:	8
Stop bits:	1
Approximate weight	4.5 kg (10 lbs) max with all options installed
Approximate dimensions	
Centimeters:	26.0 (H) x 30.5 (W) x 11.6 (D)
Millimeters:	260 (H) x 305 (W) x 116 (D)
Inches:	10.25 (H) x 12 (W) x 4.57 (D)
Scanner ports	1 (DS) or 2 (DD)
Optional display	2-line $\times$ 20-character LCD with continuous LED backlighting
Optional digital I/O	Supports 8 output modules (or 7 output and 1 input module)
Environmental	
Ambient Temperature	
Operating:	**0 to 50°C (32 to 122°F)**
Storage:	-40 to 85°C (-40 to 185°F)
Relative humidity	5 to 95% (without condensation)

Allen-Bradley

Single- and Dual-Headed Enhanced Decoders

(Cat. Nos. 2755-DS, -DD)

Ordering Information

The Single- and Dual-Headed Decoders are available in different configurations. To order a decoder with the desired options factory installed ①, use the following catalog number breakdown:

2755 - D S 1 A - 1 - U - B1 - R1

Bulletin Number

Device Type

D = Decoder

Scan Heads

S = Single
D = Dual

Enclosure Type

1 = UL, NEMA Type 1. Used with Scanners
    having NEMA 1 connectors
4 = UL, NEMA Type 4. Used with Scanners
    having NEMA 4 connectors

Functions

A = Standard Device
P = Pharmacode Capability Included

Power Cords

Power Cords for NEMA Type 1
Blank = 120V ac, IEC 320, terminated plug prong, US style power cord
    0 = No cord (user must supply)
    1 = 240V ac, three-wire (US Color Code) un-terminated power cord
    2 = 240V ac, three-wire (European Harmonized) un-terminated power cord ④

Power Cords for NEMA Type 4
Blank = 120/240V ac, three wire (US Color Code) un-terminated power cord
    0 = No cord (user must supply)
    3 = 240V ac, three-wire (European Harmonized) un-terminated power cord ④

LCD Display

Blank = No Display ②
R1 = LCD Display, with Backlighting

Discrete I/O Options

Blank = No I/O Installed ②
B1 = I/O Board (no modules)
B2 = I/O Board, 3 modules ③
B5 = I/O Board, 1 NEMA Type 4 Connector/Cables
B6 = I/O Board, 2 NEMA Type 4 Connectors/Cables
B7 = I/O Board, 3 modules,
    2 NEMA Type 4 Connectors/Cables ③

Manual Language

Blank = English ②
U = No Manual Included

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① If delivery time is critical, order stock decoders with user-installed option kits. See page 8-19.

② For applications that do not require special hardware, these fields are omitted. For example: A NEMA Type 1, Dual Scan Head Decoder with only an LCD display = 2755-DD1A-R1

③ Two dc output modules and one dc input module.

④ Decoder is not UL listed/CSA approved when used with the European Harmonized power cord.

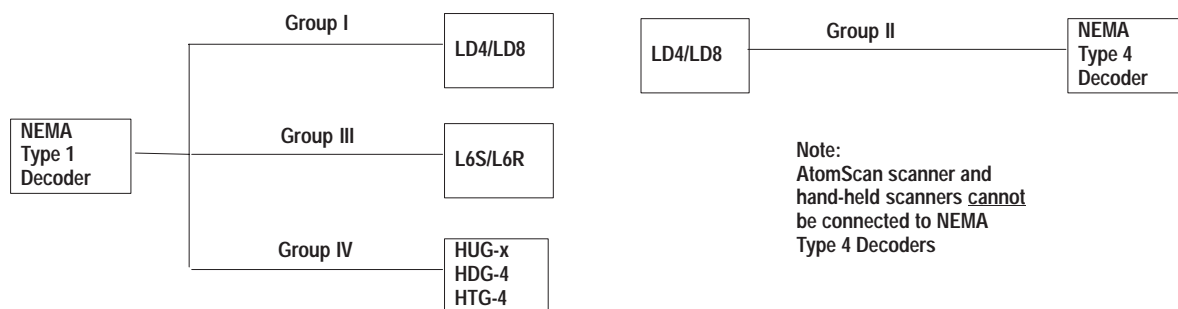# Single- and Dual-Headed Enhanced Decoders

