

M Series



Description

Alloy Thermal-Link / Alloy Thermal Cutoff (ATCO) is defined as a non-resettable protective device functioning one time only. It is widely used in electrical equipment. ATCO is mainly consist of fusible alloy, flux resin, case, sealant and lead wires. Normally, fusible alloy is jointed to the two lead wires. Under abnormal conditions, when the temp. reaches to the fusing temp. of ATCO, the fusible alloy melts and quickly retracts to the two lead wire ends with the aid of the flux resin and disconnects the circuit completely.

SETsafe | SETfuse Alloy Thermal-Link (ATCO) M series Rated Functioning Temp. 139 °C, Rated Current: 9 A, safety certification Includes UL, cUL, TUV, and complies with RoHS and REACH.

Features

- Non-Resettable
- High Accuracy of Functioning Temp.
- RoHS & REACH Compliant

Structure Diagrams

Axial Lead Wire Sealant Epoxy Case Fusible Alloy Flux Resin

Applications

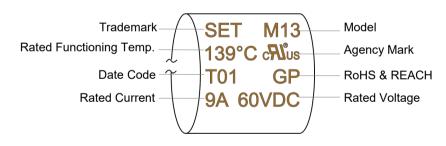
- Lamps
- Switched-Mode Power Supplies
- Home Electrical Appliances
- Transformers
- Motors
- Batteries

Customization

- Other Temp.
- The Length of Lead Wires
- Taping Packing Available
- Lead Wires can be Insulated
 - Tinned Copper Wires or CP Wires
 - Leads Forming Types

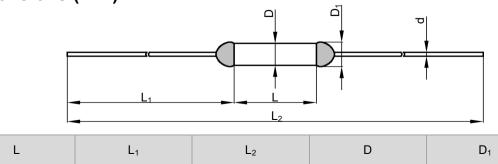
Marking

Axial (Color for reference only)



Remark: The first letter of the Date Code Year/quarter A stands for 2000, B stands for 2001, 01 stands for the first quarter, 02 stands for the second quarter, and so on.

Dimensions (mm)



L	L ₁	L ₂	D	D ₁	d
6.5 ± 0.5	37.0 ± 2.0	80.5 ± 3.0	2.1 ± 0.5	≤ 2.6	0.80 ± 0.05

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Thermal-Link (ATCO)-Alloy Type

Specifications

np. (T _f) °C		Model	Fusing Temp.	T _h	T _m	/r (A)	U _r	/ _n 8 / 20 μs (15 Times) (kA)	/ _{max} 8 / 20 μs (1 Time) (kA)	RL ®	c N ® cUL	کم Tuv	RoHS REACH
Rated Functioning Temp.	139	M13	135 ± 2	85	200	9	DC 60	3.5	7	•	•	•	•

Note:

1: " \bullet "Means certificated, " \bigcirc "Means non-certificated, RoHS & REACH Compliant .

2: " * "Customizable DC voltage.



M Series

Agency Information

Institution	Standards	The File No. and certification No. obtained by SETsafe SETfuse
RI®	UL 60691	E214712
c FN®	CAN-CSA-E60691	E214712
$\boldsymbol{\mathbb{A}}$	EN 60691	R50415881

Soldering

Hand-Soldering

- 1. Soldering should be carried out according to Table T-1.
- The thermal element of ATCO is fusible alloy with low melting point, which is jointed with ATCO lead wires. Improper soldering operation (too high soldering temp., too long soldering time, too short lead wire etc.) may transfer more heat to the thermal element and ATCO may open in advance.

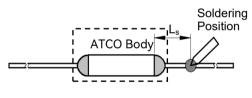


FIGURE T-1

- 3. When soldering conditions are more severe than those listed in Table T-1, a heat sink fixture should be used between soldering point and ATCO body.
- 4. When soldering, please do not pull / push or twist ATCO body or lead wires.
- 5. After soldering, let it naturally cool for longer than 20 seconds. During cooling, never move the ATCO body or lead wires.

