# express**MARK**

LABEL & IDENTIFY

ETM-M2 Mil-spec heat shrinkable wire markers

expressMARK ETM-M2 sleeves are designed to meet the wire and cable marking needs of customers with high performance requirements. The marks are permanent immediately after printing and remain legible even when exposed to abrasion, aggressive cleaning solvents and military fuels & oils. Suitable for aerospace, military and defence specified applications.
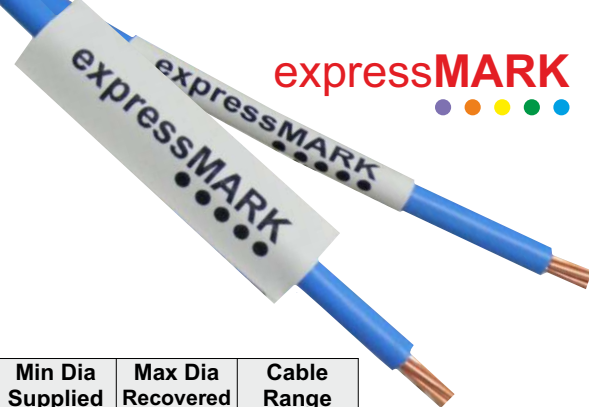
expressMARK

Ordering information

| Part Number (WHITE)	Part Number (YELLOW)	Pack Size	Sleeve Size (mm)	Sleeve Length (mm)	Min Dia Supplied (mm)	Max Dia Recovered (mm)	Cable Range (mm²) *
ETM-9-024050-B-M2	ETM-4-024050-B-M2	1000pcs	2.4	50	2.79	0.79	<0.5
ETM-9-032050-B-M2	ETM-4-032050-B-M2	1000pcs	3.2	50	3.64	1.0	0.5 to 1
ETM-9-048050-B-M2	ETM-4-048050-B-M2	1000pcs	4.8	50	5.26	1.6	1 to 4
ETM-9-064050-B-M2	ETM-4-064050-B-M2	1000pcs	6.4	50	6.92	2.4	4 to 6
ETM-9-095050-B-M2	ETM-4-095050-B-M2	1000pcs	9.5	50	10.2	3.2	6 to 16
ETM-9-127050-B-M2	ETM-4-127050-B-M2	1000pcs	12.7	50	13.5	4.75	16 to 35
ETM-9-190050-B-M2	ETM-4-190050-B-M2	1000pcs	19.0	50	20.1	6.4	35 to 120
ETM-9-254050-A-M2	ETM-4-254050-A-M2	250pcs	25.4	50	26.7	8.47	120 to 185
ETM-9-381050-A-M2	ETM-4-381050-A-M2	250pcs	38.1	50	39.8	12.9	185 to 400

(*based upon customer usage for BS6231 cable)

Sleeve length options (change part number above with relevant length)

ETM-X-XXX **050** -X-M2	1 x 50.0mm sleeves per 50mm strip
ETM-X-XXX **025** -X-M2	2 x 25.0mm sleeves per 50mm strip
ETM-X-XXX **017** -X-M2	3 x 16.6mm sleeves per 50mm strip
ETM-X-XXX **012** -X-M2	4 x 12.5mm sleeves per 50mm strip
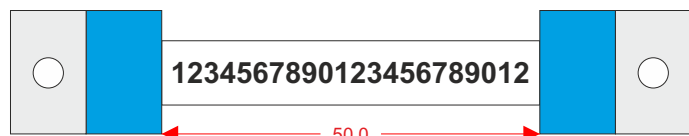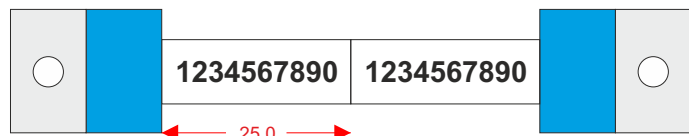
Colour options (change part number above with relevant colour)

ETM-**0**-XXXXXX-X-M2	BLACK
ETM-**2**-XXXXXX-X-M2	RED
ETM-**3**-XXXXXX-X-M2	ORANGE
ETM-**4**-XXXXXX-X-M2	YELLOW
ETM-**5**-XXXXXX-X-M2	GREEN
ETM-**6**-XXXXXX-X-M2	BLUE
ETM-**7**-XXXXXX-X-M2	VIOLET
ETM-**8**-XXXXXX-X-M2	GREY
ETM-**9**-XXXXXX-X-M2	WHITE

50.0mm sleeve option (example: 11 point Arial with 22 digits)

○ | 1234567890123456789012 | ○
← 50.0 →

25.0mm sleeve option (example: 11 point Arial with 10 digits)

○ | 1234567890 | 1234567890 | ○
← 25.0 →

16.6mm sleeve option (example: 11 point Arial with 6 digits)

○ | 123456 | 123456 | 123456 | ○
← 16.6 →

12.5mm sleeve option (example: 11 point Arial with 4 digits)

○ | 1234 | 1234 | 1234 | 1234 | ○
← 12.5 →

Printer Ribbon Part Numbers

TMS-RJS-RIBBON-4RPSCE	TE Standard black ribbon
1966-RIBBON	TE High performance black ribbon
EMR-0-RIBBON-A	EM High performance black ribbon
EMR-9-RIBBON-A	EM High performance white ribbon

Ribbons are compatible with the following printer models :
T200-IDENT, EOS1, EOS2, TE3112, TE3124, T6112DS, T3212 and T3224.

Printer External Reel Holders

PRINTER-UNI-REEL-M
expressMARK external reel holder. Designed to hold and feed large spools of markers to the printer.

UNIVERSAL-REEL-HOLDER
T.E. external reel holder. Designed to hold and feed larger spools of markers supplied on plastic drums.

Inner core design
Sized to the same width as the carrier allowing markers to be loaded directly within the printer media guides.

Write-on side carrier
You can hand write information relating to the printed markers directly on the side carrier. Also shows part number and QA code.

Perforated edges
Remove markers without the need to remove the coloured side tapes. This leads to less mess and a faster install time.

ETM-M2 Mil-spec heat shrinkable wire markers

The ETM-M2 printable heat shrink tubing is manufactured from flame retardant, self-extinguishing, flexible polyolefin tubing optimised for thermal transfer printing. The product is UL 224 VW-1 recognised, CSA certified and complies to AMS-DTL-23053/5 Class 1&3.

Physical

Properties	Test Method	Typical Value
Tensile strength	ASTM D 638	≥14 N/mm²
Elongation at break	ASTM D 638	≥400%
Longitudinal change	SAE-AMS-DTL-23053	0% - -2%
Specific gravity	ASTM D 792	1.34g/cm³
Secant modulus	ASTM D 882	65 Mpa

Electrical

Properties	Test Method	Typical Value
Dielectric strength	UL 224	15 kV/mm
Volume resistivity	ASTM D 876	3.1×10^{14} Ω cm
Voltage rating	UL 224	600V
Die-electric voltage (2.5kV x 60s)	UL 224	Pass. No breakdown.

Chemical

Properties	Test Method	Typical Value
Fungus resistance	ASTM G 21	Pass. No growth.
Fluid resistance (after 24hrs at 23°C)	SAE-AMS-DTL-23053	7.25 - 14 MPa

Thermal

Properties	Test Method	Typical Value
Heat shock (4hrs at 250°C)	SAE-AMS-DTL-23053	Pass.
Elongation heat ageing (4hrs 158°C)	SAE-AMS-DTL-23053	≥400%
Copper corrosion (168hrs at 158°C)	SAE-AMS-DTL-23053	Pass
Stability against copper (168hrs at 158°C)	SAE-AMS-DTL-23053	Pass
Low temp flexibility (4hrs at -55°C)	SAE-AMS-DTL-23053	No cracking
Flammability	UL 224	VW-1 pass

Pre-printed Markers Service

email data   print & pack   deliver on time

You need ETM markers but don't have a printer on site? No problem, we have the answer.

Simply email us your data and let us print your markers and dispatch within 24 hours to site.

Available to purchase online or contact a member of our team to discuss your requirements.

More details on our pre-print services can be found on page 22.

Technical Data

RoHS COMPLIANT   REACH COMPLIANT   FLAME RETARDANT

Standard Colours
Yellow and white.
Other colours upon request.

Material
Radiation cross linked polyolefin.
Shrink ratio 3:1

Operating temperature
-40°C up to +135°C.

Minimum shrink temperature
+85°C.

Specifications
Mark permanence
SAE AS81531:1998, point 4.6.2.

Chemical and solvent resistance
MIL-STD-202G method 215J.

Standard
UL 224 125°C 600V VW-1
(recognised file E203950)

CSA 125°C 600V Certified
(certified file 220127)

SAE-AMS-DTL-23053/5 Class 1&3

Storage
Store in original packaging.
Recommended storage environment is +10°C to +25°C and 45-55% relative humidity.

Printing method
Thermal transfer

Packaging
Supplied on printer ready reels.

Inner cores are sized to allow loading inside most printers.

Edge perforations as standard to allow easy removal of markers.

ETZ-M2 Zero halogen heat shrinkable wire markers

expressMARK

expressMARK ETZ sleeves are ideal for applications where limited fire hazard characteristics are critical. The zero halogen, low smoke and low toxic fume emissions make this product ideal for use in enclosed spaces such as mass transit, marine and industrial installations. Marks are permanent immediately and remain legible when exposed to abrasion, aggressive cleaning solvents.
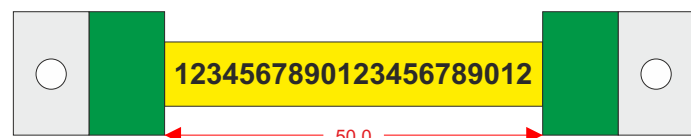
Ordering information

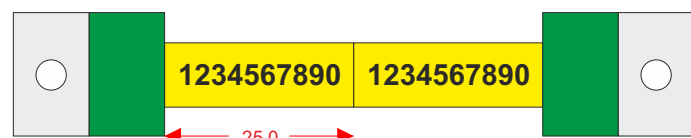| Part Number (WHITE)	Part Number (YELLOW)	Pack Size	Sleeve Size (mm)	Sleeve Length (mm)	Min Dia Supplied (mm)	Max Dia Recovered (mm)	Cable Range (mm²) *
ETZ-9-024050-B-M2	ETZ-4-024050-B-M2	1000pcs	2.4	50	2.5	1.2	<0.5
ETZ-9-032050-B-M2	ETZ-4-032050-B-M2	1000pcs	3.2	50	3.6	1.6	0.5 to 1
ETZ-9-048050-B-M2	ETZ-4-048050-B-M2	1000pcs	4.8	50	5.2	2.4	1 to 4
ETZ-9-064050-B-M2	ETZ-4-064050-B-M2	1000pcs	6.4	50	6.7	3.2	4 to 6
ETZ-9-095050-B-M2	ETZ-4-095050-B-M2	1000pcs	9.5	50	10.0	4.8	6 to 16
ETZ-9-127050-B-M2	ETZ-4-127050-B-M2	1000pcs	12.7	50	13.6	6.4	16 to 35
ETZ-9-190050-B-M2	ETZ-4-190050-B-M2	1000pcs	19.0	50	20.4	9.5	35 to 120
ETZ-9-254050-A-M2	ETZ-4-254050-A-M2	250pcs	25.4	50	27.0	12.7	120 to 185
ETZ-9-381050-A-M2	ETZ-4-381050-A-M2	250pcs	38.1	50	40.0	19.1	185 to 400