(Cat. Nos. 2755-DS, -DD)

Cable Selection

Group	Decoder/Scanner Combination	Description	Cable Length	Catalog Number 2755
I	NEMA Type 1 to LD4/LD8	Optional extension cable (10 ft. is hard-wired to the scanner)	4.57m (15 ft)	-C15D1
			12.2m (40 ft)	-C40D1
II	NEMA Type 4 to LD4/LD8	Optional extension cable (10 ft. is hard-wired to the scanner)	4.57m (15 ft)	-C15D4
			12.2m (40 ft)	-C40D4
III	NEMA Type 1 to L6S/L6R [1]	Scanner cable	3.05m (10 ft)	-CS10
			4.57m (15 ft)	-CS15
		Adapter to connect AtomScan scanner to Enhanced Decoder	Not Applicable	-NC18
IV	NEMA Type 1 to HUG-x [2]	Hand-held Undecoded Scanner cable	2.44m (8 ft)	-HUC-GA1-08
			4.57m (15 ft)	-HUC-GA1-15
			6.10m (20 ft)	-HUC-GA1-20
	NEMA Type 1 to HDG-4 [2][3]	Hand-held Decoded Scanner cable to Synapse	2.44m (8 ft)	-HDC-GS1-08
			6.10m (20 ft)	-HDC-GS1-20
	NEMA Type 1 to HTG-4 [2][3]	Hand-held Two-dimensional scanner cable to Synapse	2.44m (8 ft)	-HTC-GS1-08
	NEMA Type 1 to HDG-4, HTG-4 [2][3]	Synapse to Decoder Interface (scanner emulation)	Not Applicable	-HFC-SA1-01
	NEMA Type 1 to HUG-x, HDG-4, HTG-4 [2]	Adapter that plugs directly into the scanner port of a NEMA Type 1 decoder and provides the circuitry to connect the decoder to a hand-held scanner cable	Not Applicable	-NC16

[1] The AtomScan scanner requires the Adapter Module (cat. no. 2755-NC18) to function with these decoders.
[2] These scanners require the Gun Adapter (cat. no. 2755-NC16) to function with these decoders.
[3] These scanners require the Synapse to Decoder Interface (cat. no. 2755-HFC-SA1-01) for scanner emulation.

Cable Selection Chart

Scanner

Group I — LD4/LD8

Group II — LD4/LD8 — NEMA Type 4 Decoder

Group III — L6S/L6R

NEMA Type 1 Decoder

Group IV — HUG-x, HDG-4, HTG-4

Note:
AtomScan scanner and hand-held scanners cannot be connected to NEMA Type 4 Decoders

Hand-Held Scanners

(Cat. Nos. 2755-HxG-4, -HxG-7, -HxG-9)

Hand-Held scanners use a low-power visible-laser diode (VLD) for non-contact scanning in applications where bar codes must be scanned manually. They are designed for industrial environments and are ideal for reading bar code labels on uneven, textured, curved, and other exposed surfaces. Several scanner versions are available: decoded, undecoded, cordless, and two-dimensional (PDF 417).

The decoded scanner uses the latest in "fuzzy logic" decoding to improve first time read rates across a range of bar code symbol densities and print qualities. Various Synapse ™ connections let the scanner operate in undecoded, decoded, and wedge modes.

The cordless scanners use low-power radio frequency transmissions, which allow them to operate up to 15.24m (50 ft) from the base stations in undecoded, decoded, and wedge modes. The base stations also act as holders and recharge stations for the scanners' batteries.

The two-dimensional scanner scans and decodes both one-dimensional bar codes as well as the PDF 417 two-dimensional bar code. Various Synapse connections let the scanner operate in undecoded, decoded, and wedge modes.

