



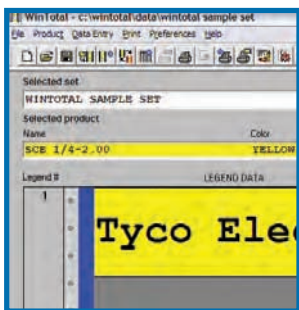
## PRINTERS

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**REVISION**

## T107M Handheld Printer

The new T107M from Tyco Electronics is perfect for the professional user who needs an affordable label printer for on-site applications that's tough and easy to use. Contractors, panel builders and facility managers will save time and money by using the special Hot Keys that provide labels at the touch of a button including wire and cable wraps, module marking, fixed length, serialization, vertical printing, barcodes, symbols and much more.

The T107M offers clear, smudge-free high-performance labels that stick permanently to a variety of surfaces and provides remarkable MIL-spec print permanence on Heat Shrink Tubing. Print media is offered in easy-to-load cassettes and includes an optimized ribbon and choice of material: Heat-Shrink, Nylon Cloth, Vinyl, Polyester, and Polypropylene labels.



### Printer Specifications

Printing Method	Thermal Transfer Printhead (180 dpi)
Dimensions	70 mm L x 114mm W x 212mm H
Printer Weight	519g
Keyboard	ABC layout To access international characters: Rapid Accented Character Entry, according to the mobile phone principle.
LCD Display	2 lines Rechargeable battery pack life indicator Display backlighting
Operating conditions	Temperature: 4°C to 40°C (39°F to 104°F) Humidity: 10% to 90% RH
Storage conditions	Temperature : 0°C to 90°C (32°F to 194°F) Humidity: 10% to 90% RH

### Product Order Code

T107M-SMS-PRINTER-KIT-US	Printer Kit - US power adaptor included
T107M-SMS-PRINTER-KIT-UK	Printer Kit - UK power adaptor included
T107M-SMS-PRINTER-KIT-EU	Printer Kit - European power adaptor included
T107M-SMS-PRINTER-KIT-AUZ	Printer Kit - Australia power adaptor included
T107M-SMS-PRINTER-KIT-ASI	Printer Kit - Asia power adaptor included
T107M-SMS-PRINTER-US	Printer Only (US)
T107M-SMS-PRINTER-EU	Printer Only (European)
SMS-US-A/C-ADAPTOR	US A/C power adaptor
SMS-EU-A/C-ADAPTOR	European A/C power adaptor
SMS-ASIA-A/C-ADAPTER	UK & Asia A/C power adaptor
SMS-AUZ-A/C-ADAPTOR	Australian A/C power adaptor
SMS-BATTERY-PACK	Rechargeable battery pack
SMS-CARRY STRAP	Soft carry strap
SMS-PRINTER-HARDCASE	Hard case

### Description

### Printer Kit Contents

- Printer
- Rubber protection bumper
- User guide
- Six (6) AA batteries
- Power adaptor
- Hard carry case
- One (1) 19mm white flexible nylon tape printer cassette
- One (1) 9mm yellow heat-shrinkable tubing printer cassette

See page 136 for available printer cassettes and ordering information.

## T107M Handheld Printer Cassettes

### Ordering Information

#### T107M Cassettes

Description	Material	Cable Diameter		Length m	Shrink Ratio	Color	Technical Datasheet
		mm	<i>inches</i>				
SMS-TMS-3.9-4	Heat-shrink tubing	1.18 - 2.33	<i>0.05 - 0.09</i>	1.5	3:1	Yellow	TTDS-122
SMS-TMS-3.9-9	Heat-shrink tubing	1.18 - 2.33	<i>0.05 - 0.09</i>	1.5	3:1	White	TTDS-122
SMS-TMS-5.2-4	Heat-shrink tubing	1.73 - 3.73	<i>0.07 - 0.15</i>	1.5	3:1	Yellow	TTDS-122
SMS-TMS-5.2-9	Heat-shrink tubing	1.73 - 3.73	<i>0.05 - 0.15</i>	1.5	3:1	White	TTDS-122
SMS-TMS-7.9-4	Heat-shrink tubing	2.97 - 5.13	<i>0.12 - 0.20</i>	1.5	3:1	Yellow	TTDS-122
SMS-TMS-7.9-9	Heat-shrink tubing	2.97 - 5.13	<i>0.12 - 0.20</i>	1.5	3:1	White	TTDS-122
SMS-TMS-13.2-4	Heat-shrink tubing	4.64 - 8.70	<i>0.18 - 0.34</i>	1.5	3:1	Yellow	TTDS-122
SMS-TMS-13.2-9	Heat-shrink tubing	4.64 - 8.70	<i>0.18 - 0.34</i>	1.5	3:1	White	TTDS-122

Description	Material	Width		Length m	Color	Technical Datasheet
		mm	<i>inches</i>			
SMS-NC-12-4	Nylon Cloth	12	<i>0.47</i>	3.5	Yellow	TTDS-123
SMS-NC-12-9	Nylon Cloth	12	<i>0.47</i>	3.5	White	TTDS-123
SMS-NC-19-9	Nylon Cloth	19	<i>0.75</i>	3.5	White	TTDS-123
SMS-PPNA-6-9	Non-adhesive tag	6	<i>0.24</i>	5.5	White	TTDS-124
SMS-PPNA-9-9	Non-adhesive tag	9	<i>0.35</i>	5.5	White	TTDS-124
SMS-V-12-4	Colored vinyl	12	<i>0.47</i>	5.5	Yellow	TTDS-125
SMS-V-12-9	Colored vinyl	12	<i>0.47</i>	5.5	White	TTDS-125
SMS-V-19.2	Colored vinyl	19	<i>0.75</i>	5.5	Red	TTDS-125
SMS-V-19-4	Colored vinyl	19	<i>0.75</i>	5.5	Yellow	TTDS-125
SMS-V-19-5	Colored vinyl	19	<i>0.75</i>	5.5	Green	TTDS-125
SMS-V-19-9	Colored vinyl	19	<i>0.75</i>	5.5	White	TTDS-125
SMS-WP-9-9	Polyester	9	<i>0.35</i>	5.5	White	TTDS-126
SMS-WP-12-9	Polyester	12	<i>0.47</i>	5.5	White	TTDS-126
SMS-MP-12-8A	Polyester	12	<i>0.47</i>	5.5	Metalized	TTDS-127
SMS-MP-19-8A	Polyester	19	<i>0.75</i>	5.5	Metalized	TTDS-127
SMS-CP-12-X	Polyester	12	<i>0.47</i>	5.5	Clear	
SMS-CP-19-X	Polyester	19	<i>0.75</i>	5.5	Clear	

## T200 Series portable thermal transfer printers

The T200 series of printers are portable/desktop thermal transfer printers with a 4.1" print head offering an economical option for low volume customers who want to take advantage of thermal transfer printing technology. Their small, light weight design makes them ideal for applications requiring portability or in environments with multiple workstations where space is limited.

The T208M has a 200 dpi printhead; the T2 12M has a 300 dpi printhead for crisp, high quality text, barcodes and graphic images. Both printers are designed for use with Tyco Electronics range of TMS heat shrinkable wire marker sleeves and limited thermal transfer printable pressure sensitive label products.

T200 series printers are available with optional label spindle accessory. It externally holds a roll of labels on 3" core for easy dispensing.



### Printer Specifications

Tyco Electronics	T208M-TTDS-011 T212M-TTDS-064
Print head width	104mm (4.09")
Print head resolution	T208M: 8dpmm (203 dpi) T212M: 12dpmm (305 dpi)
Print speed (maximum)	51mm/sec (2 inch/sec)
Media sensor	Transmissive (fixed) Reflective (fixed)
Memory	T208M: 256KB SRAM and 512KB Flash T212M: 512KB SRAM and 1MB Flash
Communication interface	Parallel (Centronics), serial (RS232), and USB
Printer dimensions	200mm W x 247mm D x 171mm H (7.9" W x 9.75" D x 6.75" H)
Printer weight	1.81 kg (4 lbs)
Shipping weight	4 kg (9 lbs)

### Media Specifications

Maximum print width	104mm (4.09")
Maximum media width	118mm (4.65")
Minimum media width	28mm (1.12")
Maximum media roll diameter	127mm (5.0")
Media core diameter	25mm (1.0")
Ribbon wind	Ink side out

### Product Order Code

Product Order Code	Description
T208M-PRINTER	T208M thermal printer - standard
T208M-C-PRINTER	T208M thermal printer - cutter option
T212M-PRINTER	T212M thermal printer - standard
T212M-C-PRINTER	T212M thermal printer - cutter option
T200-LABEL-SPINDLE	External label roll holder for T200 printers

Only the T212M printer is recommended when printing size 3/32 (2.4mm) marker sleeves.