(*based upon customer usage for BS6231 cable)

Sleeve length options (change part number above with relevant length)

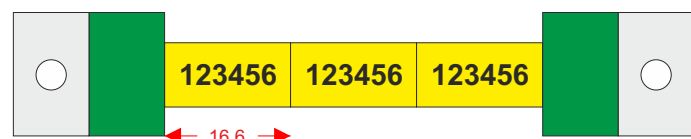|	
ETZ-X-XXX **050** -X-M2	1 x 50.0mm sleeves per 50mm strip
ETZ-X-XXX **025** -X-M2	2 x 25.0mm sleeves per 50mm strip
ETZ-X-XXX **017** -X-M2	3 x 16.6mm sleeves per 50mm strip
ETZ-X-XXX **012** -X-M2	4 x 12.5mm sleeves per 50mm strip

Colour options (change part number above with relevant colour)

ETZ- **0**-XXXXXX-X-M2	BLACK
ETZ- **2**-XXXXXX-X-M2	RED
ETZ- **3**-XXXXXX-X-M2	ORANGE
ETZ- **4**-XXXXXX-X-M2	YELLOW
ETZ- **5**-XXXXXX-X-M2	GREEN
ETZ- **6**-XXXXXX-X-M2	BLUE
ETZ- **9**-XXXXXX-X-M2	WHITE

50.0mm sleeve option (example: 11 point Arial with 22 digits)

12345678901234567890123456789012

50.0

25.0mm sleeve option (example: 11 point Arial with 10 digits)

1234567890   1234567890

25.0

16.6mm sleeve option (example: 11 point Arial with 6 digits)

123456 123456 123456

16.6

12.5mm sleeve option (example: 11 point Arial with 4 digits)

1234 1234 1234 1234

12.5

Printer Ribbon Part Numbers

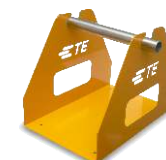|	
1966-RIBBON	TE High performance black ribbon
EMR-0-RIBBON-A	EM High performance black ribbon

Ribbons are compatible with the following printer models :
T200-IDENT, EOS1, EOS2, TE3112, TE3124, T6112DS, T3212 and T3224.

Printer External Reel Holders

PRINTER-UNI-REEL-M
expressMARK external reel holder. Designed to hold and feed large spools of markers to the printer.

UNIVERSAL-REEL-HOLDER
T.E. external reel holder. Designed to hold and feed larger spools of markers supplied on plastic drums.

Inner core design
Sized to the same width as the carrier allowing markers to be easily loaded between the printer media guides.

Packaging
Supplied on reels in clearly labelled packaging, and protected within a clear bag to ensure the print surface is dust free.

Perforated edges
Remove markers without the need to remove the coloured side tapes. This leads to less mess and a faster install time.

For more information and to purchase these products visit us online at www.expresselectrical.co.uk

LABEL & IDENTIFY

ETZ-M2 Zero halogen heat shrinkable wire markers

The ETZ-M2 printable heat shrink tubing is manufactured from halogen free, flame retardant, heat shrinkable polyolefin tubing optimised for thermal printing. The compound of the tubing excludes halogens and offers excellent fire safety characteristics combined with minimal smoke emission.

Physical

Properties	Test Method	Typical Value
Tensile strength	ASTM D 638	13 N/mm²
Elongation at break	ASTM D 638	200%
Longitudinal change	SAE-AMS-DTL-23053	≤+5% , ≤-10%
Specific gravity	ASTM D 792	1.4g/cm³
Water absorption	ASTM D 570	≤15%

Electrical

Properties	Test Method	Typical Value
Dielectric strength	ASTM D 2671	20 kV/mm²
Volume resistivity	ASTM D 257	10¹⁴ Ω cm

Chemical

Properties	Test Method	Typical Value
Fungus resistance	ASTM-DTL-7444	Inert (no growth)
Fluid resistance (24hrs immersion at 23°C)	SAE-AMS-DTL-23053	Good
Copper corrosion	ASTM D 2671B	No corrosion
Oxygen index	ASTM D 2863	36%

Thermal

Properties	Test Method	Typical Value
Heat shock (4hrs at 175°C)	ASTM D 2671	Pass.(no dripping, cracking or flowing)
Heat ageing (168hrs at 150°C)	ASTM D 638	Elongation 100%
Low temperature flexibility (-30°C)	ASTM D 2671C	No cracking
Flammability	ASTM D 635	Pass (flame retardant)

Compliance on fire behaviour

Standard	Flame propogation	Toxicity	Smoke density	Low oxygen index
BS 6853	ISO 4589-2 (ANNEX A)	BS 6853 Ap B1 / NF X 70-100	BS 6853 D8.3	ISO 4589-2
NF F-16 101	NF T 51-071 / NF C 20-455	NF X 70-100	NF X 10-702	ISO 4589-2
NFPA130	ASTM 162	BSS 7239	ASTM 662	
EN 45545-2	DIN 60332-1-2	NF X 70-100	EN 61034-2	ISO 4589-2
DIN 5510-2	DIN 54837	DIN ISO 5659	DIN ISO 5659	
UNI CEI 11170-3 cl LR4	ISO 11925-2 : 2010	NF X 70-100	NF X 10-702	

Pre-printed Markers Service

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print & pack

deliver on time

You need ETZ markers but don't have a printer on site? No problem, we have the answer.

Simply email us your data and let us print your markers and dispatch within 24 hours to site.

Available to purchase online or contact a member of our team to discuss your requirements.

More details on our pre-print services can be found on page 22.

U.K. Office +44 (0)141 941 3689   sales@expresselectrical.co.uk

Technical Data

RoHS COMPLIANT   REACH COMPLIANT   ZERO HALOGEN   FLAME RETARDANT

Standard Colours
Yellow and white.
Other colours upon request.

Material
Radiation cross linked polyolefin.
Shrink ratio 2:1

Operating temperature
-55°C up to +105°C.

Minimum shrink temperature
+90°C.

Specifications

Mark permanence
SAE AS81531:1998, point 4.6.2.

Chemical and solvent resistance
MIL-STD-202F method 215J.

Standard
BS 6853 vehicle category 1a
EN 45545-2 (rail rolling stock)
LU 1-085:A3 (compliant)
NF F 16-101 (French rolling stock)
DIN 5510-2 (German rolling stock)
UNI CEI 11170-3 (Italian rolling stock)
NFPA130 (fixed guideway transit systems)
NFPA130 (to meet Boeing toxicity test)

Storage
Store in original packaging.
Recommended storage environment is +10°C to +25°C and 45-55% relative humidity.

Printing method
Thermal transfer

Packaging
Supplied on printer ready reels.

Inner cores are sized to allow loading inside most printers.

Edge perforations as standard to allow easy removal of markers.

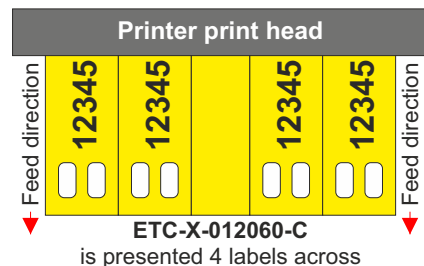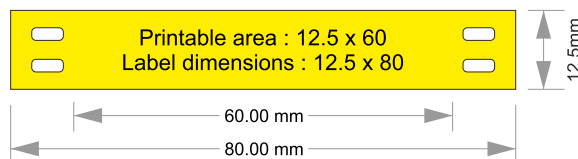# ETC Tie-on cable markers (continuous format)

expressMARK

expressMARK ETC cable markers are designed to be the perfect solution for fast, permanent and cost effective marking of cable, conduit, pipes and valves. The die-cut cable tie slots make application of printed markers both quick and simple.

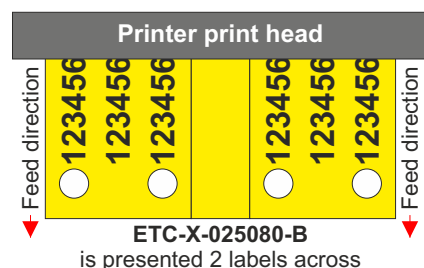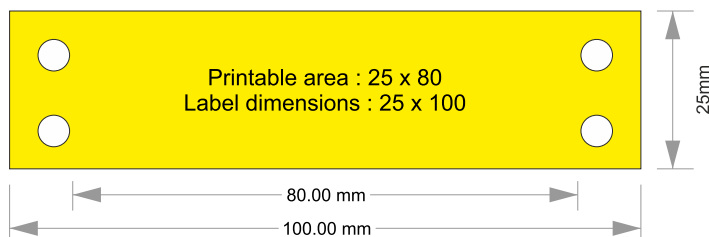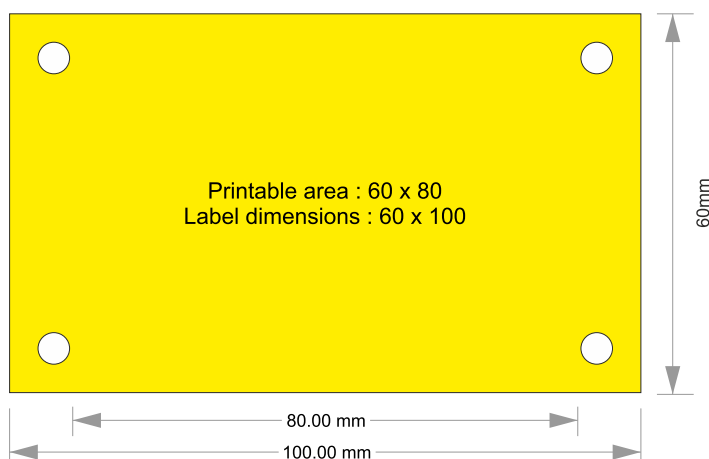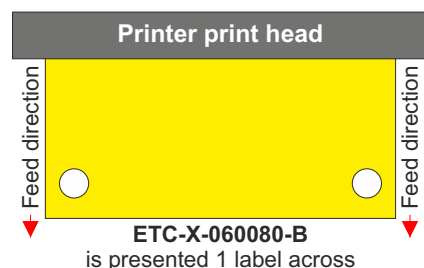## Ordering information

Part Number	Colour	Pack Size
ETC-4-012060-C	YELLOW	500pcs
ETC-9-012060-C	WHITE	500pcs
ETC-2-012060-C	RED	500pcs
ETC-5-012060-C	GREEN	500pcs
ETC-6-012060-C	BLUE	500pcs

Printable area : 12.5 x 60
Label dimensions : 12.5 x 80

12.5mm

60.00 mm
80.00 mm

Printer print head

Feed direction
12345 12345   12345 12345
Feed direction

ETC-X-012060-C
is presented 4 labels across

Part Number	Colour	Pack Size
ETC-4-025080-B	YELLOW	500pcs
ETC-9-025080-B	WHITE	500pcs

Printable area : 25 x 80
Label dimensions : 25 x 100

25mm

80.00 mm
100.00 mm

Printer print head

Feed direction
123456 123456 123456   123456 123456 123456
Feed direction

ETC-X-025080-B
is presented 2 labels across

Part Number	Colour	Pack Size
ETC-4-060080-B	YELLOW	250pcs

Printable area : 60 x 80
Label dimensions : 60 x 100

60mm

80.00 mm
100.00 mm

Printer print head

Feed direction
Feed direction

ETC-X-060080-B
is presented 1 label across

Printer Ribbon Part Numbers

1966-RIBBON	TE High performance black ribbon
EMR-0-RIBBON-A	EM High performance black ribbon
EMR-9-RIBBON-A	EM High performance white ribbon

Ribbons are compatible with the following printer models :
T200-IDENT, EOS1, EOS2, TE3112, TE3124, T3212 and T3224.
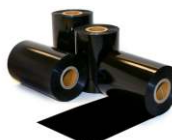
ETC Tie-on cable markers (continuous format)

The ETC continuous one-piece tie on cable markers are manufactured from Low Fire Hazard, UV stabilised, cross-linked polyolefin. The material is punched to produce tie on cable markers, complete with fixing holes at each end and perforated edges for easy removal of the finished printed markers.