Features

- Available in undecoded, decoded, cordless, and two-dimensional versions

- Standard, long, and extended read ranges

- Lightweight size and design for easy use and handling

Compatibility

Hand-Held scanners are compatible with:

- Decoders — Enhanced Decoder, DH5, and DH1 workstation (undecoded only)

- Computers - Decoded scanners can connect to IBM and DEC VT computers; the serial port of an AdaptaScan reader; or the Auxiliary port of the Enhanced Decoder

Read Ranges

- 2755-HxG-4: 0 to 127 cm (0 to 50 in)

- 2755-HxG-7: 7.62 to 366 cm (3 to 144 in)

- 2755-HxG-9: 10 to 1067 cm (4 to 420 in)

Specifications

Environmental		
Temperature		
	Operating:	-20 to 40°C (-4 to 104°F)
	Storage:	-40 to 60°C (-40 to 140°F)
Optical		
Light Source		675 nm Visible-Laser Diode
Scan Rate		36 scans/second (bi-directional)
		560 scans/second (HTG-4 only)
CDRH standards		Meets Class II, IEC 825 Class 2

Symbologies (Decoded Versions)

- Code 39
- Code 128
- Interleaved 2 of 5
- UPC-A and UPC-E
- EAN-8, -13, -128
- Discrete 2 of 5
- Codabar
- PDF 417 (2755-HTG-4 only)

The Hand-Held Scanners carry the following caution:

CAUTION
LASER LIGHT – DO NOT STARE INTO BEAM
670 nm LASER LIGHT – 1.0 MILLIWATT MAX OUTPUT
CLASS II LASER PRODUCT

For more information, see Hand-Held Scanner Product Data, publication 2755-2.66.

Allen-Bradley Bar Code Scanning Wands are constructed of metal for industrial applications. Even though these bar code wands are designed for contact scanning, they can read through thick overlays or laminates (depending upon laminate thickness and angle of the wand). There are three types of wands available:

- Visible-Red Wand (cat. no. 2755-W1) for scanning high-density bar codes

- Visible-Red Wand (cat. no. 2755-W2) for scanning medium to low-density bar codes

- Infrared Wand cat. no. 2755-W5 for scanning high-density bar codes with at least 20% carbon content in printing ink

Features

- Available in red light source (cat. nos. 2755-W1, -W2) and infrared light (-W5)

- High or low-resolution accommodates different bar code densities.

- Very low current drain and can operate in direct sunlight

- Scan angle of 0 to 45°

- Replaceable wand tip

Compatibility

Bar code scanning wands can be used with:

- Multi-Purpose Bar Code Workstation (cat. no. 2755-DH1)

Specifications

Light source	
2755-W1, -W2	Visible red (655 nm)
2755-W5	Infrared (880 nm)
Scanning speed	76 to 1,270 mm per second 3 to 50 in. per second
Enclosure	Black, textured, cast aluminum
Minimum bar width	
2755-W1	0.19 mm (.0075 in)
2755-W2	0.33 mm (.013 in)
2755-W5	0.13 mm (0.0051 in)
Temperature	
Operating	-20 to 65° C (-4 to 149° F)
Non-operating	-40 to 75° C (-40 to 167° F)

For more information, see Bar Code Wands Product Data, publication 2755-2.10.

Slot Scanners

(Cat. Nos. 2755-B1, -B2)

Slot scanners (cat. nos. 2755-B1, -B2) are bi-directional scanners that scan low- to high-resolution bar code symbols. The 2755-B1 scanner is a visible red-light source and used for symbols comprised of dye-based inks and electrostatically or thermally printed labels. The 2755-B2 scanner is infrared and used for bar code symbols printed with high carbon-based inks or where immunity to contamination and dirt is required. It is also used to read bar code symbols covered with an ink transparent to infrared light.

Features

- Available with visible-red or infrared light source

- Scan low-, medium-, and high-density labels through thick laminates

- Sealed case with full gasket; optical system is positioned behind a recessed window

Compatibility

Slot scanners can be used with:

- Multi-Purpose Bar Code Workstation (cat. no. 2755-DH1)

Specifications

Light source	
2755-B1	Visible red (660 nm)
2755-B2	Infrared (880 nm)
Scanning speed	20 to 317 cm per second 3 to 50 in. per second
Cable	1.22 m (4 ft) coiled cable
Enclosure	NEMA Type 13
Minimum bar width	0.0075 in. (0.19 mm)
Environmental	
Operating Temperature	
2755-B1:	-20 to 55°C (-4 to 131°F)
2755-B2:	-40 to 70°C (-40 to 158°F)
Storage Temperature	
2755-B1, -B2:	-40 to 80°C (-40 to 176°F)
Approximate Dimensions	
Millimeters	12.7 (L) x 5.21 (W) x 2.79 (H)
Inches	5.00 (L) x 2.05 (W) x 1.10 (H)

Multi-Purpose Bar Code Workstation

(Cat. No. 2755-DH1)

The Multi-Purpose Bar Code Workstation (cat. no. 2755-DH1) supports Allen-Bradley attended scanning devices and unattended versions of 2755-LD1 and -LD2. Use the workstation to decode and send scanned data to RS-232 or RS-422 host devices.