**T300 Series High performance, cost effective thermal transfer printers**

The T300 series printers are high performance, yet cost effective thermal transfer printers with a 4.1" printhead. The rugged and durable all metal construction makes them suitable for demanding industrial and commercial environments. The enhanced memory and 32 bit processor provide fast data processing and print speeds. Optional accessories are available for added convenience and efficiency.

The T308S and T308SN have a 200 dpi printhead for use with the Tyco Electronics range of thermal transfer printable pressure sensitive label products. The T308SN provides network capability for real time connectivity with the printer. With such connectivity, print jobs can be modified from any location over the Internet via Web-based tools. The T308SN printer is also capable of sending alerts via email enabled wired or wireless devices.

The 300 dpi printhead on the T3 12S, T3 12M and T3 12Z produces crisp, high quality text, barcodes and graphic images. The T3 12S and T3 12Z are for use with Tyco Electronics thermal transfer printable pressure sensitive label products. The color-coded operator cues and auto-calibration features make T3 12Z an affordable yet easy to use label printing system. The T3 12M is designed for use with Tyco Electronics TMS and HSI wire marker sleeves, as well as thermal transfer pressure sensitive label products.



**Printer specifications**

Tyco Electronics	T308S-TTDS-054 T3 12M-TTDS-066 T3 12Z-TTDS-115
Print head width	104mm (4.09")
Print head resolution	T308S: 8dpmm (203 dpi) T3 12M/T3 12S/T3 12Z*: 12dpmm (305 dpi)
Print speed (maximum)	T308S/T3 12M/T3 12S: 203mm/sec (8 inch/sec) T3 12Z*: 154mm/sec (6 inch/sec)
Media sensor	Transmissive - adjustable Reflective (fixed)
Memory	T308S/T3 12M/T3 12S: 6MB DRAM and 2MB Flash T308SN: Additional 8MB flash memory in PCMCIA socket T3 12Z*: 4MB DRAM and 1MB Flash
Communication interface	Bi-directional parallel (Centronics) and serial (RS232)
Printer dimensions	T308S/T3 12M/T3 12S: 283mm W x 495mm D x 394mm H (11.2" W x 19.5" D x 15.5" H) T3 12Z*: 278mm W x 475mm D x 338mm H (10.93" W x 18.69" D x 13.32" H)
Printer weight	T308S/T3 12M/T3 12S: 25kg (55 lbs) T3 12Z*: 15kg (32.4 lbs)
Shipping weight	T308S/T3 12M/T3 12S: 29kg (63 lbs) T3 12Z*: 22kg (49 lbs)

**Media Specifications**

Maximum print width	104mm (4.09")
Maximum media width	114mm (4.48")
Minimum media width	T308S/T3 12M/T3 12S: 20mm (0.76") T3 12Z*: 25.4mm (1.0")
Maximum media roll diameter	203mm (8.0")
Media core diameter	76mm (3.0")
Ribbon wind	Ink side out

**Product order code**

**Description**

T308S-PRINTER	T308S thermal printer - standard
T308S-C-PRINTER	T308S thermal printer - cutter option
T308S-R-PRINTER	T308S thermal printer - internal rewind option
T308SN-PRINTER	T308S thermal printer - network capabilities
T3 12SN	T3 12S thermal printer - network capabilities
T3 12S-PRINTER	T3 12S thermal printer - standard
T3 12S-C-PRINTER	T3 12S thermal printer - cutter option
T3 12S-R-PRINTER	T3 12S thermal printer - internal rewind option
T3 12M-PRINTER	T3 12M thermal printer - standard
T3 12M-R-PRINTER	T3 12M thermal printer - internal rewind option
T3 12Z-PRINTER	T3 12Z thermal printer - standard*

\*Not available in Europe, Middle East or Africa

## T400 Series High performance and high speed thermal transfer printers

The T400 series printers are high performance thermal transfer printers with narrow to wide printheads suitable for variety of mission critical applications. The rugged and durable metal construction makes them a top choice for demanding industrial and commercial needs.

The enhanced memory and dual 32-bit processor provide extremely fast data processing and print speeds. T400 series printers are the best option for high volume and 24 hour duty cycles. High speed of 12 inch/sec on T408M printers is well suited for the applications in which labels are needed quickly, either on demand or in batches. With the highest print resolution of 600 dpi printhead on the T424S produces unmatched quality of crisp, high quality text, barcodes and graphic images in a limited space - ideal for printing linear and 2-dimensional barcodes.

The T408M is designed for use with Tyco Electronics TMS and HSI wire marker sleeves, as well as thermal transfer pressure sensitive label products. The T424S is ideal for use with Tyco Electronics thermal transfer printable pressure sensitive label products.



### Printer specifications

Tyco Electronics	T408M-TTDS-015 T424S-TTDS-116
Print head width	T408M: 128mm (5.04") T424S*: 81mm (3.2")
Print head resolution	T408M: 8dppm (203 dpi) T424S*: 23.5dppm (600 dpi)
Print speed (maximum)	T408M: 305mm/sec (12inch/sec) T424S: 102mm/sec (4inch/sec)
Media sensor	Transmissive and reflective Reflective (fixed)
Memory	16MB SDRAM and 4MB Flash
Communication interface	Bi-directional parallel (Centronics), serial (RS232), and USB 2.0
Printer dimensions	T408M: 283.2mm W x 495.3mm D x 393.7mm H (11.15" W x 19.5" D x 15.5" H) T424S*: 263.5mm W x 495.3mm D x 393.7mm H (10.37" W x 19.5" D x 15.5" H)
Printer weight	T408M: 25kg (55 lbs) T424S*: 22.7kg (50 lbs)
Shipping weight	T408M: 29kg (63 lbs) T424S*: 27kg (59 lbs)

### Media Specifications

Maximum print width	T408M: 128mm (5.04") T424S*: 81mm (3.2")
Maximum media width	T408M: 140mm (5.51") T424S*: 114mm (4.5")
Minimum media width	T408M: 40mm (1.57") T424S*: 20mm (0.76")
Maximum media roll diameter	203mm (8.0")
Media core diameter	76mm (3.0")
Ribbon wind	Ink side out

### Product order code

	Description
T408M-PRINTER	T408M thermal printer - standard
T408M-R-PRINTER	T408M thermal printer - internal rewind option
T424S-PRINTER	T424S thermal printer - standard*

\*Not available in Europe, Middle East or Africa

T400 Series printers are available with wider printhead configurations for speciality identification applications. Contact Tyco Electronics for such product requirements.

## T612M-DS Double sided thermal transfer printer

Specifically designed by Tyco Electronics, the T612M-DS printer answers a common need in heat-shrinkable wire and cable identification markers: single-pass printing onto both the front and back side of the markers simultaneously. Specifically developed and modified by Tyco Electronics for this application, the T612M-DS is a high duty cycle, industrially robust thermal transfer printer. It will print onto the complete range of TMS System Six heat-shrinkable markers in all sizes from  $\frac{3}{32}$ " (2.4 mm) to  $2\frac{1}{4}$ " (57.2 mm). The data printed onto the two sides of each marker can be identical or different, same side up or flipped.



### Printer specifications

Tyco Electronics	T612M-TTDS-098
Print head width	128 mm (5.04")
Print head resolution	12 dpmm (304 dpi)
Print speed (maximum)	50 to 128 mm per second (2 [recommended] to 5 inches per second)
Media sensor	Transmissive and gap
Memory	12MB DRAM and 1 MB flash
Communication interface	Parallel (centronics) and serial (RS232/422)
Printer dimensions	559 mm W x 432 mm D x 508 mm H (22"W x 17"D x 20"H)
Printer weight	38 kg (84 lbs)
Shipping weight	51 kg (112 lbs)

### Media specifications

Maximum print width	112mm (4.4")
Maximum media width	117 mm (4.625")
Maximum media roll diameter	254 mm (10.0")
Media core diameter	26 mm (3.0")
Ribbon wind	Ink side out

### Product order code

T612M-DS-PRINTER

### Description

Tyco Electronics T612M-DS thermal printer – standard

## AM6310 Heavy duty dot matrix printer

Specifically designed by Tyco Electronics, the AM63 10 is a heavy duty industrial dot matrix printer with a high impact 24-pin print head. Automatic media thickness detection and a high impact print head make the AM63 10 the best industrial printer available for heavy gauge wire marker and tag materials, and the 24-pin print head produces high quality text printing with fast print speeds. Standard AM63 10 printer models are designed to print on Tyco Electronics HSI wire marker sleeves and dot matrix pressure sensitive label and tag products. AM63 10D models are equipped with dual tractor mechanism necessary for guiding TMS sleeve product range. Such dual tractor models can also print on HSI and dot matrix label and tag product range.