Test results

Properties	Test Method	Typical Value
Tensile strength	ASTM D2671	7 Mpa minimum
Mould growth	BS EN 60068-2-10	Rating 2 maximum
Oxygen index	BS EN ISO 4589-1 1996	34 minimum
Smoke emission, A0	BS6853:1999 Annex D.8.3.	0.017 maximum
Toxic fume, R	NF X 70-100	<1
LUL toxic fume	1-085 A3 Fire safety	No halogens, Phosphorus, Sulphur or Nitrogen above trace level
Colour fastness	BS 2782 Pt5 Method 540B	No colour change
UV resistance - Tensile strength	>90% of original	Pass
UV resistance - Ultimate elongation	>40% of original	Pass
Print adherence dry rub (20 rubs 4Kg)	SAE AS 5942	Legible, pass
Heat ageing (175°C 168 hrs / 20 rubs 4Kg)	SAE AS 5942	Legible, pass
Heat shock (225°C 4 hrs / 20 rubs 4Kg)	SAE AS 5942	Legible, pass
Aircraft fuel (ISO 1817 Liquid B)	40°C, 24 hours, 25 wipes	Legible, pass
Hydraulic fluid (NATO H520)	50°C, 24 hours, 25 wipes	Legible, pass
Phosphate Ester (ISO 1817 fluid 103)	70°C, 24 hours, 25 wipes	Legible, pass
Silicon hydraulic fluid (NATO S1714)	50°C, 24 hours, 25 wipes	Legible, pass
De-icing fluid (Iso Propyl Alcohol)	40°C, 24 hours, 25 wipes	Legible, pass

Pre-printed Markers Service

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print & pack

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Available to purchase online or contact a member of our team to discuss your requirements.

More details on our pre-print services can be found on page 22.

U.K. Office +44 (0)141 941 3689   sales@expresselectrical.co.uk

Technical Data

RoHS COMPLIANT

REACH COMPLIANT

ZERO HALOGEN

FLAME RETARDANT

Standard Colours
Yellow and white.

(also red, blue and green for size 012060)

Material
Radiation cross linked polyolefin.

Operating temperature
-40°C up to +105°C.

Specifications

Mark permanence
SAE AS81531:1998, point 4.6.2.

Chemical and solvent resistance
MIL-STD-202F method 215J.

Standard
BS 6853 vehicle category 1a
EN 45545-2 (rail rolling stock)
LU 1-085:A3 (compliant)
NF F 16-101 (French rolling stock)
SAE AS5942 3.4.1

Storage
Store in original packaging. Recommended storage environment is +10°C to +25°C and 45-55% relative humidity.

Printing method
Thermal transfer

Packaging
Supplied on printer ready reels.

Inner cores are sized to allow loading inside most printers.

Edge perforations to allow easy separation of markers.

ETC Tie-on cable markers (ladder format)

expressMARK ETC cable markers are designed for marking of cable, conduit, pipes and valves. The ladder style format presents markers in an organised fashion for ease of installation on site using the pre-cut cable tie slots.

expressMARK

Ordering information

Part Number	Colour	Pack Size
ETC-4-012040-D	YELLOW	1000pcs
ETC-9-012040-D	WHITE	1000pcs
ETC-2-012040-D	RED	1000pcs
ETC-3-012040-D	ORANGE	1000pcs
ETC-5-012040-D	GREEN	1000pcs
ETC-6-012040-D	BLUE	1000pcs
ETC-0-012040-D	BLACK	1000pcs

Printable area : 12 x 40
Label dimensions : 12 x 60
12mm
40.00 mm
60.00 mm
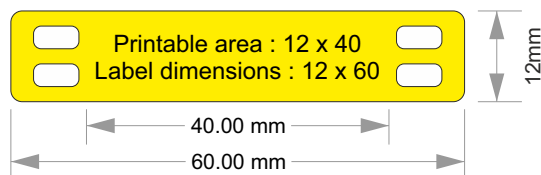
Part Number	Colour	Pack Size
ETC-4-012055-D	YELLOW	1000pcs
ETC-9-012055-D	WHITE	1000pcs
ETC-2-012055-D	RED	1000pcs
ETC-3-012055-D	ORANGE	1000pcs
ETC-5-012055-D	GREEN	1000pcs
ETC-6-012055-D	BLUE	1000pcs
ETC-0-012055-D	BLACK	1000pcs

Printable area : 12 x 55
Label dimensions : 12 x 75
12mm
55.00 mm
75.00 mm
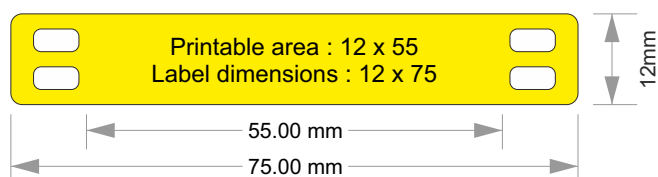
Part Number	Colour	Pack Size
ETC-4-015055-D	YELLOW	1000pcs
ETC-9-015055-D	WHITE	1000pcs
ETC-2-015055-D	RED	1000pcs
ETC-3-015055-D	ORANGE	1000pcs
ETC-5-015055-D	GREEN	1000pcs
ETC-6-015055-D	BLUE	1000pcs
ETC-0-015055-D	BLACK	1000pcs

Printable area : 15 x 55
Label dimensions : 15 x 75
15mm
55.00 mm
75.00 mm
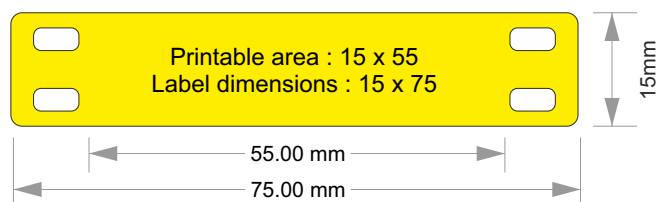
Part Number	Colour	Pack Size
ETC-4-025055-C	YELLOW	500pcs
ETC-9-025055-C	WHITE	500pcs
ETC-2-025055-C	RED	500pcs
ETC-3-025055-C	ORANGE	500pcs
ETC-5-025055-C	GREEN	500pcs
ETC-6-025055-C	BLUE	500pcs
ETC-0-025055-C	BLACK	500pcs

Printable area : 25 x 55
Label dimensions : 25 x 75
25mm
55.00 mm
75.00 mm
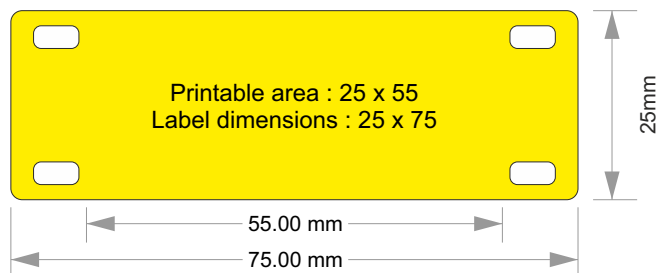
Part Number	Colour	Pack Size
ETC-4-010070-D	YELLOW	1000pcs
ETC-9-010070-D	WHITE	1000pcs
ETC-2-010070-D	RED	1000pcs
ETC-3-010070-D	ORANGE	1000pcs
ETC-5-010070-D	GREEN	1000pcs
ETC-6-010070-D	BLUE	1000pcs
ETC-0-010070-D	BLACK	1000pcs

Printable area : 10 x 70
Label dimensions : 10 x 90
10mm
70.00 mm
90.00 mm
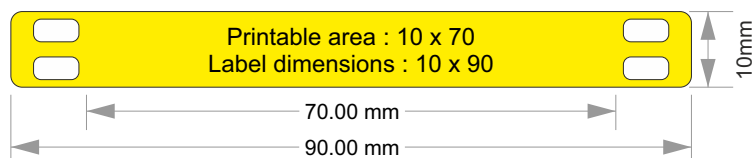
Printer Ribbon Part Numbers

EMR-0-RIBBON-A	EM High performance black ribbon
EMR-9-RIBBON-A	EM High performance white ribbon

Ribbons are compatible with the following printer models :
T200-IDENT, EOS1, EOS2, TE3112, TE3124, T3212 and T3224.

For more information and to purchase these products visit us online at www.expresselectrical.co.uk

LABEL & IDENTIFY
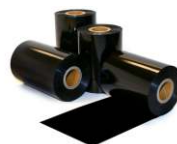
ETC Tie-on cable markers (ladder format)

The ETC ladder format cable markers are manufactured from halogen free, flame retardant thermoplastic polyether-polyurethane material. The base compound material fulfills the requirements of UL94-V0.

Test results

Properties	Test Method	Typical Value
Hardness	DIN 53505	58 Shore D
Density	DIN 53479	1.27g/cm³
Tensile strength	DIN 53504	30 MPa
Elongation at break	DIN 53504	400%
Stress at 20% elongation	DIN 53504	13 Mpa
Stress at 100% elongation	DIN 53504	19 Mpa
Stress at 300% elongation	DIN 53504	33 Mpa
Tear strength	DIN 53515	110 N/mm
Abrasion loss	DIN 53516	30 mm³
Compression set room temperature	DIN EN ISO 815	30%
Compression set at +70°C	DIN EN ISO 815	45%
Tensile strength *	DIN 53504	20 MPa
Elongation at break *	DIN 53504	400%
Charpy V-notch impact test at +23°C	DIN EN ISO 815	50 kj/m²
Charpy V-notch impact test at -30°C	DIN EN ISO 815	3 kj/m²

*(stored in water at 80°C for 42 days)

Weathering Performance

	Conditions	Result
UV lamp : UV340	Light 60° irradiation 0.76 W/m² for a duration of 8 hours. Spray duration - 15 minutes. Condensation 50° for a duration of 3 hours 45 minutes.	No visible change
Xenon lamp : XENON340	Light 65° irradiation 0.50 W/m² for a duration of 1 hours 42 minutes. Light and spray irradiation 0.60 W/m² for a duration of 8 minutes.	No visible change
Notes	Accelerated weathering testing was conducted within a laboratory using UV wet/dry cycle weathering simulation equipment. Duration of the test was 500 hours which equates to 10 years exposure within a typical northern European environment.	

