



J. M. Engineering Co.

## PRODUCTS

# Heat Shrink Sleeves

## Identification Labels



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**Dimensions**

Shrink ratio-2X

Part Number	As Supplied (mm)			After Recovery(mm)	
	ID (D)	Flatten Width (W)	Double Wall Thickness	ID (d)	Single Wall Thickness
AMS-M-2X-1.6-	2.00±0.20	3.7±0.3	0.48±0.10	0.79	0.45±0.06
AMS-M-2X-2.4-	2.79±0.20	5.0±0.3	0.48±0.10	1.18	0.49±0.06
AMS-M-2X-3.2-	3.64±0.23	6.3±0.4	0.48±0.10	1.59	0.51±0.06
AMS-M-2X-4.8-	5.26±0.25	8.9±0.4	0.49±0.10	2.36	0.54±0.06
AMS-M-2X-6.4-	6.92±0.28	11.5±0.4	0.50±0.10	3.18	0.56±0.06
AMS-M-2X-9.5-	10.2±0.32	16.7±0.5	0.51±0.11	4.75	0.59±0.06
AMS-M-2X-12.7-	13.5±0.36	21.8±0.6	0.52±0.11	6.35	0.60±0.07
AMS-M-2X-19-	20.1±0.40	32.2±0.6	0.53±0.11	9.53	0.62±0.07
AMS-M-2X-25-	26.7±0.45	42.5±0.7	0.55±0.12	12.7	0.63±0.07
AMS-M-2X-38-	39.8±0.51	63.2±0.8	0.57±0.12	19.1	0.64±0.07
AMS-M-2X-51-	53.0±0.56	83.9±0.9	0.58±0.13	25.4	0.64±0.08
AMS-M-2X-76-	79.4±0.56	125.3±1.0	0.59±0.13	38.1	0.64±0.09

Shrink ratio-3X

Part Number	As Supplied (mm)			After Recovery(mm)	
	ID (D)	Flatten Width (W)	Double Wall Thickness	ID (d)	Single Wall Thickness
AMS-M-3X-1.6-	2.00±0.20	3.7±0.3	0.47±0.10	0.53	0.52±0.06
AMS-M-3X-2.4-	2.79±0.20	5.0±0.3	0.47±0.10	0.79	0.57±0.06
AMS-M-3X-3.2-	3.64±0.23	6.3±0.4	0.48±0.10	1.06	0.61±0.06
AMS-M-3X-4.8-	5.26±0.25	8.9±0.4	0.49±0.10	1.59	0.67±0.06
AMS-M-3X-6.4-	6.92±0.28	11.5±0.4	0.50±0.10	2.13	0.71±0.06
AMS-M-3X-9.5-	10.2±0.32	16.7±0.5	0.52±0.11	3.18	0.77±0.06
AMS-M-3X-12.7-	13.5±0.36	21.8±0.6	0.53±0.11	4.23	0.80±0.07
AMS-M-3X-19-	20.1±0.40	32.2±0.6	0.55±0.11	6.35	0.84±0.07
AMS-M-3X-25-	26.7±0.45	42.5±0.7	0.565±0.12	8.47	0.86±0.07
AMS-M-3X-38-	39.8±0.51	63.2±0.8	0.57±0.12	12.9	0.89±0.07
AMS-M-3X-51-	53.0±0.56	83.9±0.9	0.57±0.12	17.2	0.90±0.08
AMS-M-3X-76-	79.4±0.56	125.3±1.0	0.57±0.13	25.8	0.92±0.09

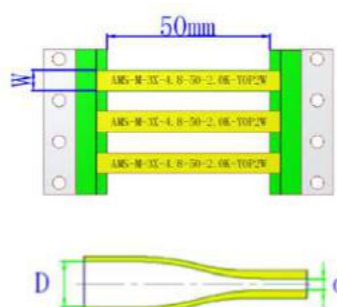
**Package information**

Ordering Size (AMS-M-2X/3X)	Ladder Format Type		Continuous Type	
	A&B-Small Box Packing (PCS/Box)	A-Paper reel Packing (m/reel)	B-Plastic reel Packing (m/reel)	
1.6	2500	50	25	
2.4	2500	50	25	
3.2	2000	100	25	
4.8	2000	100	25	
6.4	2000	100	25	
9.5	1000	100	25	
12.7	1000	100	25	
19	500	100	25	
25	500	100	25	
38	500	50	25	
51	250	50	25	
76	250	50	25	

**Part Numbering System**

AMS-M-3X-4.8-50-2.0K-Y 0 P2 W

- Package: W for WOLABLE painting package.O for OEM package
- Printing: P0/P1/P2 for printing/single-side printing/ double-side printing
- Dash line: 0/1/2/3.....for not need/one line/two-line/three-line.....
- Color: Y for yellow, W for white and ten colors are available
- Standard pack: 2.5K/2K/1.5K/1K/0.5K/0.25K/for 2500/...../500 and 250 pieces
- Sleeve length: nominal length is 50mm(the total length is 56.5mm)
- Expanded ID: as supplied,nominal inside diameter
- Expansion ratio: 2X/3X refers to 2:1 or 3:1
- Standard wall thickness
- Product family:AMS refer to AMS-DTL-23053/5



**RSFR**

**Heat Shrinkable Identification Sleeves**

**Description:** RSFR marker sleeve is a flattened, heat-shrinkable tubing intended for wire and cable harness identification. It can also be used for applications where limited fire hazard characteristics are necessary. When RSFR is printed with Woer recommended printers and ink ribbons, the marks remain legible, durable, even when exposed to abrasion, aggressive cleaning solvents, and industrial fluids.