Features

- *Default Configuration* makes the decoder ready for many applications right out of the box

- *Customize the Configuration* using the bar code menu provided with the user manual

- *Terminal Port* lets you connect an ASCII type display and view data as it is decoded

- Host Port supports RS-232-C or RS-422 communication with a host computer

Compatibility

- Undecoded hand-held scanners (cat. no. 2755-HUG-x)

- Wands (cat. nos. 2755-W1, -W2, -W5)

- Slot scanners (cat. nos. 2755-B1, -B2)

Specifications

Mechanical	
Approximate weight	1.8 kg (4.0 lbs)
Enclosure	NEMA 1 steel enclosure
LED indicators	Power On, Laser On, Valid Read, Transmitted Data, Received Data
Dimensions	
Millimeters:	203.2 (W) × 190.5 (D)
Inches:	8 (W) × 7.5 (D)
Shock	
Operating:	30g
Non-operating:	50g
Vibration	
Operating:	2.5g; 5 to 2,000 Hz (3 axis)
Non-operating:	5g; 5 to 2,000 Hz (3 axis)
Environmental	
Operating temperature	0 to 40° C (32 to 104° F)
Storage temperature	-40 to 85° C (-40 to 185° F)
Relative humidity	5 to 95% (without condensation)
Electrical	
Input voltage	90-264V ac, 50/60 Hz
Operating current	0.5A max
Power consumption	40 VA max
Communication	
Standards	RS-232-C / RS-422
Communication rates	150, 300, 600, 1200 2400, 4800, 9600, 19200 bit/s
Stop bits	1 or 2
Data bits	7
Parity	Mark, space, even, or odd
Ports	
Display Terminal Port	RS-232-C
Host Computer Port	RS-232-C or RS-422

Symbologies

- Code 39

- Code 128

- Interleaved 2-of-5

- UPC-A, -E

- EAN-8, -13

- CodabarCode 11

For more information, see Multi-Purpose Workstation Product Data, publication 2755-2.23.

Flexible Interface Module and Protocol Cartridges

(Cat. Nos. 2760-RB, -SFC1, -SFC2)

The Flexible Interface Module (cat. no. 2760-RB) is a two-slot module compatible with 1771-I/O chassis. The module has three interface ports for intelligent devices and one configuration port for menu-driven setup and diagnostics.

This module, and not the PLC controller, handles complex communication protocols. Data matrixing and match-code features provide flexible network control.

To access and run the Flexible Interface Module configuration software, you must connect a programming terminal to the configuration port. You can use one of the following:

- Personal Computer with terminal emulation software

- Any ANSI-standard terminal that emulates a VT100 terminal

You can link up to 31 DH485 multi-drop devices per interface port to the module. The module also supports RS-232 and RS-422 devices. Removable protocol cartridges let you quickly change protocols.

The cartridges plug into the front of the module. The module setup menus let you assign protocols to any of the three interface ports.

The selection of the protocol depends upon the the type of device being interfaced with the PLC controller. Each Protocol Cartridge contains a specific protocol as well as simple ASCII (dumb terminal) protocol.

There are two types of protocol cartridges:

- *DF1/ASCII Protocol Cartridge* (cat. no. 2760-SFC1) lets you connect a variety of simple ASCII devices to the Flexible Interface Module using RS-232/RS-422 communication. Allen-Bradley DF1 Protocol is also included

- *Multi-drop Master/Slave Protocol Cartridge* (cat. no. 2760-SFC2) lets you connect a variety of intelligent devices on a network including:

  - Enhanced Decoders (cat. no. 2755-DS and -DD) using DH485 protocol

  - The SFC2 also includes Dumb Terminal Communication Protocol

Features

- Two-slot module that fits into a 1771 chassis

- Three bi-directional communication ports

- One configuration port

- Five LED indicators for operating conditions

- *Match-Code Capability* lets you assign 20 match codes to each of the three interface ports. Each match code may be 24 (or less) hex bytes