Technical Data

Standard Colours
Yellow, white, red, orange, green, blue and black.

Material
Thermoplastic polyether-polyurethane

Operating temperature
-25°C up to +80°C.

Specifications
Mark permanence
SAE AS81531:1998, point 4.6.2.

Chemical and solvent resistance
MIL-STD-202F method 215J.

Storage
Store in original packaging. Recommended storage environment is +10°C to +25°C and 45-55% relative humidity.

Printing method
Thermal transfer

Packaging
Supplied on printer ready reels.

Inner cores are sized to allow loading inside most printers.

Pre-printed Markers Service

email data   print & pack   deliver on time

You need ETC markers but don't have a printer on site? No problem, we have the answer.

Simply email us your data and let us print your markers and dispatch within 24 hours to site.

Available to purchase online or contact a member of our team to discuss your requirements.

More details on our pre-print services can be found on page 22.

U.K. Office +44 (0)141 941 3689   sales@expresselectrical.co.uk

LABEL & IDENTIFY

ETI Insert wire markers

expressMARK ETI is a two-part system allowing the creation of permanently printed markers which are then inserted into clear carriers and subsequently mounted on to the wire or cable. The printed strips can be replaced post-termination when re-labelling is required and the clear carrier gives added protection from dust and grime. Carriers can also be applied during wire termination and markers inserted at a later date.

Product Properties

Markers: Polypropylene zero halogen film, 250 micron
Carriers: PVC clear
Resistant to water, humidity, alcohol, oil, grease and miscellaneous cleaning agents.
Applications: Electrical panel builders, junction box, cabinet and post-termination labelling applications.

Temperature Ratings

Operating temp. range
-40ºC to +90ºC   (-40ºF to +194ºF)

Insert Marker Dimensions

30mm long x 4mm high
18mm long x 4mm high
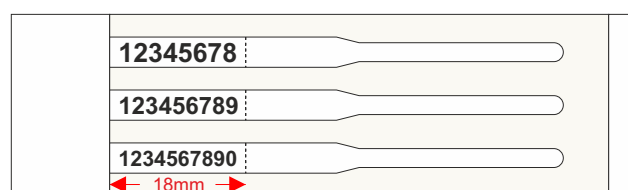
Ordering information

ETI Insert Markers

Part Number (18mm)	Colour	Pack Size
ETI-9-004018-D	WHITE	3000pcs
ETI-4-004018-D	YELLOW	3000pcs

18mm insert markers - font size examples are shown opposite
10 point Arial with up to 8 digits
9 point Arial with up to 9 digits
8 point Arial with up to 10 digits

12345678
123456789
1234567890
← 18mm →

Part Number (30mm)	Colour	Pack Size
ETI-9-004030-D	WHITE	3000pcs
ETI-4-004030-D	YELLOW	3000pcs

30mm insert markers - font size examples are shown opposite
10 point Arial with up to 14 digits
9 point Arial with up to 16 digits
8 point Arial with up to 18 digits

12345678901234
1234567890123456
123456789012345678
← 30mm →

Clear Carriers

Part Number (18mm)	Colour	Pack Size	Carrier Cable Range
ETI-X-018001-D	CLEAR	3000pcs	0.5mm² to 2.5mm²
ETI-X-018002-C	CLEAR	2000pcs	2.5mm² to 4mm²
ETI-X-018003-B	CLEAR	1000pcs	4mm² to 10mm²
ETI-X-018004-A	CLEAR	500pcs	10mm² to 25mm²

Part Number (30mm)	Colour	Pack Size	Carrier Cable Range
ETI-X-030001-B	CLEAR	1000pcs	0.5mm² to 2.5mm²
ETI-X-030002-B	CLEAR	1000pcs	2.5mm² to 4mm²
ETI-X-030003-B	CLEAR	1000pcs	4mm² to 10mm²
ETI-X-030004-A	CLEAR	500pcs	10mm² to 25mm²

(*based upon BS6231 Tri-Rated)

Step 1: Print the insert marker

12345678901234
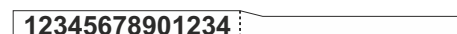
Step 2: Pull through clear carrier

12345678901234

Step 3: Align and snap off guide tail

12345678901234

Printer Ribbon Part Numbers

TMS-RJS-RIBBON-4RPSCE	TE Standard black ribbon
1966-RIBBON	TE High performance black ribbon

Ribbons are compatible with the following printer models :
T200-IDENT, EOS1, EOS2, TE3112, TE3124, T3212 and T3224.

i10-L Insert wire markers

expressMARK i10-L is comprised of a printed strip, which is inserted into a protective clear carrier. The clear carrier can be applied to wires and cables pre-termination to allow post termination insertion of the printed strip. The strips can also be replaced when re-labeling is required. The clear carrier protects the marker strips from dust and grime and are available in a number of sizes to cover a wide range of cable diameters.
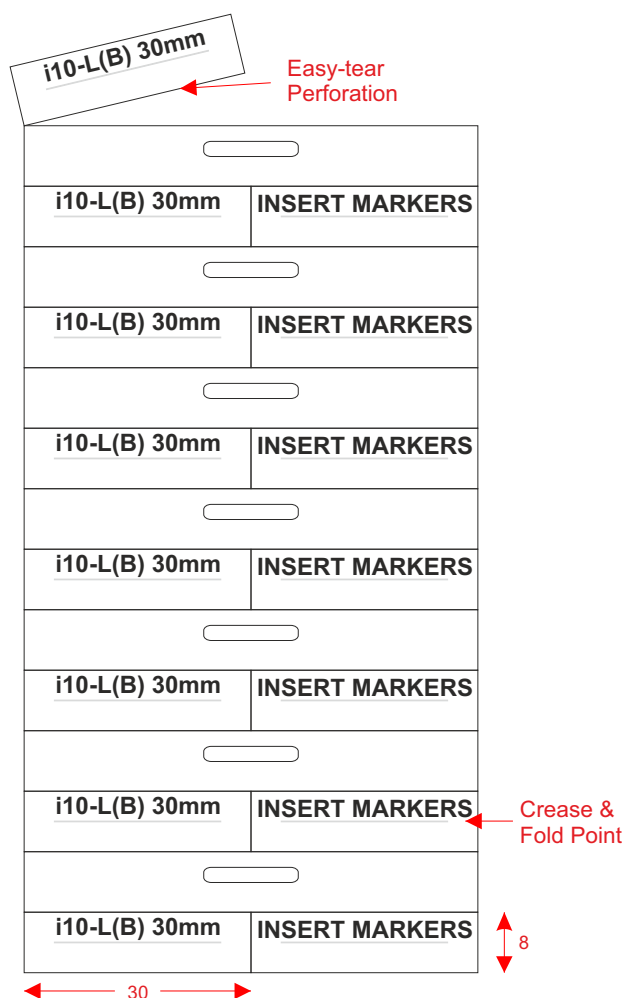
Ordering information

30mm Insert Markers

Part Number (30mm)	Colour	Pack Size	Reel Inner Core
i10-L(B)	WHITE	2500pcs	38mm

Clear Carriers

Part Number (30mm)	Colour	Pack Size	Carrier Cable Range
PT+020030A	CLEAR	200pcs	0.5mm² to 0.75mm²
PT+100030A	CLEAR	200pcs	0.75mm² to 4mm²
PT+200030A	CLEAR	100pcs	2.5mm² to 16mm²
PT+300030A	CLEAR	50pcs	16mm² to 70mm²

i10-L(B) 30mm

Easy-tear Perforation

i10-L(B) 30mm	INSERT MARKERS
i10-L(B) 30mm	INSERT MARKERS
i10-L(B) 30mm	INSERT MARKERS
i10-L(B) 30mm	INSERT MARKERS
i10-L(B) 30mm	INSERT MARKERS
i10-L(B) 30mm	INSERT MARKERS
i10-L(B) 30mm	INSERT MARKERS

Crease & Fold Point

8

30

Step 1 : Print the marker

i10-L(B) 30mm

Step 2 : Fold along crease

i10-L(B) 30mm

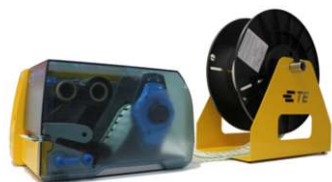**Step 3 :** Insert in clear carrier

i10-L(B) 30mm

Printer Ribbon Part Numbers

TMS-RJS-RIBBON-4RPSCE	TE Standard black ribbon
1966-RIBBON	TE High performance black ribbon

Ribbons are compatible with the following printer models :
T200-IDENT, EOS1, EOS2, TE3112, TE3124, T3212 and T3224.

On-Site Cable & Wire Marking The specialist onsite marking system provider
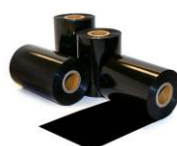
Printers

- A range of thermal transfer printers that provide outstanding print quality.
- Designed with the operator in mind making them user-friendly and easy to operate.
- Ribbon and media loading is made simple due to the ease of access.
- A small footprint yet rugged construction make for the perfect on-site marking system.

Plug & Play Systems

- We offer "plug and play" printer systems that include printer, laptop and pre-loaded software.
- Printer drivers, labelling software and product templates are pre-loaded before despatch.
- All ports and plugs are marked for ease of set up upon arrival at site.
- The perfect "standalone" marking system solution. Call a member of our team to discuss.

Ribbons

- Specially formulated ink ribbons that are specific to the media being printed.
- The inks meet the most rigorous of mark permanence industry standards.
- Correct ribbon and printer combination ensures excellent print quality at all times.
- Ribbons and printer compatibility are listed on each product page.

Printer Ribbon Part Numbers

TMS-RJS-RIBBON-4RPSCE	TE Standard black ribbon
1966-RIBBON	TE High performance black ribbon
EMR-0-RIBBON-A	EM High performance black ribbon
EMR-9-RIBBON-A	EM High performance white ribbon

Ribbons are compatible with the following printer models :
T200-IDENT, EOS1, EOS2, TE3112, TE3124, T6112DS, T3212 and T3224.

Software

- Labelling software is supplied pre-loaded with product templates.
- User friendly platform in "What you see is what you get" (WYSIWYG) format
- Options to enter data manually or import via a database saving you both time and money
- Fully compatible with Windows operating systems. Supplied with unlock dongle.

Software Part Number

WINTOTAL-X-DONGLE	WinTotal label software c/w dongle

Pease note the "X" in the part number above should be replaced with required version.
For example WINTOTAL-6-DONGLE

Support

- A dedicated in-the-field technical support team is available to all our customers
- FREE installation is offered with all newly purchased on-site printing systems
- FREE on-site training of your relevant personnel
- FREE lifetime technical support for any customer purchasing blank media to print

Online

- Remote assistance can be provided via platforms such as TeamViewer and Skype
- Visit our YouTube Channel www.youtube.com/user/expressMARKid
- Printer demonstrations and helpful "How to" guides available at our YouTube channel
- Our website contains demo videos. Simply select "the Videos" tab on the product page.