### Printer specifications

Tyco Electronics	TTDS-002
Print head	24-pin high-impact dot matrix
Print speed	Max. high-speed draft: 600 cps at 12 cpi Letter quality: 160 cps at 12 cpi
Print direction	Bi-directional, logic seeking
Control panel	LCD, 12 keys, select-dial and quick access setup menu
Feed mechanism	Tractor (single or dual)
Memory	2 MB flash
Input buffer	80 KB
Communication interface	Parallel port (centronics 36-pin) and serial port (RS232/DB25)
Printer dimensions	483 mm W x 427 mm D x 208 mm H 19.0"W x 16.0"D x 8.2"H
Printer weight	18.1 kg (40 lbs)

### Media specifications

Maximum print width	279 mm (11.0")
Maximum media width	305 mm (12.0")
Minimum media width	25 mm (1.0")

### Product order code

AM6310-110V	Tyco Electronics AM6310 dot matrix printer – standard 110 V
AM6310-230V	Tyco Electronics AM6310 dot matrix printer – standard 230 V
AM6310D-110V	Tyco Electronics AM6310 dot matrix printer – dual tractor 110 V
AM6310D-230V	Tyco Electronics AM6310 dot matrix printer – dual tractor 230 V

### Description

### New at Tyco Electronics. Ultra clean dot matrix labels!

#### Process Improvement - Web Cleaning

To address reported issues with our dot matrix label stock, we sought out equipment that would help us to remove containments from the label surface and improve overall printability. This contact cleaning/tacky roll system was integrated into our rewind tables to remove small to microscopic particles down to 1 micron from the label surface. Flood coating the web with black ink showed a cleaning efficiency that was beyond our expectations.

This 12" roller vacuum style construction helps to reduce waste, improve product quality and save production loss. Containments tend to attach themselves to the labels surface due to static electricity and moisture which require stringent cleaning techniques. Since implementing the web cleaners, we have seen huge improvements in the cleanliness of our label stock which has drastically reduced the potential for printing issues.



## LMS6000 Laser Marking System

The LMS6000 Laser Marking System is a fully functional, closed-loop, Ytterbium doped fiber laser system that is fast, efficient, flexible and reliable. The LMS6000 system comes integrated with state-of-the-art software and transport systems. These integrated systems are capable of marking on a variety of flat label materials.

Optional direct marking module provides the capability to mark on specific metallic and plastic components.

The system comes complete with a fume extraction system to meet the strictest of emission and safety regulations. If validation is not required, the system can be fitted with an optional cutter used to cut the labels as they exit the marking chamber.



### Printer specifications

Operating power	85-220V, 50-80Hz - laser 110V, 60 Hz - fume extractor
Maximum output power	10 watts laser power, 0.5mJ
Power consumption	350W Laser only
Operating temperature	10-40 °C
Humidity non-condensing	30-85%
Weight:	42KG
Laser type	Ytterbium doped fiber laser, pulsed Q-switched
Cooling system	Air cooled
Beam dimensions	TEM-00 (M2<1.4), Plano Spherical 163
Wavelength	1062nm
Pulse width	100nsec
Pulse frequency	20-80MHz
Pilot laser	650nm/ 1mW
Laser protection class	4
Marking area	130mm x 130mm
Resolution	725-1000 dpi
Beam attenuator	Galvo Mirrors, Safety shutter included
Exhaust	Integrated fume extractor with Rheostat control, filter layers and exhaust indicators

### Software specifications

Operating system	Windows 2000 and XP, Pentium IV, 500-Mhz, 150 MB hard drive, USB Interface
Graphics	All standard dimensional, PLT, DXF, BMP, JPG, PCX, WMF, EPS, TIFF. all elements can be scaled, moved, grouped or mirrored
Barcodes	1D - Code 39, Code 93, Code 128, Data Matrix - ECC200, QRCode
Characters	All true type fonts under Windows, filled, out lined, laser specific double or triple line fonts. All fonts can be scaled or wobbled stretching, compressing, circular arc
Integration capabilities	Industry standard ERP/MPR systems, databases and programs

### Product order code

### Description

LMS6000-130	Tyco Electronics LMS6000 laser - standard
LMS6000-XYZ30	Direct part marking module 300mm x 300mm
LMS6000-XYZ80	Direct part marking module 800mm x 800mm
LMS6000-XYZ100	Direct part marking module 1000mm x 1000mm - fume extractor unit
LMS6000-FE-110V	Integrated fume extractor system Verifier/Validator Part No. LMS6000-VRF-100, integrated data matrix verifier/validator

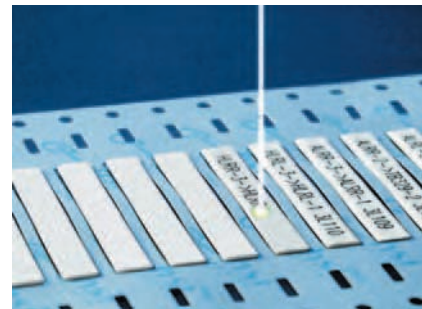
## LMS-9000 Laser Marking System

The LMS-9000 laser marker is a low maintenance laser marking system designed for high volume users. It is a highly automated system including cutting to length, postmark rewinding and double sided, one step sleeve marking.

Integrated with WinTotal marker sleeve/label marking software, it is designed for Tyco Electronics wire identification sleeves and selected labels.

### Features and benefits

- Simultaneous double-sided laser marking option for marker sleeves saves considerable time and eliminates any margin for error
- Optional handling system designed to handle several Tyco Electronics products
- Laser marking and cutting for kitting in one integrated step eliminates post print cutting and kitting
- Virtually no product wastage during marking, thanks to a state of the art product recognition and jogging system
- Optional scoring and marking feature for label products
- Modular design for easy placement and re-installation
- Fully integrated software and hardware
- On screen diagnostics
- Meets all relevant US and European laser equipment standards
- Laser parameters pre-set and software controlled



Product order code	Description
Tyco Electronics	TTDS-057
LMS-9000	Tyco Electronics LMS-9000 laser – standard <i>*Please contact your local Tyco Electronics representative for product configuration per your application.</i>

See page 168 for Laser Markable Label Materials and ordering information.

Tyco Electronics also offers a pre-printing service to customers who need high quality, durable, permanent laser markers, yet do not want to invest in the purchase of LMS-9000 equipment at this time. All pre-printed laser markers, labels or tags are produced to out exacting quality, manufacturing standards and meet applicable mark permanence specifications. A variety of System Six and HSI products including TMS-SCE, D-SCE, HT-SCE, HL and HLX are available for pre-print base materials along with many label materials.

Please contact your local Tyco Electronics representative to find out more about our laser pre-print services.

## BSC-100 Barcode scanners

Tyco Electronics BSC-100 barcode scanners are cost effective, full featured, and fast barcode readers. These combine high image transfer speed with exceptional image quality. Their omnidirectional reading capability allows fast and easy reading of EAN-UCC composite codes, 2-dimensional (PDF417, datamatrix) and Postal codes. It comes with USB connection ready to "point and shoot" at a complicated looking 2-dimensional barcode or a simple linear code. It can be used in a wide range of commercial and industrial applications within government/postal, military, healthcare, logistics, manufacturing and retail sectors.



### General specifications

Symbolologies	2 Dimensional: PDF417, MicroPDF417, MaxiCode, DataMatrix, QR Code, Aztec, Aztec Mesas, Code 49 and EAN-UCC composite  Linear: Codabar, Code 39, Interleaved 2 of 5, Code 93, Code 128, UPC, EAN, RSS, and Codablock  Postal: Postnet, Planet Code, British Post, Canadian Post, Japanese Post, KIX  OCR fonts: OCR-A, OCR-B
Power Requirements	4.5 - 12 VDC - powered through USB port
Physical Dimensions	81mm W x 135mm L x 157mm H (3.2" W x 5.3" L x 6.2" H)
Weight	184.3g (6.5 oz)

### Product order code

BSC-100

### Description

Barcode scanner - standard

## BSC-200 Hand held imager

The BSC-200 imager is a portable hand held solution for reading both linear bar codes and 2D symbols. The BSC-200 reads a wide range of bar code symbols created from a variety of printing and marking methods.

• **Read Area:**

The BSC-200 imager's advanced "dual decode zone" technology allows the user to easily capture 2D symbols and linear bar codes at varying distances from 2" to 20" (50.8mm to 508mm). This wide read area allows the symbols to be decoded fast and reliably.

Fast processing speeds also add to the BSC-200's ability to acquire and decode multiple symbologies, with no adjustment of the imager required.