- *Discrete Byte Input* allows up to two bytes per port to be read from an incoming data string or message (while the module is in one-slot address mode)

- *Data Matrix* provides the ability to transfer data bi-directionally from any port(s) to port(s)

Specifications

Electrical	
Current	1.25A from 1771 backplane
Interfaces	• RS-232 • RS-422 • RS-485 optically isolated to 1500V
Environmental	
Operating temperature	0 to 60° C (32 to 140° F)
Storage temperature	-40 to 85° C (-40 to 185° F)
Relative humidity	5 - 95% (without condensation)
Mechanical	
Connections	• 3 device ports • 1 configuration port

AdaptaScan Bar Code Readers

AdaptaScan Reader, 300 scans/s	2755-SN3
AdaptaScan Reader, 500 scans/s	2755-SN5
AdaptaScan Reader, 800 scans/s	2755-SN8
Wiring base - U.S. version	2755-NB40
Wiring base - metric version	2755-NB41
Plastic window kit	2755-NW44
Glass window kit	2755-NW45
Power supply, 24V dc, 120V ac input/60 Hz	2755-PW46
Power supply, 24V dc, 240V ac input/50 Hz	2755-PW47
Mounting bracket kit	2755-NM42
Communication cable	2755-NC43
Configuration software	2755-ASN
Two dc output modules, 3 to 60V dc	2755-OB5S
Two dc output modules, 12 to 140V ac	2755-OA5S
Two ac output modules, 24 to 280V ac	2755-OM5S
Two dc input modules, 3.3 to 32V dc	2755-IB5S
Two ac/dc input modules, 90 to 140V dc or VRMS	2755-IA5S
Two ac/dc input modules, 180 to 280V dc or VRMS	2755-IM5S

AtomScan+ Bar Code Scanners

Single line scanner, straight ahead high density	2755-LS7-SA
Single line scanner, straight ahead low density	2755-LS7-SB
Raster scanner, straight ahead high density	2755-LS7-RA
Raster scanner, straight ahead low density	2755-LS7-RB
Single line scanner, right angle low density	2755-LS7-SBV
Raster scanner, right angle low density	2755-LS7-RBV
Interface with RS-232 and RS-485 communication	2755-LS7-IB1
Interface box, with RS-232 and RS-422 communication	2755-LS7-IB2
Power supply, 100-240Vac input, 50/60 Hz	2755-LS7-PW1
Mounting Plate for reader	2755-LS7-N1

AtomScan Bar Code Scanners

Linear scanner, high density	2755-L6SA
Raster scanner, high density	2755-L6RA
Linear scanner, medium to low density	2755-L6SB
Raster scanner, medium to low density	2755-L6RB
Mounting plate	2755-NM7
Scanner cable - 3.05m (10 ft)	2755-CS10
Scanner cable - 4.57m (15 ft)	2755-CS15
Adapter module for Enhanced Decoder connection	2755-NC18

High Performance VLD Bar Code Scanners (2755-LD4, -LD8)

Linear scanner, 200 scans/s, NEMA Type 1 connector, short range	2755-LD4A1
Linear scanner, 200 scans/s, NEMA Type 4 connector, short range	2755-LD4A4
Linear scanner, 200 scans/s, NEMA Type 1 connector, medium range	2755-LD4B1
Linear scanner, 200 scans/s, NEMA Type 4 connector, medium range	2755-LD4B4
Linear scanner, 200 scans/s, NEMA Type 1 connector, long range	2755-LD4C1

Linear scanner, 200 scans/s, NEMA Type 4 connector, long range	2755-LD4C4
Linear scanner, 200 scans/s, NEMA Type 1 connector, extended range	2755-LD4E1
Linear scanner, 200 scans/s, NEMA Type 4 connector, extended range	2755-LD4E4
Linear scanner, 500 scans/s, NEMA Type 1 connector, short range	2755-LD8A1
Linear scanner, 500 scans/s, NEMA Type 4 connector, short range	2755-LD8A4
Linear scanner, 500 scans/s, NEMA Type 1 connector, medium range	2755-LD8B1
Linear scanner, 500 scans/s, NEMA Type 4 connector, medium range	2755-LD8B4
Linear scanner, 500 scans/s, NEMA Type 1 connector, long range	2755-LD8C1
Linear scanner, 500 scans/s, NEMA Type 4 connector, long range	2755-LD8C4
Extension cable, 4.5m (15 ft), NEMA Type 1 connector	2755-C15D1
Extension cable, 4.5m (15 ft), NEMA Type 4 connector	2755-C15D4
Extension cable, 12.2m (40 ft), NEMA Type 1 connector	2755-C40D1
Extension cable, 12.2m (40 ft), NEMA Type 4 connector	2755-C40D4
Swivel mounting base	2755-NM1
Mounting plate	2755-NM6

Enhanced Decoders

Custom versions are available using configurator.