For more information and to purchase these products visit us online at www.expresselectrical.co.uk

LABEL & IDENTIFY

On-Site Cable & Wire Marking Desktop thermal transfer printers

T200-IDENT

Key Features
- Light-weight
- Automatic calibration
- Simple ribbon and media loading
- Superior print position accuracy
- Cutter & perforator options available
- Touch screen

Suitable Products
- Heat shrinkable sleeves, cable markers, and labels
- Ideal for low to medium volume printing

Printable Product Dimensions
- Heat shrink sleeves from 2.4mm unshrunk diameter
- Print width max: 108 mm
- For labels: 10 to 110 mm wide
- For labels: 5 mm minimum height

Printer Dimensions
- 322x189x253mm (DxHxW)
- Weight: 4 kg

Printing Method
- 300dpi Thermal Transfer

Interfaces
- USB 2.0 (Full Speed)
- LAN 10/100 Base (Ethernet)

Ordering information

Part number
T200-IDENT-PRINTER Printer only
T200-IDENT-SWARE-PRINTER Printer & WinTotal software bundle

Printer spares

Part number
T200-IDENT-PRINTHEAD Replacement 300dpi printhead
T200-IDENT-DR4-DRIVEROLLER Drive roller unit
T200-IDENT-PRINTHEAD-HOLDER Print head hosuing unit
T200-IDENT-TRANSPORT-MODULE Lower media guide unit
T200-IDENT-CUTTER Cutter attachment
T200-IDENT-PERFORATOR Perforator attachment

T3212 & T3224

Key Features
- 300dpi and 600dpi print head options
- Automatic calibration and easy to use
- Light weight with small foot print
- High accuracy printing
- Full colour touchscreen
- Supplied with Wi-Fi dongle

Suitable Products
- Heat shrinkable sleeves, cable markers, and labels
- Ideal for medium to high volume printing

Printable Product Dimensions
- Heat shrink sleeves from 2.4mm unshrunk diameter
- Print width max: 105.7mm
- For labels: 4 to 110 mm wide
- For labels: 4 mm minimum height

Printer Dimensions
- 460x288x252mm (DxHxW)
- Weight: 10 kg

Printing Method
- 300dpi / 600dpi Thermal Transfer

Interfaces
- USB 2.0 (Full Speed)
- LAN 10/100 Base (Ethernet)

Ordering information

Part number
T3212-PRINTER **T3224-PRINTER** Printer only
T3212-SWARE-PRINTER **T3224-SWARE-PRINTER** Printer and WinTotal software bundle

Printer spares

Part number
T3212-PRINTHEAD Replacement 300dpi printhead
T3224-PRINTHEAD Replacement 600dpi printhead
T3200-PRINT-ROLLER Drive roller unit
T3200-PRINT-SENSOR Sensor unit
T3200-CUTTER Cutter attachment
T3200-PERFORATOR Perforator attachment

T6112DS

Key Features
- Twin stacked print head assembly
- Simultaneous printing of front and back
- High level of print quality and image clarity
- Automatic calibration
- Simple ribbon and media loading
- High print position accuracy

Suitable Products
- Heat shrinkable marker sleeves
- Suitable for high volume printing

Printable Product Dimensions
- Heat shrink sleeves from 2.4mm unshrunk diameter
- Print width max: 105.6mm

Printer Dimensions
- 554x395x248mm (DxHxW)
- Weight: 21 kg

Printing Method
300dpi Thermal Transfer

Interfaces
- USB 2.0 (Full Speed)
- LAN 10/100 Base (Ethernet)

Ordering information

Part number
T6112DS-PRINTER Printer only

Printer spares

Part number
TTC-PRINTER-PRINTHEAD-300 Replacement 300dpi printhead
TTC-PRINTER-ROLLER Drive roller unit
TTC-PRINTER-6112DS-MEDIASENSOR Sensor unit
TTC-PRINTER-PRINTHEAD-LEVER Upper printhead open/close lever
TTC-6112DS-LOWER-LEVER Lower printhead open/close lever
TTC-PRINTER-PERFORATOR Perforator attachment

Additional spare parts for all printers can be found online or contact us for advice

K-TYPE Pre-printed cable markers

K-Type markers are designed to offer flexibility when it comes to wire and cable identification. Used to identify wire bundles, cable, pipes and conduit, the oval shaped profile has been designed to allow markers to be easily slipped onto a carrier strip and attached using cable ties. K65 markers are ideal for post termination applications or where retrofitting is required.

One standard size of marker, with PVC carrier strips that can hold up to 18 characters. Standard colours are yellow or white with black legends. Colour coded option available.

Features and benefits

- K-Type markers are a cost effective solution for many commercial wire identification applications
- Self-extinguishing
- Resistant to key industrial fluids, including those used in mass transit, aviation and military
- Versatile marking system for cables, cable bundles and conduit
- Elliptical marker profile allows easy fitting to carrier strips
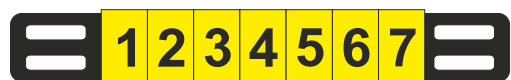
K-Type Markers

Ordering information

Part Number (WHITE)	Part Number (YELLOW)	Part Number (COLOURS)	Pack Size	Dimensions	Cable Range
13619.(legend)	**13614.(legend)**	**13614(colour).(legend)**	500pcs	10x6mm	4 to 10mm²
A to Z 0 to 9 + - / . ⏚ ~	A to Z 0 to 9 + - / . ⏚ ~	0 1 2 3 4 5 6 7 8 9			Please see table opposite for full listing of part number ordering codes

(* directly on to BS6231 Tri-Rated)

K-Type Carrier Strips

Ordering information

Part Number	Number of characters	Pack Size	Dimensions (HxW)	Fixing Holes (HxW)
1132000	For up to 7 characters	500pcs	9mm x 66mm	2mm x 8mm
1131000	For up to 12 characters	500pcs	9mm x 97mm	2mm x 8mm
1130000	For up to 18 characters	250pcs	9mm x 134mm	2mm x 8mm

1234567

123456789012

123456789012345678

Full range of cable ties available to suit your carrier strips

For more information and to purchase these products visit us online at www.expresselectrical.co.uk

LABEL & IDENTIFY

K-TYPE Pre-printed cable markers - ordering information

Marker Printed Character	Part Number Black/Yellow	Part Number Black/White	Part Number Colour Coded	Description Quantity of marker reels per pack
A - Z 0 - 9	13614.KIT1	13619.KIT1		36 reels - 1 reel of each A to Z & 0 to 9
0 - 9	13614.KIT2	13619.KIT2		10 reels - 1 reel of each 0 to 9
A - Z	13614.KIT3	13619.KIT3	1361C.C.KIT	26 reels - 1 reel of each A to Z
A - Z 0 - 9 + - / ⏚	13614.KIT4	13619.KIT4		40 reels - 1 reel of each A to Z 0 to 9 + - / ⏚
A - Z 0 - 9 + - / BL	13614.KIT5	13619.KIT5		100pcs of A to Z 0 to 9 + - / blank c/w carry case
A - Z 0 - 9 + - / ⏚	13614.KIT6	13619.KIT6		100pcs of A to Z 0 to 9 + - / ⏚ c/w carry case

0	13614.0	13619.0	13610.0	1 reel marked with 0
1	13614.1	13619.1	13611.1	1 reel marked with 1
2	13614.2	13619.2	13612.2	1 reel marked with 2
3	13614.3	13619.3	13613.3	1 reel marked with 3
4	13614.4	13619.4	13614.4	1 reel marked with 4
5	13614.5	13619.5	13615.5	1 reel marked with 5
6	13614.6	13619.6	13616.6	1 reel marked with 6
7	13614.7	13619.7	13617.7	1 reel marked with 7
8	13614.8	13619.8	13618.8	1 reel marked with 8
9	13614.9	13619.9	13619.9	1 reel marked with 9

A	13614.A	13619.A		1 reel marked with A
B	13614.B	13619.B		1 reel marked with B
C	13614.C	13619.C		1 reel marked with C
D	13614.D	13619.D		1 reel marked with D
E	13614.E	13619.E		1 reel marked with E
F	13614.F	13619.F		1 reel marked with F
G	13614.G	13619.G		1 reel marked with G
H	13614.H	13619.H		1 reel marked with H
I	13614.I	13619.I		1 reel marked with I
J	13614.J	13619.J		1 reel marked with J
K	13614.K	13619.K		1 reel marked with K
L	13614.L	13619.L		1 reel marked with L
M	13614.M	13619.M		1 reel marked with M
N	13614.N	13619.N		1 reel marked with N
O	13614.O	13619.O		1 reel marked with O
P	13614.P	13619.P		1 reel marked with P
Q	13614.Q	13619.Q		1 reel marked with Q
R	13614.R	13619.R		1 reel marked with R
S	13614.S	13619.S		1 reel marked with S
T	13614.T	13619.T		1 reel marked with T
U	13614.U	13619.U		1 reel marked with U
V	13614.V	13619.V		1 reel marked with V
W	13614.W	13619.W		1 reel marked with W
X	13614.X	13619.X		1 reel marked with X
Y	13614.Y	13619.Y		1 reel marked with Y
Z	13614.Z	13619.Z		1 reel marked with Z

+	13614.+	13619.+		1 reel marked with PLUS SIGN
-	13614.-	13619.-		1 reel marked with MINUS / DASH SIGN
/	13614./	13619./		1 reel marked with FORWARD SLASH
.	13614.DOT	13619.DOT		1 reel marked with DOT
⏚	13614.EA	13619.EA		1 reel marked with EARTH SYMBOL
~	13614.PH	13619.PH		1 reel marked with PHASE SYMBOL
	13614.BL	13619.BL		1 reel marked with BLANK (no mark)

Technical Data

RoHS COMPLIANT   REACH COMPLIANT

Standard Colours
Black Legend on Yellow Body
Black Legend on White Body
International Colour Coded Numbers

Material
PVC

Operating temperature
-45°C up to +70°C.

Specifications
BS 6746C: 1993
IEC 60304

Z-TYPE Pre-printed wire markers

Z-Type markers are individual push-on markers used to identify wires and small cables permanently. The markers are manufactured using PVC and designed with an expanding profile, enabling each marker to accommodate a wide range of wire and cable sizes.

Z-Type markers are a simple, cost effective solution for many commercial wire identification applications,

The most popular colour option is white marker body with black marking and available as loose piece in boxes or on reels. Can also be supplied with a yellow marker body with black marking.

Features and benefits

- Z-Type markers are a cost effective solution for many commercial wire identification applications

- Self-extinguishing

- Resistant to key industrial fluids, including those used in mass transit, aviation and military

- 9 sizes available covering wire diameters from 1.5mm to 12.7mm

- Applicator wands available for easy marker installation

Z-Type Markers - straight cut in boxes

Ordering information - *(the full range of part numbers are listed on the page opposite)*

Part Number (WHITE)	Part Number (COLOURS)	Size	Pack Size	For Cable Dia (mm)	For Cable Size (mm²)	Applicator
058019.(legend)	05801(colour).(legend)	Z5	1000pcs	1.5 - 2.0	–	–
058119.(legend)	05811(colour).(legend)	Z7	1000pcs	2.0 - 3.2	1.0	1251
061519.(legend)	06151(colour).(legend)	Z9	1000pcs	2.5 - 4.0	1.5	1252
061619.(legend)	06161(colour).(legend)	Z11	1000pcs	2.9 - 4.7	2.5	1253
061719.(legend)	06171(colour).(legend)	Z13	1000pcs	3.4 - 5.7	4.0	1254
061819.(legend)	06181(colour).(legend)	Z15	1000pcs	3.8 - 6.3	6.0	1255
062019.(legend)	06201(colour).(legend)	Z18	500pcs	4.3 - 6.9	10.0	1256
062219.(legend)	06221(colour).(legend)	Z23	500pcs	5.5 - 8.9	16.0	–
062419.(legend)	06241(colour).(legend)	Z35	250pcs	7.9 - 12.7	25.0	–

A to Z   0 to 9   + - / .   ⏚ ~

0 1 2 3 4 5 6 7 8 9

(* BS6231 Tri-Rated)

Applicator wands

Z-Type Marker Kits

Z-Type markers are available in easy to order bundles. A time saving solution when ordering your marker requirements, as everything you need is ordered using one part number.