**Standard:** SAE-AS 81531, MIL-STD-202F/Method 215J, UL224 RoHS

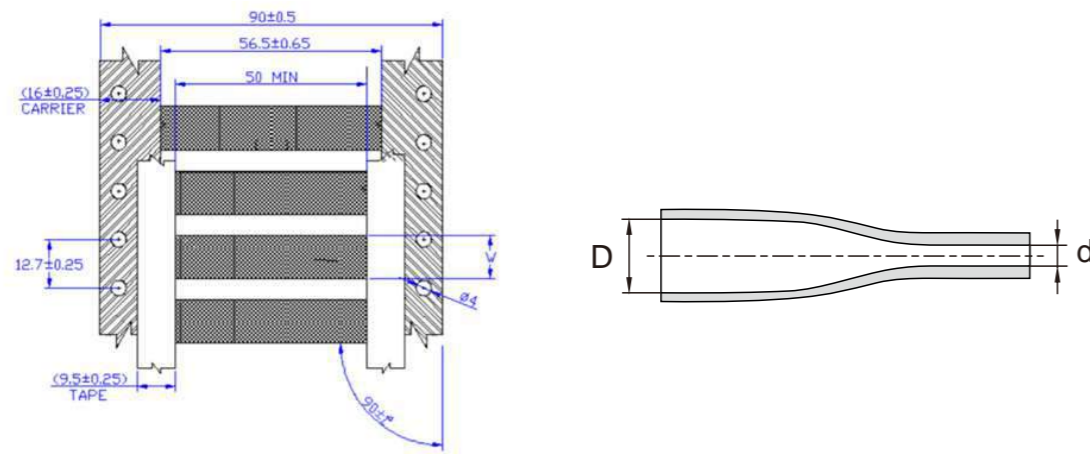
**Features**

Material	The sleeving shall be fabricated from irradiated, thermally stabilized and flame retarded modified polyolefin compound containing no halogens or cadmium in the formulation.
Application range	commercial Industrial environment
Operating temperature range	-55~+125
Minimum recovery temperature	+125
Maximum storage temperature	+50
Shrink ratio	2:1, 3:1
Color	White, Yellow, other color is available if ordered
Printing mode	Single sided printing and Double sided printing formats available
Supplied mode	Either Continuous type or Ladder format type is available
Recommended Printers	Thermal transfer printer
Recommended Ribbons	N85 resin ribbon, Black, 100mm(width)*300m(length)

**Physic performance**

Property	Unit	Testing Requirement	WOER Results
Tensile strength	MPa	10.3	14.3
Ultimate elongation	%	200	330
Low temperature flexibility 4 hours at -55±1	-	No cracking	Pass(no cracking)
Dielectric strength	kV/mm	19.7	20
Volume Resistivity	·cm	10 <sup>14</sup>	2.0×10 <sup>14</sup>
Corrosive effect	-	No corrosive	pass
Heat aging	-	168 hours at 158±2	Pass(no cracking, print is legible)
Print performance	Rubs	SAE-AS 81531	Pass(legible after 100 rubs)
	Strokes	MIL-STD-202F	Pass(legible after 100 Strokes)

**Part Numbering System**



RSFR-M-3X-4.8-50-2.0K-Y 0 P2 W

- Package: W for WOLABLE painting package.O for OEM package
- Printing: PO/P1/P2 for printing/single-side printing/ double-side printing.
- Dash line: 0/1/2/3.....for not need/one line/two-line/three-line.....
- Color: Y for yellow, W for white and ten colors are available
- Standard pack: 2.5K/2K/1.5K/1K/0.5K/0.25K/for 2500/...../500 and 250 pieces
- Sleeve length: nominal length is 50mm(the total length is 56.5mm)
- Expanded ID: as supplid,nominal inside diameter
- Expansion ratio: 2X/3X refers to 2:1 or 3:1
- Standard wall thickness
- Product family:RSFR refers to UL 224

Color code	BL	Br	R	Or	Y	G	Blu	V	Gr	W
Color	Black	Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	White

Note Yellow and white are standard, other color is available if ordered.

**Dimensions**

**Shrink ratio-2X**

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RSFR-M-2X-51-	53.0±0.56	83.9±0.9	0.58±0.13	25.4	0.64±0.08

**Shrink ratio-3X**

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RSFR-M-3X-4.8-	5.26±0.25	8.9±0.4	0.49±0.10	1.59	0.67±0.06
RSFR-M-3X-6.4-	6.92±0.28	11.5±0.4	0.50±0.10	2.13	0.71±0.06
RSFR-M-3X-9.5-	10.2±0.32	16.7±0.5	0.52±0.11	3.18	0.77±0.06
RSFR-M-3X-12.7-	13.5±0.36	21.8±0.6	0.53±0.11	4.23	0.80±0.07
RSFR-M-3X-19-	20.1±0.40	32.2±0.6	0.55±0.11	6.35	0.84±0.07
RSFR-M-3X-25-	26.7±0.45	42.5±0.7	0.56±0.12	8.47	0.86±0.07
RSFR-M-3X-38-	39.8±0.51	63.2±0.8	0.57±0.12	12.9	0.89±0.07
RSFR-M-3X-51-	53.0±0.56	83.9±0.9	0.57±0.13	17.2	0.90±0.08

**Package Information**

Ordering Size (RSFR-M-2X/3X)	Ladder Format Type	
	Small Box Packing (PCS/Box)	Continuous Type A-Paper reel Packing (m/reel)
2.4	2500	50
3.2	2000	100
4.8	2000	100
6.4	2000	100
9.5	1000	100
12.7	1000	100
19	500	100
25	500	100
38	500	50
51	250	50