• **Ease of use:**

BSC-200 imagers feature point-and-click targeting with a red laser spot to quickly center the symbol in the field of view. Beeper, vibrator and multi-purpose LEDs provide real-time feedback to signal successful decoding.

• **Applications:**

The BSC-200 imager is a strong reading solution for applications needing to read linear bar codes and 2D symbologies with a portable handheld device.

• **System Integration:**

BSC-200 imagers are available in 2 configuration options:

- Batch: A wireless way to collect thousands of decoded symbols for later download, capable of performing more than 4000 reads from a single battery charge and buffers a minimum of 1 MB of data in nonvolatile memory. (battery purchased separately)
- Cabled: Cabled units include USB, RS-232. (RS-232 available through the purchase of optional connector kit - contact Tyco Electronics)

• **Symbologies:**

The BSC-200 automatically discriminates between all major 2D matrix and linear bar code symbologies, and offers time stamp capabilities for logging data. Symbologies include:

2D Symbologies:

- MaxiCode                                - QR Code
- Aztec Code                                - Data Matrix (ECC 200)

Stacked Symbologies:

- UCC Composite
- PDF4 17 (with Macro support)
- Micro PDF4 17

Linear Bar Codes:

- Codabar                                    - Codablock F
- GoCode                                    - Code 93
- RSS                                        - Code 39
- Code 128                                 - Standard postal codes
- UPC/EAN/JAN - Int 2 or 5

• **BSC-200 Accessories:**

- Long-life 1300 mA lithium-ion battery
- Two-bay battery charger
- RS-232 kit

**Imager specifications**

Imager dimensions	33mm H x 46mm W x 109mm D (1.3" H x 1.8" W x 4.3" D)
Imager weight:	71.5 g (2.5 oz) not including cable
Handle dimensions	96.5 mm H x 30 mm W x 36 mm D (1.8" H x 1.2" W x 1.4" D)
Handle weight:	59.8 g (1.2 oz) not including cable

**Environmental**

Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	-20°C to 60°C (-4°F to 140°F)
Humidity	5% to 90% (non-condensing)

**Electrical**

Power requirements	5 VDC (mA)
Typical:	310
Peak:	310
Sleep	3

**Read Parameters**

Pitch	±60° C (front to back)
Skew	±60°
Tilt	360°
Focal Range	50.8mm to 508mm (2" to 20")
Rotational Tolerance	±180°
Print Control Resolution	25% (bar codes), 35% (PDF4 17), absolute dark/light reflectance differential measure at 650 nm
Target Beam	Visible laser diode at 630 nm, Class 2
Ambient Light Immunity	Sunlight, up to 9,000' candles 96,890 lux
Shock	Withstands multiple drops of 2m (6.5') to concrete

**Product Order Code**

BSC-200	Hand held imager
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## VLD-100 Hand held imager/validator

The VLD-100 Imager/Validator is optimized to read both linear bar codes and 2D symbols. It is an aggressive hand held imager/validator for decoding symbols on low contrast substrates such as metal, plastic, rubber, polyester, vinyl, Kapton, polyvinyl fluoride and glass. The VLD-100 can read marking methods such as dot peen, thermal transfer and laser/chemical etch. Containing custom optics and Tyco Electronics' decode algorithms, the VLD-100 combines the decoding power of Tyco Electronics' popular smart camera, VRF-100, into a portable hand held device.

**Optical Options:**

The VLD-100 hand held imager/validator is available in:  
 - The high resolution version is custom designed to optimize resolution for reading small 2D symbols.

**LightRay Optics Accessory:**

Tyco Electronic's LightRay Optics solution further enhances its ability to read directly marked parts. By directing the illumination toward the symbol at off-axis angles, the LightRay Optics increase symbol contrast and filters out texture noise. The LightRay Optics are designed so that it is positioned at the correct focal distance and angle. No training is needed to find the best angles for reading low contrast symbols. Either optical accessory easily attaches on to the end of the VLD-100. Two options are available: the LightRay Optics 100 Series and the LightRay Optics 200 Series.



LightRay Optics 100 Series generates off-axis diffuse illumination



LightRay Optics 200 Series generates dark field illumination

**Ease of Use:**

The VLD-100 features point-and-click targeting with a red laser spot to quickly center the symbol in the field of view. Beeper, vibrator and multi-purpose LEDs provide real-time feedback to signal successful decoding.

**Applications:**

The VLD-100 provides outstanding performance validating challenging 2D codes.  
Automotive and Aerospace: reads codes marked on steel, iron, aluminum, rubber, and glass parts by laser etch, dot peen, metal stamp, and thermal transfer products.  
Electronics: reads codes laser etched on printed circuit boards and components.  
Department of Defense: reads UID codes on a variety of substrates. Software enables it to validate Ull code format for suppliers and constructs the UID string for DoD operators

**System Integration:**

All Tyco Electronics imagers are available in 2 configuration options:  
 - Batch: A wireless way to collect thousands of decoded symbols for later download, capable of performing more than 4000 reads from a single battery charge and buffer a minimum of 1 MB of data in non-volatile memory.  
 - Cabled: Cabled units include USB, RS-232. (RS-232 available through the purchase of optional connector kit - contact Tyco Electronics)

**Imager specifications**

Imager dimensions	33mm H x 46mm W x 109mm D 1.3"H x 1.8"W x 4.3"D
Imager weight:	71.5 g (2.5 oz) not including cable
Handle dimensions	96.5 mm H x 30 mm W x 36 mm D (1.8" H x 1.2" W x 1.4"D)
Handle weight:	59.8 g (1.2 oz) not including cable

**Environmental**

Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Humidity	5% to 90% (non-condensing)

**Electrical**

Power requirements	5 VDC (mA)
Typical:	310
Peak:	310
Sleep	3

**Read Parameters**

Pitch	±60° C (front to back)
Skew	±60°
Tilt	360°
Focal Range	25 to 508 mm (1" to 20")
Rotational Tolerance	±180°
Print Control Resolution	25% (bar codes), 35% (PDF417), absolute dark/light reflectance differential measure at 650nm
Target Beam	Visible laser diode at 630 nm, Class 2
Ambient Light Immunity	Sunlight, up to 9,000' candles 96,890 lux
Shock	Withstands multiple drops of 2m (6.5') to concrete

**Product Order Code**

VLD-100	Hand held imager/validator
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**Symbologies:**

The VLD-100 imager/validator reads all standard linear bar codes plus:  
**2D Symbologies:**  
 - Data Matrix (ECC 0200) - QR Code  
 - MaxiCode - Aztec Code  
**Stacked Symbologies:**  
 - UCC Composite - PDF4 17 (Macro Support)  
 - Micro PDF4 17

## VRF-100 Production ready data matrix verifier

The VRF-100 is an ISO/IEC 15415 and AS9132-compliant Data Matrix verifier for use in production environments. The VRF-100 helps to ensure that your marks will be verified accurately every time. Unlike most verifiers that are mounted on stands designed for the lab environment, the VRF-100 Verifier is a fully-contained, compact device that is easy to integrate into the production environment. The VRF-100 Verifier is factory-calibrated to specific traceability standards with a fully-contained housing, making it easy to integrate into existing applications. No on-site calibration of optics or lighting is needed to verify marks with the Verifier. Simply present the part to the Verifier, trigger, and receive the symbol quality report.

### • Production-Ready

It is the first 2D verifier designed specifically for use in a production environment. Its compact, lightweight design makes the Verifier easy to integrate into production processes. A self-contained, factory-calibrated system with flexible mounting allows the Verifier to be adapted to any application quickly and easily.

### • Calibrated System

It provides the user with a ready-to-use, ISO/IEC 15426-2 calibrated system. Simply present the part, trigger, and the Verifier will output the results. The user is not required to focus the optics, set the light angles. Fixed optics and pre-set illumination angles make the verifier consistent, reliable and accurate.

### • Illumination Chamber

The Verifier's fully-enclosed illumination chamber provides the controlled lighting environment for accurate, repeatable verification. The chamber is specifically engineered to produce the illumination angles required by the ISO/IEC 15415 standard.

### • VRF Software

Offers complete symbol verification reports in a variety of formats: PDF, CSV, HTML and RTF.

### • ISO/IEC 15426-2 Certified

The Verifier is ISO/IEC 15426-2 certified. It is precisely engineered to meet rigorous verification standards, ensuring accurate and consistent verification.