- **KIT1** - supplied with letters A to Z and numbers 0 to 9 along with 50 compartment carry case

- **KIT2** - supplied with numbers 0 to 9

- **KIT3** - supplied with letters A to Z

- **C.KIT** - supplied with colour coded numbers 0 to 9

- **CL55-50** - 50 compartment carry case only

Part numbers are listed in table opposite for each kit

Z-TYPE Pre-printed wire markers - ordering information

Printed Character	Z5 Part Number	Z7 Part Number	Z9 Part Number	Z11 Part Number	Z13 Part Number	Z15 Part Number	Z18 Part Number	Z23 Part Number	Z35 Part Number
A - Z 0 - 9	058019.KIT	058119.KIT	061519.KIT	061619.KIT	061719.KIT	061819.KIT	062019.KIT	062219.KIT	062419.KIT
0 - 9	058019.KIT2	058119.KIT2	061519.KIT2	061619.KIT2	061719.KIT2	061819.KIT2	062019.KIT2	062219.KIT2	062419.KIT2
A - Z	058019.KIT3	058119.KIT3	061519.KIT3	061619.KIT3	061719.KIT3	061819.KIT3	062019.KIT3	062219.KIT3	062419.KIT3
0	058019.0	058119.0	061519.0	061619.0	061719.0	061819.0	062019.0	062219.0	062419.0
1	058019.1	058119.1	061519.1	061619.1	061719.1	61819.1	062019.1	062219.1	062419.1
2	058019.2	058119.2	061519.2	061619.2	061719.2	61819.2	062019.2	062219.2	062419.2
3	058019.3	058119.3	061519.3	061619.3	061719.3	61819.3	062019.3	062219.3	062419.3
4	058019.4	058119.4	061519.4	061619.4	061719.4	61819.4	062019.4	062219.4	062419.4
5	058019.5	058119.5	061519.5	061619.5	061719.5	61819.5	062019.5	062219.5	062419.5
6	058019.6	058119.6	061519.6	061619.6	061719.6	61819.6	062019.6	062219.6	062419.6
7	058019.7	058119.7	061519.7	061619.7	061719.7	61819.7	062019.7	062219.7	062419.7
8	058019.8	058119.8	061519.8	061619.8	061719.8	61819.8	062019.8	062219.8	062419.8
9	058019.9	058119.9	061519.9	061619.9	061719.9	61819.9	062019.9	062219.9	062419.9
A	058019.A	058119.A	061519.A	061619.A	061719.A	061819.A	062019.A	062219.A	062419.A
B	058019.B	058119.B	061519.B	061619.B	061719.B	061819.B	062019.B	062219.B	062419.B
C	058019.C	058119.C	061519.C	061619.C	061719.C	061819.C	062019.C	062219.C	062419.C
D	058019.D	058119.D	061519.D	061619.D	061719.D	061819.D	062019.D	062219.D	062419.D
E	058019.E	058119.E	061519.E	061619.E	061719.E	061819.E	062019.E	062219.E	062419.E
F	058019.F	058119.F	061519.F	061619.F	061719.F	061819.F	062019.F	062219.F	062419.F
G	058019.G	058119.G	061519.G	061619.G	061719.G	061819.G	062019.G	062219.G	062419.G
H	058019.H	058119.H	061519.H	061619.H	061719.H	061819.H	062019.H	062219.H	062419.H
I	058019.I	058119.I	061519.I	061619.I	061719.I	061819.I	062019.I	062219.I	062419.I
J	058019.J	058119.J	061519.J	061619.J	061719.J	061819.J	062019.J	062219.J	062419.J
K	058019.K	058119.K	061519.K	061619.K	061719.K	061819.K	062019.K	062219.K	062419.K
L	058019.L	058119.L	061519.L	061619.L	061719.L	061819.L	062019.L	062219.L	062419.L
M	058019.M	058119.M	061519.M	061619.M	061719.M	061819.M	062019.M	062219.M	062419.M
N	058019.N	058119.N	061519.N	061619.N	061719.N	061819.N	062019.N	062219.N	062419.N
O	058019.O	058119.O	061519.O	061619.O	061719.O	061819.O	062019.O	062219.O	062419.O
P	058019.P	058119.P	061519.P	061619.P	061719.P	061819.P	062019.P	062219.P	062419.P
Q	058019.Q	058119.Q	061519.Q	061619.Q	061719.Q	061819.Q	062019.Q	062219.Q	062419.Q
R	058019.R	058119.R	061519.R	061619.R	061719.R	061819.R	062019.R	062219.R	062419.R
S	058019.S	058119.S	061519.S	061619.S	061719.S	061819.S	062019.S	062219.S	062419.S
T	058019.T	058119.T	061519.T	061619.T	061719.T	061819.T	062019.T	062219.T	062419.T
U	058019.U	058119.U	061519.U	061619.U	061719.U	061819.U	062019.U	062219.U	062419.U
V	058019.V	058119.V	061519.V	061619.V	061719.V	061819.V	062019.V	062219.V	062419.V
W	058019.W	058119.W	061519.W	061619.W	061719.W	061819.W	062019.W	062219.W	062419.W
X	058019.X	058119.X	061519.X	061619.X	061719.X	061819.X	062019.X	062219.X	062419.X
Y	058019.Y	058119.Y	061519.Y	061619.Y	061719.Y	061819.Y	062019.Y	062219.Y	062419.Y
Z	058019.Z	058119.Z	061519.Z	061619.Z	061719.Z	061819.Z	062019.Z	062219.Z	062419.Z
+	058019.+	058119.+	061519.+	061619.+	061719.+	061819.+	062019.+	062219.+	062419.+
-	058019.-	058119.-	061519.-	061619.-	061719.-	061819.-	062019.-	062219.-	062419.-
/	058019./	058119./	061519./	061619./	061719./	061819./	062019./	062219./	062419./
.	058019.DOT	058119.DOT	061519.DOT	061619.DOT	061719.DOT	061819.DOT	062019.DOT	062219.DOT	062419.DOT
⏚	058019.EA	058119.EA	061519.EA	061619.EA	061719.EA	061819.EA	062019.EA	062219.EA	062419.EA
~	058019.PH	058119.PH	061519.PH	061619.PH	061719.PH	061819.PH	062019.PH	062219.PH	062419.PH
BLANK	058019.BL	058119.BL	061519.BL	061619.BL	061719.BL	061819.BL	062019.BL	062219.BL	062419.BL
0	058010.0	058110	061510.0	061610.0	061710.0	061810.0	062010.0	062210.0	062410.0
1	058011.1	058111.1	061511.1	061611.1	061711.1	061811.1	062011.1	062211.1	062411.1
2	058012.2	058112.2	061512.2	061612.2	061712.2	061812.2	062012.2	062212.2	062412.2
3	058013.3	058113.3	061513.3	061613.3	061713.3	061813.3	062013.3	062213.3	062413.3
4	058014.4	058114.4	061514.4	061614.4	061714.4	061814.4	062014.4	062214.4	062414.4
5	058015.5	058115.5	061515.5	061615.5	061715.5	061815.5	062015.5	062215.5	062415.5
6	058016.6	058116.6	061516.6	061616.6	061716.6	061816.6	062016.6	062216.6	062416.6
7	058017.7	058117.7	061517.7	061617.7	061717.7	061817.7	062017.7	062217.7	062417.7
8	058018.8	058118.8	061518.8	061618.8	061718.8	061818.8	062018.8	062218.8	062418.8
9	058019.9	058119.9	061519.9	061619.9	061719.9	061819.9	062019.9	062219.9	062419.9
0 - 9	05801C.C.KIT	05811C.C.KIT	06151C.C.KIT	06161C.C.KIT	06171C.C.KIT	06181C.C.KIT	06201C.C.KIT	06221C.C.KIT	06241C.C.KIT

Pre-print Service for cable and wire marking

For 30 years our pre-print service has provided labels and signage to customers. Our in-house team produce finished identification products, from simple individual markers to large complex kits, all delivered to you through a service, designed to meet your demands and ensure a prompt turnaround.

Data manipulation - send us your data and allow us to extract the relevant information for you. We can sort your data by set, batch, field area or simply in alpha-numerical order.

Material performance - with a huge range of materials at our disposal we are sure to have a solution to meet your specific requirement and environmental conditions.

Machining capabilities - from CNC laser cutting of raw material through to detailed finishing within our in-house machine shop gives us control of the complete process ensuring a high standard of finish.

Kitting and picking - finished product is catalogued to your instruction which leads to ease of pickability and improved productivity at site. A simple discussion with you now can lead to many man hours being saved at site.

Dispatched on time - with the ability to deliver worldwide, this service requires an efficient service driven team to ensure on time deliveries. A fast turnaround to meet customer delivery expectations with unbeatable customer service.

Pre-printed cable & wire markers

email us your data

we print & pack

delivered to you on time

Pre-printed Heat Shrink Wire Markers

All heat shrink markers can be supplied pre-printed with your required data. Options including a choice of colours, font print styles, logo printing and no minimum order quantities, we have a solution for your wire marking requirements. The popular sizes and colours of ETM and ETZ markers are listed below, however other colours and lengths are available upon request.