Decoder, single scanner, NEMA Type 1	2755-DS1A
Decoder, single scanner, NEMA Type 4	2755-DS4A
Decoder, dual scanner, NEMA Type 1	2755-DD1A
Decoder, dual scanner, NEMA Type 4	2755-DD4A
Decoder, single scanner, NEMA Type 1 with Pharma code	2755-DS1P
Decoder, single scanner, NEMA Type 4 with Pharma code	2755-DS4P
Decoder, dual scanner, NEMA Type 1 with Pharma code	2755-DD1P
Decoder, dual scanner, NEMA Type 4 with Pharma code	2755-DD4P
LCD display module, back lit	2755-NR1
Input/output board	2755-NB1
Input/output board with 2 output and 1 input module	2755-NB2
I/O connector kit with 1.8m (6 ft) cable	2755-NB0
Two dc ouput modules, 3 to 60V dc	2755-OB5S
Two ac ouput modules, 12 to 140V ac	2755-OA5S
Two ac ouput modules, 24 to 280V ac	2755-OM5S
Two dc input modules, 3.3 to 32V dc	2755-IB5S
Two ac/dc input modules, 90 to 140V dc or VRMS	2755-IA5S
Two ac/dc input modules, 180 to 280V dc or VRMS	2755-IM5S

Ordering Information

(Cat. No. 2708, 2755 and 2760 Series)

Hand-Held Scanners

Hand-Held Scanners — Cordless

Standard range, hand-held cordless scanner	2755-HCG-4
Long range, hand-held cordless scanner	2755-HCG-7
Base/interface unit, hand-held cordless scanner	2755-HCG-B
Interface cable, 1.8m (6 ft) - cordless base to IBM XT/AT 5-pin DIN wedge	2755-HCC-BP1-06
Interface cable, 1.8m (6 ft) - cordless base to PS/2 6-pin mini-DIN wedge	2755-HCC-BP2-06
Interface cable, 1.8m (6 ft) - cordless base to RS-232-C, DB25F, for DCE devices	2755-HCC-BR1-06
Interface cable, 1.8m (6 ft) - cordless base to RS-232-C, DB25M, for DTE devices	2755-HCC-BR2-06
Interface cable, 1.8m (6 ft) - cordless base to DEC VT2xx, 3xx, 4xx	2755-HCC-BV1-06
Cordless base power supply, 115/230V ac	2755-HCP-D1
Battery pack, hand-held cordless scanner	2755-HCP-B1
4-slot desk mount universal rapid battery charger (requires four 2755-HCP-B3)	2755-HCP-B2
Battery mounting adapter for universal battery charger	2755-HCP-B3
Protective boot, hand-held cordless scanner	2755-HCN-H1
Holster, hand-held cordless scanner	2755-HCN-H2
Belt clip, hand-held cordless scanner	2755-HCN-H3

Hand-Held Scanners - Undecoded

Standard range, hand-held undecoded scanner	2755-HUG-4
Extended range, hand-held undecoded scanner	2755-HUG-9
Cable, hand-held undecoded scanner to A-B decoder 2.4m (8 ft)	2755-HUC-GA1-08
Cable, hand-held undecoded scanner to A-B decoder 4.6m (15 ft)	2755-HUC-GA1-15
Cable, hand-held undecoded scanner to A-B decoder 6.1m (20 ft)	2755-HUC-GA1-20

Hand-Held Scanner — Decoded

Standard range, hand-held fuzzy logic decoded scanner	2755-HDG-4
Cable, hand-held decoded scanner to Synapse 2.4m (8 ft)	2755-HDC-GS1-08
Cable, hand-held decoded scanner to Synapse 6.1m (20 ft)	2755-HDC-GS1-20
Cable, AdaptaScan pass-through 2.4m (8 ft)	2755-HDC-GA2-08