### • ISO/IEC 15415 Compliant

The Verifier provides verification of 2D symbols for parameters:

- |                           |                               |
|---------------------------|-------------------------------|
| - Symbol contrast         | - Fixed pattern damage        |
| - Modulation              | - Reference decode algorithms |
| - Axial non-uniformity    | - Unused error correction     |
| - Grid non-uniformity     |                               |
| - Print growth (ungraded) |                               |

### • AS9132

Verifies Data Matrix symbols in accordance with the parameters called out in the AS9132 standard:

- |                     |                       |
|---------------------|-----------------------|
| - Quiet Zone        | - Dot ovality         |
| - Cell fill         | - Contrast            |
| - Dot center offset | - Angle of distortion |
| - Symbol type       |                       |

### • MIL-STD 130

Requires verification of Data Matrix symbols to both ISO/IEC 15415 and AS9132 standards as required by the MIL STD 130 specification.

### Imager specifications

Imager dimensions 307 mm H x 127 mm W x 122 mm D  
(12.1" H x 5.0" W x 4.8" D)

### Environmental

Operating Temperature 0°C to 40°C (32°F to 104°F)  
Storage Temperature -50°C to 75°C (-58°F to 167°F)  
Humidity Up to 90% (non-condensing)

### Electrical

Power Requirements Input, 10 to 28 VDC, 200 mV-P-P max. ripple, 270 mA at 24 VDC (typ. CMOS), 333 mA at 24 VDC (typ. CCD)  
Trigger, New Master, Input 1: (Optoisolated) 5 to 28 VDC rated (12 mA at 24 VDC)  
Outputs 1/2/3: (Optoisolated) 1 to 28 VDC rated, (I<sub>CE</sub> < 100 mA at 24 VDC, current limited by user)

### Product Order Code

VRF-100\* Data matrix verifier

\*not available in Europe, Middle East, or Africa



## Thermal transfer ribbons



### RJS-4RPSCE

Tyco Electronics RJS-4RPSCE is a high durability black resin thermal transfer ribbon tested and approved for use on Tyco Electronics TMS-SCE, RPS and HL cable markers wire marker sleeve products. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width	110 mm (4.33 inches)
Ribbon length	300 meters (984 feet)
Ink	Resin
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T308S, T3 12M, T3 12Z**, T408M, T6 12M-DS, T3 12S
Compatible materials	TMS-SCE, RPS, SB, HL, HS, HC
<i>**Not available in Europe, Middle East or Africa</i>	

#### Ordering information

Product order code	TMS-RJS-RIBBON-4RPSCE
Description	Tyco Electronics 4RPSCE thermal transfer ribbon for T308S, T3 12S, T3 12M, T3 12Z**, T408M and T6 12M-DS printers
<i>**Not available in Europe, Middle East or Africa</i>	

### 101-4RPSCE

Tyco Electronics 101-4RPSCE is a high durability black resin thermal transfer ribbon tested and approved for use on Tyco Electronics TMS-SCE, RPS wire marker sleeve products and SB self-laminating labels. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width	110 mm (4.33 inches)
Ribbon length	74 meters (242 feet)
Ink	Resin
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T208M, T2 12M
Compatible materials	TMS-SCE, RPS, SB

#### Ordering information

Product order code	TMS-101-RIBBON-4RPSCE
Description	Tyco Electronics 4RPSCE thermal transfer ribbon for T208M and T2 12M printers

### RJS-4HT

Tyco Electronics RJS-4HT is a high temperature black resin thermal transfer ribbon tested and approved for use on Tyco Electronics HT-SCE high temperature wire marker sleeve products. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width	110 mm (4.33 inches)
Ribbon length	300 meters (984 feet)
Ink	Resin
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T3 12M, T408M, T6 12M-DS
Compatible materials	HT-SCE, HTCM-SCE-TP (T3 12M only)

#### Ordering information

Product order code	TMS-RJS-RIBBON-4HT
Description	Tyco Electronics 4HT thermal transfer ribbon for T3 12M, T408M and T6 12M-DS printers

## Thermal transfer ribbons

### 101-4HT

Tyco Electronics 101-4HT is a high temperature black resin thermal transfer ribbon tested and approved for use on Tyco Electronics HT-SCE high temperature wire marker sleeve products. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width	110 mm (4.33 inches)
Ribbon length	74 meters (242 feet)
Ink	Resin
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T208M, T212M
Compatible materials	HT-SCE

#### Ordering information

Product order code	TMS-101-RIBBON-4HT
Description	Tyco Electronics 4HT thermal transfer ribbon for T208M and T212M printers

### 1910

Tyco Electronics 1910 is a high durability high contrast resin/wax thermal transfer ribbon tested and approved for use on the HLX-zero halogen cable marker tape and the HXTM-FB rail tags. For reliable print performance use with Tyco Electronics recommended printers.

#### General specifications

Ribbon width	110 mm (4.33 inches)
Ribbon length	210 meters (689 feet)
Ink	Resin/wax
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T408M
Compatible materials	HLX, HXTM-FB
Tyco Electronics	TTDS-080

#### Ordering information

Product order code	1910-RIBBON-4T300
Description	Tyco Electronics 1910 thermal transfer ribbon for T408M printers

### 1966 - RIBBON

Tyco Electronics 1966-RIBBON is an ultra-high durability black resin thermal transfer ribbon tested and approved for use on Tyco Electronics HX, HX-SCE and D-SCE wire marker sleeves as well as CM-SCE-TP and HLX cable markers. See right for compatible materials. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Tyco Electronics	TTDS-099
Ribbon width	100 mm (3.9 inches)
Ribbon length	300 meters (984 feet)
Ink	Resin
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printer	T312M
Compatible materials	CM-SCE-TP, D-SCE, HLX, HS, HX, HXTM-FB, HX-SCE, HL

#### Ordering information

Product order code	1966-RIBBON
Description	Tyco Electronics 1966 thermal transfer ribbon for T312M

### T200-RIBBON-1966

Tyco Electronics T200-RIBBON-1966 is an ultra-high durability black resin thermal transfer ribbon tested and approved for use on Tyco Electronics HX-SCE wire marker sleeves. See right for compatible materials. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width	100 mm (3.9 inches)
Ribbon length	74 meters (242 feet)
Ink	Resin
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T212M
Compatible materials	HX-SCE, D-SCE, HLX-NEL

#### Ordering information

Product order code	T200-RIBBON-1966
Description	Tyco Electronics 1966 thermal transfer ribbon for T212M



### 1330-0606

Tyco Electronics 1330-0606 is a high durability black resin thermal transfer ribbon tested and approved for use on Tyco Electronics thermal transfer printable pressure sensitive labels. See right for compatible materials. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width*	110 mm (4.33 inches)
Ribbon length	300 meters (984 feet)
Ink	Wax/Resin
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T308S, T312M, T312S, T312Z**, T408M
Compatible materials	SB, NC, WP, HW, MP, HM, MV

\* Available in additional sizes by custom quotation \*\*Not available in Europe, Middle East or Africa

#### Ordering information

Product order code	1330-0606-10
Description	Tyco Electronics RHQ thermal transfer ribbon for all T300 and T400 printers

### 1330-0607

Tyco Electronics 1330-0607 is a high durability black resin thermal transfer ribbon tested and approved for use on Tyco Electronics thermal transfer printable pressure sensitive labels. See right for compatible materials. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width*	110 mm (4.33 inches)
Ribbon length	300 meters (984 feet)
Ink	Resin
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T308S, T312M, T312S, T312Z**, T408M
Compatible materials	CP, HM, HMM, HPK, HW, MP, MV, NC, PVF, TN, TTP, WP, WV, TP, HLTM, SP

\* Available in additional sizes by custom quotation \*\*Not available in Europe, Middle East or Africa

#### Ordering information

Product order code	1330-0607-10
Description	Tyco Electronics RHD thermal transfer ribbon for all T300 and T400 printers

### 1330-0607-T200

Tyco Electronics 1330-0607-T200 is a high durability black resin thermal transfer ribbon tested and approved for use on Tyco Electronics thermal transfer printable pressure sensitive labels. See right for compatible materials. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width	110 mm (4.33 inches)
Ribbon length	74 meters (242 feet)
Ink	Resin
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T208M, T212M
Compatible materials	HM, HMM, HW, MP, MV, NC, TN, TTP, WP, WV, HPK

#### Ordering information

Product order code	1330-0607-T200
Description	Tyco Electronics RHD thermal transfer ribbon for T208M and T212M printers

### 1330-0619

Tyco Electronics 1330-0619 is a high temperature black resin thermal transfer ribbon tested and approved for use on Tyco Electronics thermal transfer printable Kapton® labels. See right for compatible materials. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width*	110 mm (4.33 inches)
Ribbon length	300 meters (984 feet)
Ink	Resin
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T308S, T312M, T312S, T312Z**, T408M
Compatible materials	T1K, T2K, TSK, T2Y, KTT

\* Available in additional sizes by custom quotation \*\*Not available in Europe, Middle East or Africa

#### Ordering information

Product order code	1330-0619-10
Description	Tyco Electronics RHT thermal transfer ribbon for all T300 and T400 printers