Pre-printed ETM Mil-spec heat shrinkable wire markers

Ordering information - 50mm long sleeves

Part Number (WHITE)	Part Number (YELLOW)	Sleeve Diameter	Sleeve Length	Pack Size	Cable Range (mm²)*
PP-ETM-9-024050	PP-ETM-4-024050	2.4	50mm	each	
PP-ETM-9-032050	PP-ETM-4-032050	3.2	50mm	each	0.50 to 1.00
PP-ETM-9-048050	PP-ETM-4-048050	4.8	50mm	each	1.00 to 4.00
PP-ETM-9-064050	PP-ETM-4-064050	6.4	50mm	each	4.00 to 6.00
PP-ETM-9-095050	PP-ETM-4-095050	9.5	50mm	each	6.00 to 16.00
PP-ETM-9-127050	PP-ETM-4-127050	12.7	50mm	each	16.00 to 35.00
PP-ETM-9-190050	PP-ETM-4-190050	19.0	50mm	each	35.00 to 120.00
PP-ETM-9-254050	PP-ETM-4-254050	25.4	50mm	each	120.00 to 185.00
PP-ETM-9-381050	PP-ETM-4-381050	38.1	50mm	each	185.00 to 400.00
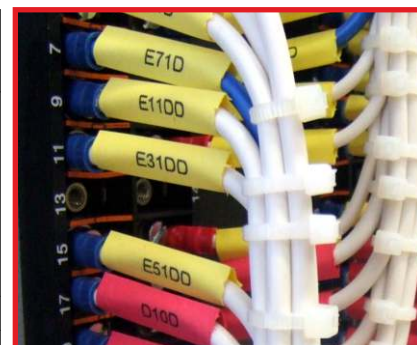
(*based upon BS6231 cable)

Ordering information - 25mm long sleeves

Part Number (WHITE)	Part Number (YELLOW)	Sleeve Diameter	Sleeve Length	Pack Size	Cable Range (mm²)*
PP-ETM-9-024025	PP-ETM-4-024025	2.4	25mm	each	
PP-ETM-9-032025	PP-ETM-4-032025	3.2	25mm	each	0.50 to 1.00
PP-ETM-9-048025	PP-ETM-4-048025	4.8	25mm	each	1.00 to 4.00
PP-ETM-9-064025	PP-ETM-4-064025	6.4	25mm	each	4.00 to 6.00
PP-ETM-9-095025	PP-ETM-4-095025	9.5	25mm	each	6.00 to 16.00
PP-ETM-9-127025	PP-ETM-4-127025	12.7	25mm	each	16.00 to 35.00
PP-ETM-9-190025	PP-ETM-4-190025	19.0	25mm	each	35.00 to 120.00
PP-ETM-9-254025	PP-ETM-4-254025	25.4	25mm	each	120.00 to 185.00
PP-ETM-9-381025	PP-ETM-4-381025	38.1	25mm	each	185.00 to 400.00

(*based upon BS6231 cable)

Now available to order online. Visit our website for details.

For more information and to purchase these products visit us online at www.expresselectrical.co.uk

Pre-print Service for cable and wire marking

Pre-printed ETZ zero halogen heat shrinkable wire markers

Ordering information - 50mm long sleeves

Part Number (WHITE)	Part Number (YELLOW)	Sleeve Diameter	Sleeve Length	Pack Size	Cable Range (mm²)*
PP-ETZ-9-024050	PP-ETZ-4-024050	2.4	50mm	each	
PP-ETZ-9-032050	PP-ETZ-4-032050	3.2	50mm	each	0.50 to 1.00
PP-ETZ-9-048050	PP-ETZ-4-048050	4.8	50mm	each	1.00 to 4.00
PP-ETZ-9-064050	PP-ETZ-4-064050	6.4	50mm	each	4.00 to 6.00
PP-ETZ-9-095050	PP-ETZ-4-095050	9.5	50mm	each	6.00 to 16.00
PP-ETZ-9-127050	PP-ETZ-4-127050	12.7	50mm	each	16.00 to 35.00
PP-ETZ-9-190050	PP-ETZ-4-190050	19.0	50mm	each	35.00 to 120.00
PP-ETZ-9-254050	PP-ETZ-4-254050	25.4	50mm	each	120.00 to 185.00
PP-ETZ-9-381050	PP-ETZ-4-381050	38.1	50mm	each	185.00 to 400.00

(*based upon BS6231 cable)

Ordering information - 25mm long sleeves

Part Number (WHITE)	Part Number (YELLOW)	Sleeve Diameter	Sleeve Length	Pack Size	Cable Range (mm²)*
PP-ETZ-9-024025	PP-ETZ-4-024025	2.4	25mm	each	
PP-ETZ-9-032025	PP-ETZ-4-032025	3.2	25mm	each	0.50 to 1.00
PP-ETZ-9-048025	PP-ETZ-4-048025	4.8	25mm	each	1.00 to 4.00
PP-ETZ-9-064025	PP-ETZ-4-064025	6.4	25mm	each	4.00 to 6.00
PP-ETZ-9-095025	PP-ETZ-4-095025	9.5	25mm	each	6.00 to 16.00
PP-ETZ-9-127025	PP-ETZ-4-127025	12.7	25mm	each	16.00 to 35.00
PP-ETZ-9-190025	PP-ETZ-4-190025	19.0	25mm	each	35.00 to 120.00
PP-ETZ-9-254025	PP-ETZ-4-254025	25.4	25mm	each	120.00 to 185.00
PP-ETZ-9-381025	PP-ETZ-4-381025	38.1	25mm	each	185.00 to 400.00

(*based upon BS6231 cable)

Now available to order online. Visit our website for details.

Pre-printed Tie-on Cable Markers

White, yellow, green, blue and red tie-on cable markers can be supplied pre-printed with your data. All ETC cable markers featured in this catalogue can be supplied pre-printed giving you access to a wide range of colour and size options, without the need to purchase dedicated desktop printers, software and ribbons.

We can supply cable ties along with your cable markers

Pre-printed ETC zero halogen tie-on cable markers

Ordering information - 12mm high x 60mm ling cable markers

Part Number	Colour	Dimensions	Pack Size
PP-ETC-4-012060	YELLOW	12 x 60mm	each
PP-ETC-9-012060	WHITE	12 x 60mm	each
PP-ETC-2-012060	RED	12 x 60mm	each
PP-ETC-5-012060	GREEN	12 x 60mm	each
PP-ETC-6-012060	BLUE	12 x 60mm	each

Printable area : 12.5 x 60
Label dimensions : 12.5 x 80
12.5mm
60.00 mm
80.00 mm
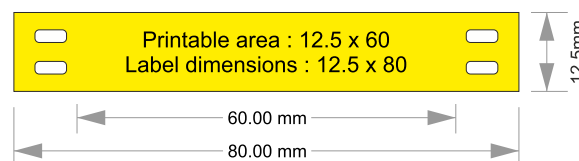
Pre-print Service for terminal markers, labels and signage

Self-laminating Labels

● Widely used for post termination applications within networking installation

● Also used for rework within existing panels and electrical installations

● The clear "tail" wraps to overlap and provides protection for the printed text

● Text is "sealed" and protected from solvents, chemicals and the elements

● Email your required data and we shall pre-printed and despatch next day

Push Button, Switch and Panel Labels

● We can pre-print push button, rotary switch, fuse rack and panel labels

● Material options include semi-rigid, polyester and vinyls

● Colour options available for both material and printed text

● All labels can be supplied with self adhesive backing for ease of installation

● Got a specific requirement? Send us a drawing and let us provide options

Warning Signs and Labels

● Critical within all industry sectors to the safety of your onsite personnel

● Industry standard warning, flash and voltage signage all available

● Used on electrical panels, junction boxes, machinery and onsite equipment

● Our bespoke service can accommodate unique text, layout and size of labels

● The self adhesive vinyl material is suitable for indoor and outdoor applications

Health and Safety Signage

● Extensive range of health and safety signage

● All commonly used H&S signage can be provided

● Mandatory, Prohibition, Fire Exit, Warning, Smoking, CCTV and more

● Self adhesive vinyl, semi-rigid and Photo-luminiscent materials available

● Customer specific layouts can also be accomodated

Terminal Markers

● Terminal markers can be supplied pre-printed with your data

● A range of markers available to suit industry leading brands

● Including Weidmuller, Entrelec, Wago, Siemens, Legrand and Telemecanique

● Fast, efficient, hassle free service

● Simply email your data and let us do the rest.

For more information and to purchase these products visit us online at www.expresselectrical.co.uk
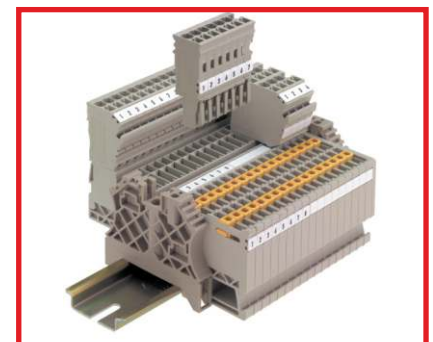
Engraved Labels

Our engraved labels feature a classic non-glare, highly durable matte finish. UV stable and heat tolerant colours make these the engraved label material of choice for customers. The engraved labels offer a flexibility that is far superior to traditional traffolyte materials and this is why they have become an industry wide standard. Common applications include :

Labels, plates, tags and markers

Valve and disc tags

Name plates, face plates and door signage

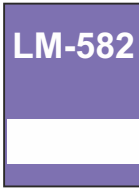**Junction box and control panel labels**
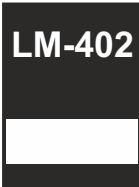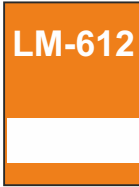
Cable tray node point labels

Facia and mimic plates

Switch and push button labels

One-off specials to large complex projects

Fast, efficient and competitively priced

LM-204	LM-402	LM-704	LM-407
WHITE/ BLACK	BLACK/ WHITE	YELLOW/ BLACK	BLACK/ YELLOW
LM-206	LM-602	LM-607	LM-612
WHITE/ RED	RED/ WHITE	RED/ YELLOW	ORANGE/ WHITE
LM-205	LM-512	LM-517	LM-552
WHITE/ SKY BLUE	SKY BLUE/ WHITE	SKY BLUE/ YELLOW	PATRIOT BLUE/ WHITE
LM-209	LM-932	LM-312	LM-582
WHITE/ GREEN	GREEN/ WHITE	SMOKE GREY/ WHITE	PURPLE/ WHITE

Above colour chart is for guidance only.

Technical Data

Colour
Wide range of colours

Material
Micro-surfaced impact Acrylic

Thickness
1.5mm (standard)
3.0mm (optional)

Operating temperature
-40°C up to +90°C.