Hand-Held Scanner — Two-dimensional

Standard range, hand-held two-dimensional decoded scanner	2755-HTG-4
Cable, hand-held two-dimensional decoded scanner to Synapse	2755-HTC-GS1-08
Protective boot, hand-held two-dimensional decoded scanner	2755-HTN-H1

Hand-Held Scanners — Synapse Connections (HDG-4, HTG-4 only)

Interface cable, Synapse to A-B decoder (scanner emulation)	2755-HFC-SA1-01
Interface cable, Synapse to IBM XT/AT 5-pin DIN wedge	2755-HFC-SP1-01
Interface cable, Synapse to PS/2 6-pin mini-DIN wedge	2755-HFC-SP2-01
Interface cable, Synapse to RS-232-C, DB25M, for DTE devices	2755-HFC-SR2-01
Interface cable, Synapse to RS-232-C, DB9F, for DCE devices	2755-HFC-SR3-01

Interface cable, Synapse to DEC VT2xx, 3xx, 4xx wedge	2755-HFC-SV1-01
Interface cable, Synapse to DEC VT510, 520 wedge	2755-HFC-SV2-01
Synapse power supply, 115/230V ac	2755-HFP-D1

Hand-Held Scanners — Accessories

Hand-Held undecoded and decoded scanners protective boot	2755-HFN-H1
Hand-Held undecoded and decoded scanners heavy-duty IntelliStand, 12.7 to 20.3 cm (5 to 8 in) high	2755-HFN-K1
Hand-Held undecoded and decoded scanners IntelliStand, 22.9 to 40.6 cm (9 to 16 in) high	2755-HFN-K2
Hand-Held undecoded, decoded, and cordless scanners multi-mount stand	2755-HFN-K3

Wands

Wand, visible red light source (high density bar codes)	2755-W1
Wand, visible red light source (low density bar codes)	2755-W2
Wand, Infrared light source (high density bar codes)	2755-W5
Wand holder	2755-WS
Wand tip replacement	2755-WT1

Slot Scanners

Slot scanner, visible red light source	2755-B1
Slot scanner, Infrared light source	2755-B2
Mounting bracket	2755-NC14

Multi-Purpose Workstation

Multi-Purpose workstation for hand-held scanners, wands, and slot scanners	2755-DH1

Attended Workstation

96K-byte RAM memory, RS-232, backlit display	2708-DH5B2L
96K-byte RAM memory, RS-422, backlit display	2708-DH4B2L
Power supply, U.S.A.	2708-NP1
Power supply, European	2708-NP2
Network connector	2708-NNC
Application generator software	2708-NAG
Network manager software	2708-NNM
Basic development software kit	2708-NBD

Flexible Interface Module

Flexible interface module	2760-RB
Protocol cartridge, RS-232 and RS-422	2760-SFC1
Protocol cartridge, DH-485 (includes 2760-A485)	2760-SFC2
DH-485 multi-drop connector for NEMA Type 1 decoders	2760-A485

UL/CSA

The following products (in addition to the ones we've already identified in this section) have UL/CSA approval and CE certification.

- 2755-DD
- 2755-DH1
- 2755-DS
- 2755-HxG-4
- 2755-HxG-7
- 2755-HxG-9
- 2755-L6S
- 2755-L6R
- 2755-LD4
- 2755-LD8
- 2755-SN3
- 2755-SN5
- 2755-SN8

- 2755-LS7-SA
- 2755-LS7-SB
- 2755-LS7-RA
- 2755-LS7-RB
- 2755-LS7-RBV
- 2755-LS7-SBV

- 2755-LS7-SA
- 2755-LS7-SB
- 2755-LS7-RA
- 2755-LS7-RB
- 2755-LS7-RBV
- 2755-LS7-SBV

CE

- 2755-DD
- 2755-DS
- 2755-HxG-4
- 2755-HxG-7
- 2755-HxG-9
- 2755-LD4
- 2755-LD8
- 2755-LS7-SA
- 2755-LS7-SB
- 2755-LS7-RA
- 2755-LS7-RB
- 2755-LS7-RBV
- 2755-LS7-SBV
- 2755-SN3
- 2755-SN5
- 2755-SN8
- 2760-RB

Notes