## Thermal transfer ribbons

### 1330-0600

Tyco Electronics 1330-0600 is a high quality black wax thermal transfer ribbon tested and approved for use on Tyco Electronics thermal transfer printable paper labels. See right for compatible material. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width*	110 mm (4.33 inches)
Ribbon length	300 meters (984 feet)
Ink	Wax
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T308S, T312M, T312S, T312Z**, T408M
Compatible materials	EP

\* Available in additional sizes by custom quotation \*\*Not available in Europe, Middle East or Africa

#### Ordering information

Product order code	1330-0600-10
Description	Tyco Electronics RS thermal transfer ribbon for all T300 and T400 printers

### 1330-0600-T200

Tyco Electronics 1330-0600-T200 is a high quality black wax thermal transfer ribbon tested and approved for use on Tyco Electronics thermal transfer printable paper labels. See right for compatible material. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width	110 mm (4.33 inches)
Ribbon length	74 meters (242 feet)
Ink	Wax
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T208M, T212M
Compatible materials	EP

#### Ordering information

Product order code	1330-0600-T200
Description	Tyco Electronics RS thermal transfer ribbon for T200 printers

### 3300

Tyco Electronics 3300 is a high durability black resin thermal transfer ribbon tested and approved for use on Tyco Electronics thermal transfer printable pressure sensitive labels. See right for compatible materials. For reliable print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width*	110 mm (4.33 inches)
Ribbon length	300 meters (984 feet)
Ink	Resin
Standard color	Black
Ribbon wind direction	Ink side out
Compatible printers	T308S, T312S, T312M, T312Z, T408M
Compatible materials	PVF, TTVF

\* Available in additional sizes by custom quotation

#### Ordering information

Product order code	1330-3300-10
Description	Tyco Electronics 3300 thermal transfer ribbon for all T300 and T408M printers

### T300-WH

White resin based ribbons are available to print on Tyco Electronics TMS-SCE wire marker sleeve products. For print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width	110 mm (4.33 inches)
Ribbon length	300 meters (984 feet)
Ink	Resin
Standard color	White
Ribbon wind direction	Ink side out
Compatible printers	T308S, T312S, T312Z**, T312M and T-408M
Compatible materials	TMS-SCE (T312M only), CP, TTP

\*\*Not available in Europe, Middle East or Africa

#### Ordering information

Product order code	T300-RIBBON-WH
Description	Tyco Electronics thermal transfer ribbon for T300 and T400 printers

### T200-WH

White resin based ribbons are available to print on Tyco Electronics TMS-SCE wire marker sleeve products. For print performance and durability use with Tyco Electronics recommended compatible printers.

General specifications	
Ribbon width	110 mm (4.33 inches)
Ribbon length	70 meters (230 feet)
Ink	Resin
Standard color	White
Ribbon wind direction	Ink side out
Compatible printers	T208M, T212M
Compatible materials	TMS-SCE (T212M only) HM, MP, MV, TTP
Ordering information	
Product order code	T200-RIBBON-WH
Description	Tyco Electronics thermal transfer white ribbon for T200 printers

### T300-WH-4HT

White resin based ribbons are available to print on Tyco Electronics HT-SCE wire marker sleeve products. For print performance and durability use with Tyco Electronics recommended compatible printers.

General specifications	
Ribbon width	114 mm (4.49 inches)
Ribbon length	300 meters (984 feet)
Ink	Resin
Standard color	White
Ribbon wind direction	Ink side out
Compatible printers	T312M
Compatible materials	HT-SCE
Ordering information	
Product order code	T300-RIBBON-WH-4HT
Description	Tyco Electronics thermal transfer white ribbon for all T308M, T312M and T408M printers

### T200-WH-4HT

White resin based ribbons are available to print on Tyco Electronics HT-SCE wire marker sleeve products. For print performance and durability use with Tyco Electronics recommended compatible printers.

General specifications	
Ribbon width	110 mm (4.33 inches)
Ribbon length	74 meters (242 feet)
Ink	Resin
Standard color	White
Ribbon wind direction	Ink side out
Compatible printers	T212M
Compatible materials	HT-SCE
Ordering information	
Product order code	T200-RIBBON-WH-4HT
Description	Tyco Electronics thermal transfer white ribbon for T200 printers

### RHCA

RHCA resin based ribbons are specifically designed to print on polyester or metalized polyester Tyco Electronics label products. For print performance and durability use with Tyco Electronics recommended compatible printers. It is not suitable to print on paper or self-laminating products.

General specifications	
Ribbon width	110 mm (4.33 inches)
Ribbon length	91 meters (300 feet)
Ink	Resin
Standard color	Red, Blue and Green (see ordering information below)
Ribbon wind direction	Ink side out
Compatible printers	T308S, T312M, T312S, T312Z** and T408M
Compatible materials	CP, HW, HM, HPK, HMM, MP, MV, PVF, WP, WV
<i>**Not available in Europe, Middle East or Africa</i>	
Ordering information	
Product order codes	1330-0620-10 (Red)      1330-0621-10 (Blue)      1330-0622-10 (Green)
Description	Tyco Electronics thermal transfer color ribbon for all T300 and T400 printers

### Thermal transfer ribbons

#### RHCB

RHCB wax-resin based ribbons are specifically designed to print on paper. For print performance and durability use with Tyco Electronics recommended compatible printers.

#### General specifications

Ribbon width	110 mm (4.33 inches)
Ribbon length	300 meters (9840 feet)
Ink	Wax-Resin
Standard color	Red, Blue and Green (see ordering information below)
Ribbon wind direction	Ink side out
Compatible printers	T308S, T312M, T312S, T312Z** and T408M
Compatible materials	EP

*\*\*Not available in Europe, Middle East or Africa*

#### Ordering information

Product order codes	1330-0630-10 (Red)	1330-0631-10 (Blue)	1330-0632-10 (Green)
Description	Tyco Electronics thermal transfer color ribbon for all T300 and T400 printers		

## Dot matrix ribbons



### RIBBON A

Tyco Electronics RIBBON A is a permanent black ink dot matrix ribbon tested and approved for use on Tyco Electronics TMS-SCE wire marker sleeves and RMK-6 products on the LQ870 printer. See right for compatible materials.

#### General specifications

Ink	Standard
Standard color	Black
Compatible printer	LQ870
Compatible materials	CM-SCE, D-SCE, RMK-6, RPS, TMS-SCE

#### Ordering information

Product order code	TMS-SYSTEM-SIX-RIBBON-A
Description	Tyco Electronics dot matrix Ribbon A for LQ870 printer

### QUICK-DRY LQ870

Tyco Electronics QUICK-DRY LQ870 is a quick drying indelible black ink dot matrix ribbon tested and approved for use on Tyco Electronics dot matrix printable pressure sensitive labels on the LQ870 printer. See right for compatible materials.

#### General specifications

Ink	RI Quick-Dry
Standard color	Black
Compatible printer	LQ870
Compatible materials	C, DMVF, E, HLTM, K, M, NMX, PV, TW

#### Ordering information

Product order code	1330-0037-00
Description	Tyco Electronics Quick-Dry dot matrix ribbon for LQ870 printer

## Dot matrix ribbons

### STANDARD AM6310

Tyco Electronics STANDARD AM6310 is a permanent black ink dot matrix ribbon tested and approved for use on Tyco Electronics wire marker sleeves and cable marker products on the AM6310 printer. See right for compatible materials.

#### General specifications

Ink	Standard
Standard color	Black
Compatible printer	AM6310, AM6310D
Compatible materials	CM-SCE, D-SCE*, HC, HL, HLTM-FB, HM, HS, RMK-6, RPS*, TMS-SCE*, MultiMark

#### Ordering information

Product order code	1892BK04-RIBBON
Description	Tyco Electronics standard dot matrix ribbon for AM6310 printer

\* Available only with AM6310D models

### HIGH-PERF AM6310

Tyco Electronics HIGH-PERF AM6310 is a high performance, permanent black ink dot matrix ribbon tested and approved for use on Tyco Electronics wire marker sleeves and cable marker products on the AM6310 printer. See right for compatible materials.

#### General specifications

Ink	High performance
Standard color	Black
Compatible printer	AM6310, AM6310D
Compatible materials	HM, HX

#### Ordering information

Product order code	1892BK03-HIGH-PERF-RIBBON
Description	Tyco Electronics high performance dot matrix ribbon for AM6310 printer

### QUICK-DRY AM6310

Tyco Electronics QUICK-DRY AM6310 is a quick drying indelible black ink dot matrix ribbon tested and approved for use on Tyco Electronics dot matrix printable pressure sensitive labels on the AM6310 printer. See right for compatible materials.