Features and Benefits
Flexible
True type fonts
Graphics & images
Single or multiple lines
Interior and exterior use
UV stable
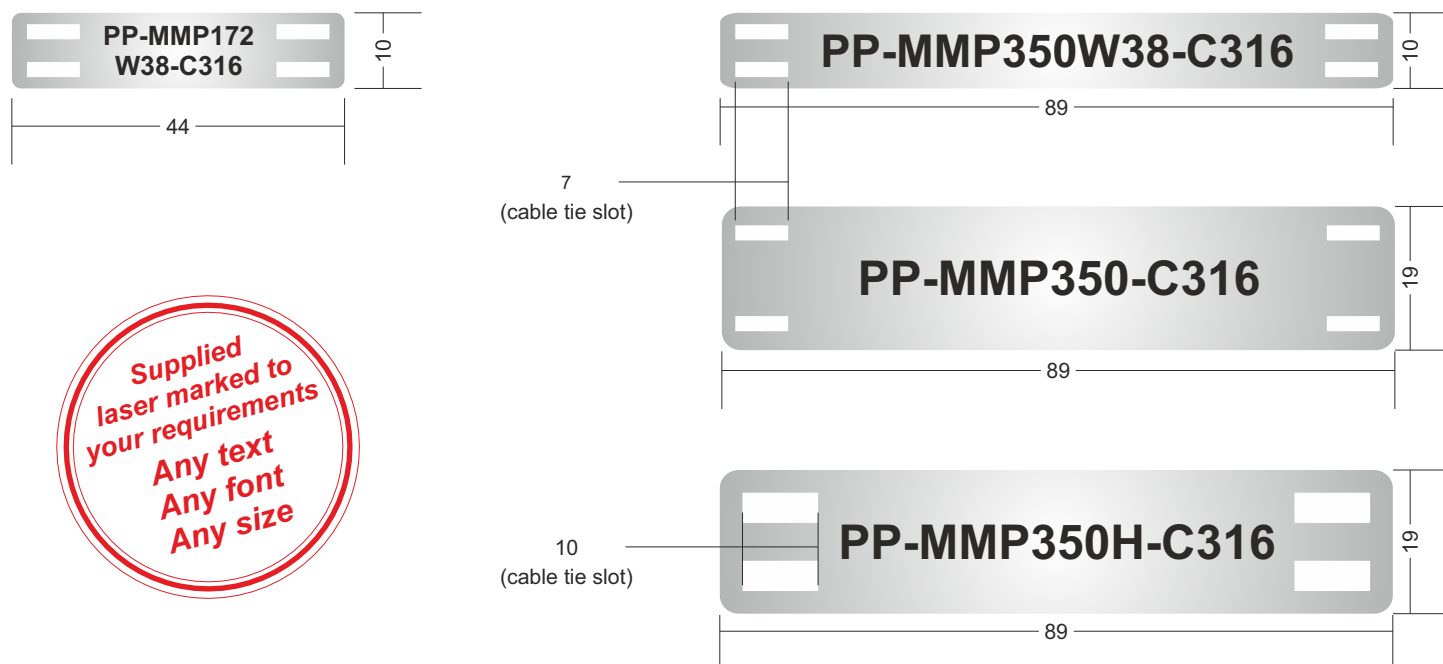Permits fine engraving
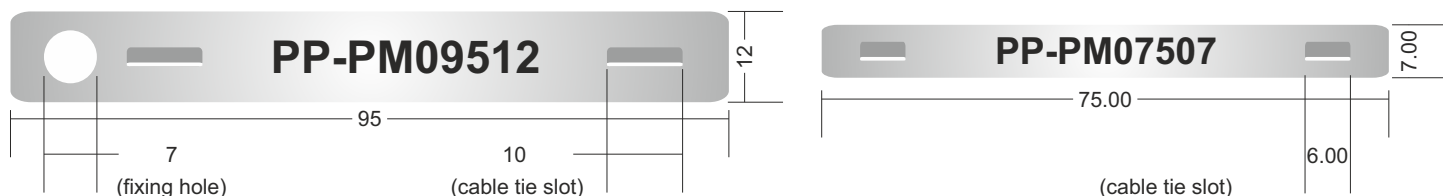Adhesive backed option
Can supply with fixing holes

Pickability
Labels are supplied in a catalogued fashion for ease of picking upon arrival at site.

U.K. Office +44 (0)141 941 3689   sales@expresselectrical.co.uk

Stainless Steel Marking

Stainless Steel 316 Cable Markers

PP-MMP172 W38-C316
10
44

PP-MMP350W38-C316
10
89

7 (cable tie slot)

PP-MMP350-C316
19
89

PP-MMP350H-C316
19
89

10 (cable tie slot)

Supplied laser marked to your requirements Any text Any font Any size

Stainless Steel 316 "Permark" Raised Shoulder Cable Markers

PP-PM09512
12
95

7 (fixing hole)

10 (cable tie slot)

PP-PM07507
7.00
75.00

6.00

(cable tie slot)

Stainless Steel Tags, Disc and Marker Plate (complete with 6.3mm fixing holes)

PP-MT 172-C316
19
44

PP-MT 1D-Q
25

PP-MT350W38-C316
10
89

6.3 (fixing hole)

PP-MMP350W17-Q
44
89
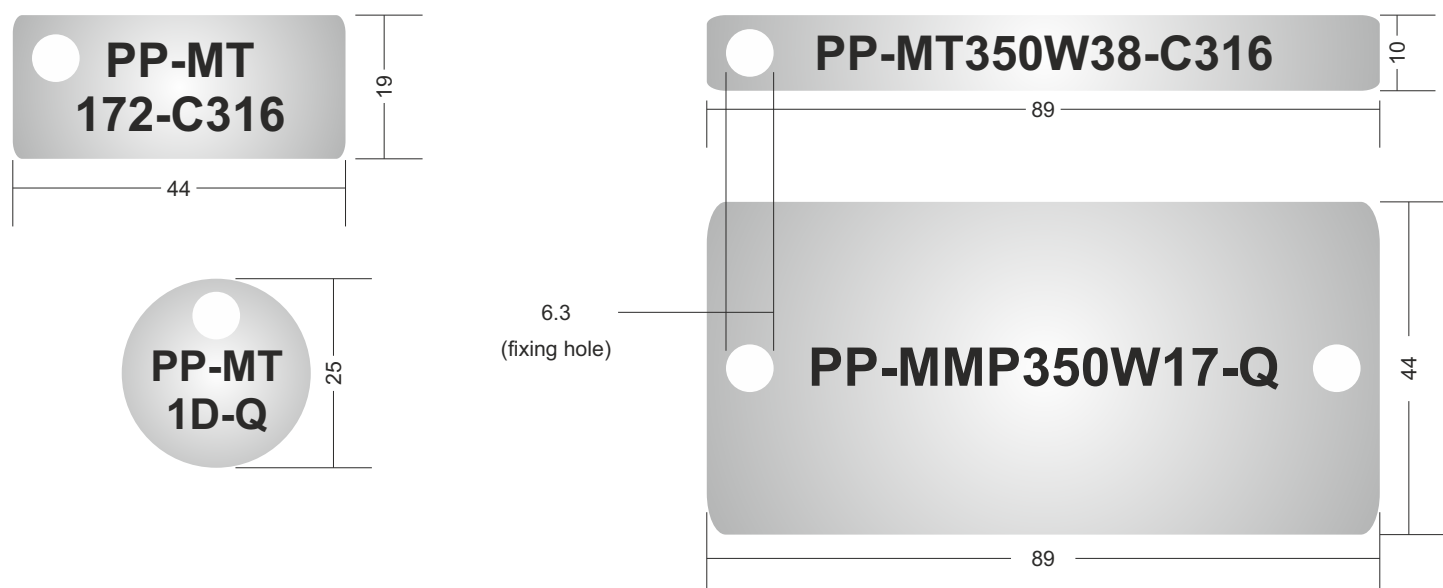
Stainless Steel markers, plates and tags

Stainless steel markers meet the requirements of the most hostile environments. Combined with our laser marking process that has been developed over 20 years we deliver a final product that is among the very best to be found in the marketplace today. With a clear and legible black mark our products can be found on land, in the air and at sea. We serve many industry sectors including offshore oil and gas, chemical plants and refining, rail, mining, and aerospace.

Stainless Steel Marking

Ordering information - Blank or laser marked with your data

Part number (BLANKS)	Part Number (LASER MARKED)	Length (mm)	Width (mm)	Thickness (mm)	Material Grade
MMP350-C316	PP-MMP350-C316	89.00	19.00	0.25	SS 316
MMP350H-C316	PP-MMP350H-C316	89.00	19.00	0.25	SS 316
MMP350W38-C316	PP-MMP350W38-C316	89.00	10.00	0.25	SS 316
MMP172W38-C316	PP-MMP172W38-C316	44.00	10.00	0.25	SS 316
MT350W38-C316	PP-MT350W38-C316	89.00	10.00	0.25	SS 316
MT172-C316	PP-MT172-C316	44.00	19.00	0.25	SS 316
MMP350W17-Q	PP-MMP350W17-Q	89.00	44.00	0.38	SS 304
MT1D-Q	PP-MT1D-Q	25.00	diameter	0.89	SS 304
PM09512	PP-PM09512	95.00	12.00	0.89	SS 316
PM07507	PP-PM07507	75.00	7.00	0.89	SS 316

Laser Marking Test Results

All markers tested were laser marked with a CO2 laser at 600dpi

Test Solution	1 Hour	12 Hours	24 Hours	168 Hours
Organic				
Gasoline	No effect	No effect	No effect	No effect
Limonene	No effect	No effect	No effect	No effect
Methyl Ethyl	No effect	No effect	No effect	No effect
N-Butanol	No effect	No effect	No effect	No effect
Mineral Spirits	No effect	No effect	No effect	No effect
Xylene	No effect	No effect	No effect	No effect
Acetone	No effect	No effect	No effect	No effect
Propylene	No effect	No effect	No effect	No effect
Ethanol	No effect	No effect	No effect	No effect
DMSO	No effect	No effect	No effect	No effect
Motor Oil	No effect	No effect	No effect	No effect
Acid / Bases				
Hydrochloric Acid	No effect	No effect	* note1	No effect
Nitric Acid (68%)	No effect	No effect	No effect	No effect
Sulphuric Acid (conc.)	No effect	No effect	No effect	No effect
Acetic Acid (99.5%)	No effect	No effect	No effect	** note 2
Hydrogen Peroxide (30%)	No effect	No effect	No effect	No effect
Sodium Hydroxide (25%)	No effect	No effect	No effect	No effect
Ammonium Hydroxide (20%)	No effect	No effect	No effect	No effect

*Acid dissolves steel tag and test was not run over 12 hours
After 1 hour acid dissolved 0.2767gms off of steel tag (4.7%) - no effect to mark
After 12 hours acid dissolved 1.8057gms off of steel tag (30.6%) - no effect to mark
**Acid discolours after approximately 96 hours - mark appears slightly discoloured

Technical Data

Colour
Metallic

Material
Marine Grade SS316
Standard Grade SS304

Operating temperature
-80°C up to +538°C.

Specifications
SAE AS81531 4.6.2
(Legible after 50 rubs)
MIL-STD-202F M215J
(Legible after 30 strokes)

Marking Capabilities
Bold or standard letters
Lower and upper case letters
Choice of True Type Fonts
Lines, boxes and shapes
Logos and graphics
Data-martrix and barcode
Multiple lines of text
Variable font size on single marker

Test Results
Markers were laser marked with C02 laser prior to testing.

Markers were totally immersed in each test solution and results recorded as per table opposite.

Stainless Steel Cutting & Marking Services

Stainless steel plates designed by you and manufactured by us.

Our CNC laser delivers an unrivalled service in custom plate manufacturing.

We laser cut material up to 3mm thick in a choice of materials and finishes.

Radius corners, fixing holes, switch and lamp openings can all be achieved with ease.

A complete solution in stainless steel, from one-off plates to large scale projects.

All services are delivered in-house giving us complete flexibility to meet your demands.

Laser cutting

- Any size! Any shape!
- Metal, wood or plastic
- Up to 3mm thick stainless steel cutting capabilities
- SS316 and SS304 grades as standard
- Brushed, matt and polished finishes
- Hole cutting options available

Laser marking

- BOLD block letters, upper & lower case characters
- True Type fonts in single or multiple lines of text
- Data-matrix, barcoding, borders, logos and graphics
- Variable font styles and sizes on the same plate
- Single / one-off tags for adds, mods, changes
- Alphanumeric and sequential numbering ability

Part marking service

Have stainless parts that simply need marked?
Send us the parts and we'll mark them for you.

- **e**   express offer a part marking service
- **a**   any size, any shape, any thickness
- **s**   simple, quick response time and all hassle free
- **y**   you send us the parts, we mark them - **easy!**

Mechanical engraving & paint filling

- In-house capability with no minimum order quantity
- Option to combine laser marking and engraved paint filling

Laser marked stainless steel cable ties

We laser mark directly on to stainless steel cable ties.

A solution for weight or space saving where identification is required.

The tie can double as a fixing and marking solution in one.

For more information and to purchase these products visit us online at www.expresselectrical.co.uk