#### General specifications

Ink	RI Quick-Dry
Standard color	Black
Compatible printer	AM6310, AM6310D
Compatible materials	C, DMVF, E, HLTM, HPC, HPTM, K, M, NMX, PV, TW

#### Ordering information

Product order code	1892BK01
Description	Tyco Electronics Quick-Dry dot matrix ribbon for AM6310 printer

## WinTotal Wire marker and label printing software

WinTotal software is a powerful 32-bit label/marker design package that makes wire marker printing simple in an industrial environment. Running in the familiar Windows environment, the package is pre-loaded with all the Tyco Electronics wire identification products to facilitate marker design. The software features a highly graphical user interface to simplify operator training and minimize errors. The Windows environment gives access to a huge array of font options, including non-English fonts such as Chinese, Japanese and Hebrew (when used with appropriate operating systems or add-on software), and also allows simple importing and manipulation of graphics and logos. Bar code printing is available.

WinTotal software supports all common wire identification needs, including:

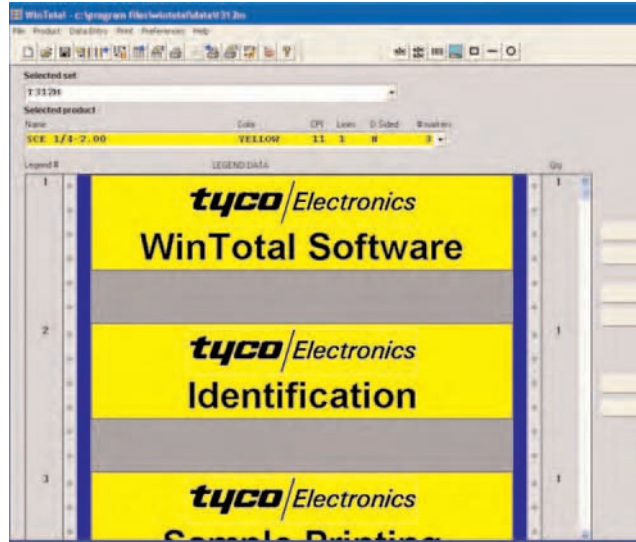
- Manual printing
- Automatic set printing from spreadsheets, databases or other CAD systems (including Tyco Electronics's HarnWare® harness design software package)
- Incremental alpha and numeric fields
- Double-sided marker printing
- Automatic or manual routing or multiple printers
- Paper output option
- Wraparound marker production
- User-defined products
- Programmable buttons for repeated data insertion

The software can be password protected at different levels to prevent unauthorized use, and can be run on networked computers so that the design function can be separated from printing. The display can be set to several different languages, and a full on-screen Help function is incorporated.

Running behind the simple WinTotal user interface is a powerful label-making package, so the software can be used to design and print general labeling applications such as rating plates and shipping labels.

### Features and benefits

- Powerful wire marker design and print software
- Familiar Windows user environment
- Pre-loaded with Tyco Electronics identification products
- Powerful import and export functions: reads wire lists from spreadsheets, databases and text files from CAD systems
- Printer multi-tasking
- Multiple on-screen languages



### Specifications

TTDS-001

## WinTotal Wire marker and label printing software

### Features and benefits (continued)

#### Support

- Free technical support
- OS Support: Windows 95, 98, ME, NT, 2000, XP
- International language support

#### Label design

- WYSIWYG label design and display
- Align text left, right, justified or center
- Built-in printer font support
- Windows True Type fonts
- Lines, boxes and graphic images
- Resize, rotate and stretch text, graphics and bar codes
- Thumbnail preview of saved labels

#### Printing

- Set and batch printing capabilities
- Multiple application port printing (MAPP)

- Double sided marker printing
- Local or network printer support
- Number of identical or serialized copies selectable from database

#### Serialization

- Increment or decrement by any interval
- Numeric, alphanumeric and custom base serialization

#### Database options

- Microsoft ODBC support, including: Access, Excel and dBase
- ASCII text files
- AutoCAD importing

#### Data management

- Visual Basic scripting for custom data processing.
- Sharable data fields
- Multiple products within one set or batch

#### Minimum recommended computer configuration

Computer	IBM-compatible PC
Processor	Intel Pentium® processor, 400 MHz minimum
RAM	64 MB minimum (128 MB for Windows NT, 2000 and XP)
Operating system	Windows 95, 98, ME or NT (Service pack 6), 2000 and XP
Disk space required	25 MB minimum

#### Other technical information

Barcode types	Codabar, code 39, code 93, code 128, EAN-13, EAN-8, UPC-E, Interleaved 2/5, ITF (DUN14), PDF 417, DataMatrix
Company logo or graphics	Can be imported in BMP, PCX, MSP, WMF, JPG, JIF, GIF formats
Text and graphics	Can be rotated, moved or resized

#### Ordering information

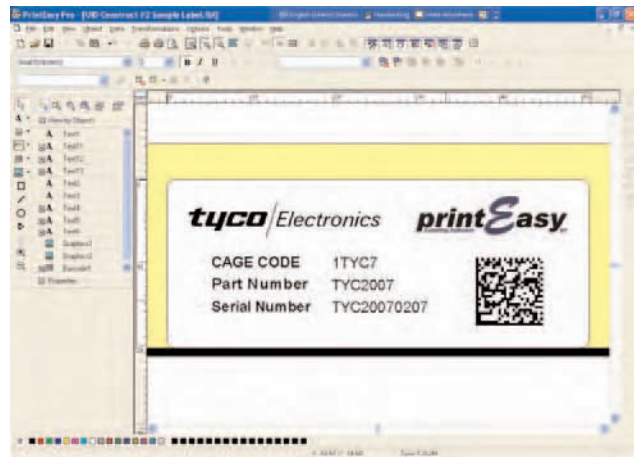
Ordering description	Product description
TMS-WINTOTAL-SWARE	Tyco Electronics Wire Marker Printing Software – Windows, 32 bit



## PrintEasy Label printing software

Tyco Electronics PrintEasy is a powerful yet easy to use Windows based label design and printing software. With PrintEasy you can quickly and easily combine bar codes, text and graphics into professional quality labels. Carefully organized menus and pop-up dialogs display all your options in plain, easy to understand words.

The true WYSIWYG display allows you to create and view your labels with precision, giving you total control over your labels' appearance before printing. PrintEasy is ideal for use with the Tyco Electronics range of thermal transfer printable pressure sensitive label products. PrintEasy is pre-loaded with all of Tyco Electronics' standard thermal transfer label templates, which allows you to simply select the Tyco Electronics part number you want to print and you are ready to go!



### Features and Benefits

#### Support

- Free technical support
- OS Support: Windows 95, 98, ME, NT, 2000, XP
- International language support

#### Label design

- True WYSIWYG label design and display
- Built-in printer font support
- Windows True Type fonts
- Reverse (white on black) text printing
- Align text left, right, justified or center
- Unlimited Undo/Redo command
- Lines, boxes and graphic images
- Import graphics in BMP, JPG, TIF, PCX, DCX, DIB, EPS and others
- Resize, rotate and stretch objects
- Thumbnail preview of saved labels.
- Metric and US measurement systems

#### Bar codes

- Numerous 1D and 2D symbologies
- Unlimited width and height
- Sequentially numbered bar codes
- Place characters above or below bar codes or do not print
- Option to display Start/Stop characters
- Able to print MIL-STD-130 UID Syntax

#### Printing

- Printer-based bar codes and serial numbers
- Speed optimization using repetitive data control
- Local or network printer support
- Performance-enhancing printer controlled serialization
- Number of identical or serialized copies selectable from database

#### Specifications

TTDS-093

## PrintEasy Label printing software

### Features and Benefits *(continued)*

#### Serialization

- Increment or decrement by any interval
- Separate Rollover/Rollunder and Value Reset options
- Preserve or expand field length when rolling over
- Numeric, alphanumeric and custom base serialization

#### Database options

- Microsoft ODBC support, including: Access, Btrieve, dBase, Excel, Oracle, Paradox, Clipper, FoxPro, Interbase and more.
- ASCII text files
- SAP (mySAP.com and R/3)
- Versatile multiple-table data access
- Import variable graphics from databases
- Data query wizard
- Individual record-picking at print time

#### Data management

- Visual Basic scripting for custom data processing
- User-definable minimum and maximum field lengths
- Customizable data-entry filters and error checking
- Multi-data source selection per label object
- Easy entry of special and unprintable control characters
- Sharable data fields
- Customizable message box handling

#### Integration

- Command line interface option
- Pre-loadable into "background" to avoid start-up delays
- Dynamically selectable label formats and data sources
- Error logging

#### Minimum recommended computer configuration

Computer	IBM-compatible PC
Processor	Intel Pentium® processor, 200 MHz minimum
RAM	32 MB minimum
Operating system	Windows 95, 98, ME or NT (Service pack 6), 2000 and XP
Disk space required	15MB to 80 MB minimum (depending on installation options)

#### Ordering information

Ordering description	Product description
PRINTEASY –BASIC	Tyco Electronics Label Printing Software – Windows, 32 bit version for Laser and Inkjet printers**
PRINTEASY –ECC4	Tyco Electronics Label Printing Software – Windows, 32 bit version for Laser, Inkjet, ECC4 and T200 printers**
PRINTEASY –PRO	Tyco Electronics Label Printing Software – Windows, 32 bit version for Laser and Inkjet and Full Thermal Transfer support
PRINTEASY –SUITE	Tyco Electronics Label Printing Software – Windows, 32 bit version for Laser and Inkjet and Full Thermal Transfer support with additional modules
PRINTEASY –NET05	Tyco Electronics Label Printing Software – Windows, – Network version with 5 user license
PRINTEASY –NET10	Tyco Electronics Label Printing Software – Windows, – Network version with 10 user license

\*\*Available in Europe, Middle East and Africa

## HL2010E/HL1910E

The HL2010E and HL1910E Hot air heaters are designed to work with a standard line voltage (230V) on a wide variety of Raychem heat-shrinkable products. These tools are suitable for occasional use and are not recommended for applications requiring high duty cycles. Both tools supply forced hot air with an adjustable heat setting to meet the requirements of many different installation situations. A three position switch controls the air flow (150/300/500 l/min).

The HL2010E tool is switched on and off at the three-stage switch and the temperature can be continuously adjusted over a range of 50 °C - 630 °C by the pushbuttons. The temperature can be increased or reduced by 10 °C steps. An LCD display shows the actual temperature.

The HL1910E tool is switched on and off at the two-stage switch and the temperature can be continuously adjusted over a range of 50 °C - 600 °C at the thumbwheel (the numbers on it serve as a guide only, 1 means 50 °C and max. temperature of 600 °C is attained at 9).

A bench stand allowing use of both the HL2010E and the HL1910E as a bench tool is available as an option. Furthermore, it requires only two reflectors to cover most applications of heat-shrinkable tubing and SolderSleeve terminations.

\*Available in Europe only



### Specifications

Voltage	230V AC
Power	2000W
Air flow	150 - 500 l/min
Weight	920g
Length	280mm
Noise	<70 dB

Ordering description	Product description	PCN
HL2010E-230V tool	HL2010E-230V-Euro	C99451-000
	HL2010E-230V-UK	A22932-000
	HL2010E-Kit-230V-Euro	A23120-000
HL1910E-230V tool	HL1910E-230V-Euro	F30529-000
	HL1910E-230V-UK	F11734-000
	HL1910E-Kit-230V-Euro	A93538-000

### Accessories

HL2010E/HL1910E tool	HL1802E-0746 16-SolderSleeve Terminators Reflector	832011-000
	HL1802E-0705 19-Heat-shrinkable Tubings Reflector	022611-000
	HL1802E-0706 18-9mm Adaptor	930321-000
	HL1802E-0707 17-14mm Reduction Nozzle	868259-000
	HL1802E-0708 16-20mm Reduction Nozzle	613361-000
	HL1802E-ADAP-PR-Adaptor for PR Series Reflector	444817-000
	HL1802E - Bench-Std	717083-000

The HL2005E heatgun is supplied with a 3 year warranty statement by Steinel. This warranty does not apply when used in a manufacturing environment as opposed to a DIY environment. The 12 month warranty usually offered by Tyco on all tooling applies (see conditions in warranty statement).

**AMP-TY Nylon cable ties**

AMP-TY All-Nylon Cable Ties provide a strong, durable way to bundle and harness cable quickly and economically. They can be used on virtually any bundle configuration, in diameters ranging from 1/16 [1.58] to 10 [254.00]. AMP-TY Cable Ties are resistant to common solvents, alkalies, dilute acids, oils and greases.

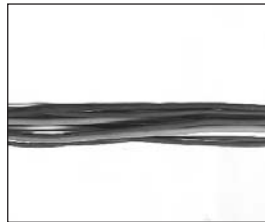
All packages are heat sealed to retain moisture. Do not open package until you are ready to apply the ties.

**Features and benefits**

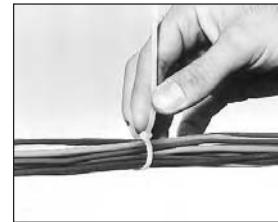
- Self-locking application by hand or hand tool provides versatility
- Tapered tip speeds up threading and reduces applied cost
- Interior serrations help hold individual wires in place through friction
- Tough, smooth nylon may be used in outdoor and indoor applications. Black, UV-resistant ties are recommended for outdoor use
- Specific parts meet the requirements of MIL-S-23190. See MS3367 and MS3368 part number notations
- All-nylon design eliminates metal components
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E73541



**Fast and Easy to Apply**



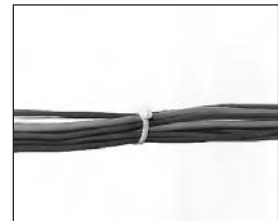
1. Gather cables together.



2. Apply hand-tight.



3. Snug-up with tool.



4. Finished tie holds cables firmly.

### AMP-TY Nylon cable tie accessories

#### Cable Tie Mount (Screw Type)

Accommodates ties with maximum tensile strength of 50 lbs. [222.5 N]

**Part No. 1-350087-0**  
Package of 100

**Part No. 2-350087-0**  
Package of 1000  
Note: Screw not included



#### Two-Way Cable Tie Mount

Permits entry from two sides. Available in two sizes.

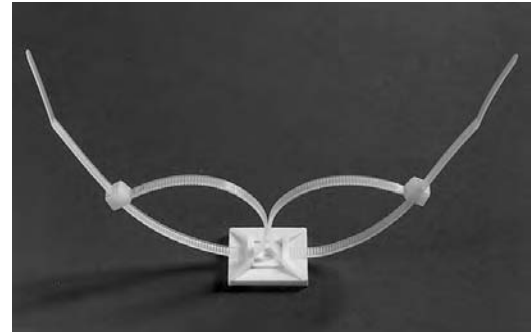


0.38 [9.65] x 0.6 [15.24], #6 Screw Hole, without Adhesive Back. Accommodates ties with maximum tensile strength of 50 lbs. [222.5 N]

**Part No. 608801-1**  
Package of 100

1.13 [28.70] x 1.13 [28.70], #6 Screw Hole, with Adhesive\* Back. Accommodates ties with maximum tensile strength of 50 lbs. [222.5 N]

**Part No. 608800-1**  
Package of 100



#### Four-Way Cable Tie Mount

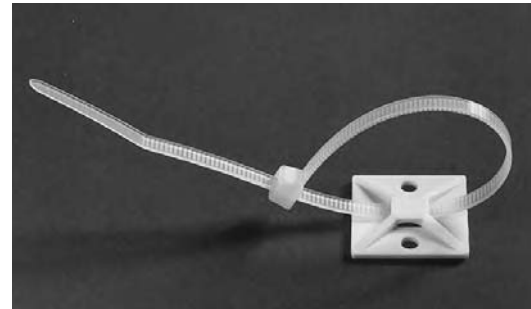
Permits entry from four sides. Available in two sizes.

0.75 [19.05] x 0.75 [19.05], two #4 Screw Holes, with Adhesive\* Back. Accommodates ties with maximum tensile strength of 30 lbs. [133.5 N]

**Part No. 608802-1**  
Package of 100

1.13 [28.70] x 1.13 [28.70], two #8 Screw Holes, with Adhesive\* Back. Accommodates ties with maximum tensile strength of 50 lbs. [222.5 N]

**Part No. 608803-1**  
Package of 100



#### Cable Tie Swivel Mount with Adhesive Back and Screw Holes (0.187 [4.75] Dia.)

1 [25.4] x 1 [25.4], two 0.187 [4.75] Dia. Screw Holes, with Adhesive Back. Accommodates ties with maximum tensile strength of 30 lbs. [133.5 N]

**Part No. 607847-1**  
Package of 100



\*The rubber-based adhesive backing on these mounts has a tensile strength of 6 lbs. [26.7 N] per square inch. This rating applies in temperatures from -50°F [-45°C] to 180°F [82°C]. For best performance, mounts should be applied to a smooth, clean, dry, and oil-free surface.

### AMP-TY Application Tool

#### Economy Application Tool

Part No. 734587-1 (Color — blue)  
IS 408-8816

Tool operates on cable ties up to 50 lbs. [222.5 N] tensile value. It has a tension adjustment and cuts off the end of the tie.



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**Engineering Notes**

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