TABLE T-1 Hand-Soldering Time

Rated Functioning Temp.		Max. Allowable Soldering Time for Different Lead Wire Length (Fig.T-1)												
(<i>T</i> _f)	L _s Length	Time)	L _s Length	Time		L _s Length	Tim	Temp.					
	Lengtin	Tinned Copper Wire	CP Wire	- Length -	Tinned Copper Wire	CP Wire	Length	Tinned Copper Wire	CP Wire					
(°C)	(mm)	(s)	(s)	(mm)	(s)	(s)	(mm)	(s)	(s)	(°C)				
139	10	3	6	20	5	8	30	5	8	400				

Note:

a: Auxiliary Heat Sink Fixture is Required to Avoid ATCO Cutting off Unexpectedly.

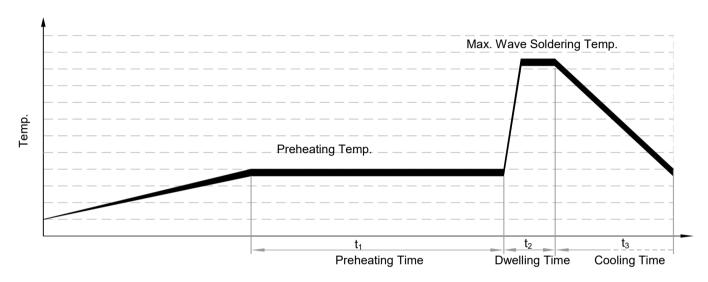
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Wave Soldering

The wave soldering parameters as Table T-2, for reference only, when ATCO is for practice use, you need to do some validation experiments. For example, using X-RAY to see the fusible alloy of ATCO whether damage after wave soldering.

TABLE T-2 Wave Soldering Parameters Setting

Rated Functioning Temp.	Who	Max. Allowal en the Length		ng Temp. e is Different	Preheating Time (t ₁)	Max. Wave Soldering	Dwelling Time (t ₂)	Cooling Time (t ₃)
(<i>T</i> _f)	L _s Length	Preheating Temp.	L₅ Length	Preheating Temp.		Temp.		
(°C)	(mm)	(°C)	(mm)	(°C)	(s)	(°C)	(s)	(s)
139	20	80	30	90	< 60	≤ 260	≤ 3	≤ 10



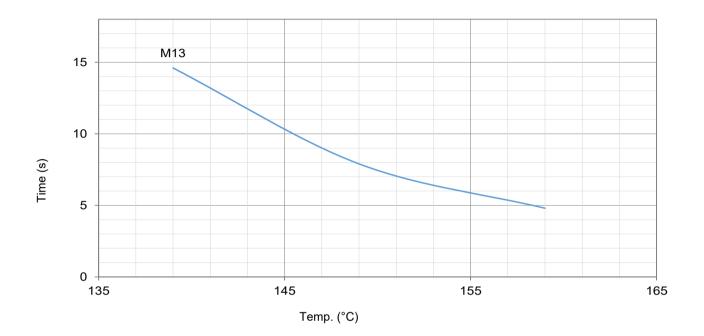


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Thermal-Link (ATCO)-Alloy Type

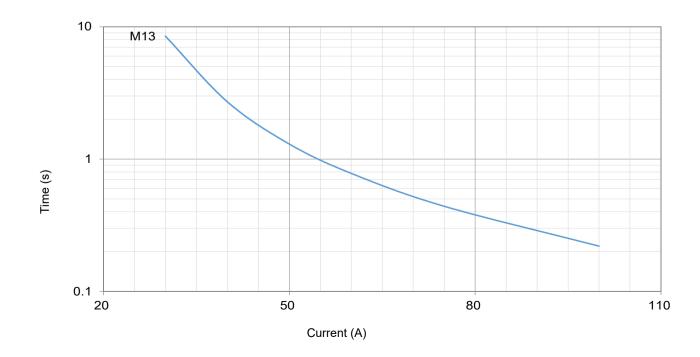
Product Temp.-Time Curve (Reference)

The Temp.-Time Curve of Thermal-Link in different temp. oil bath.



Product Current-Time Curve (Reference)

The Current-Time Curve shows functioning time at multi-times rated current at room temperature 25 ± 2 °C.



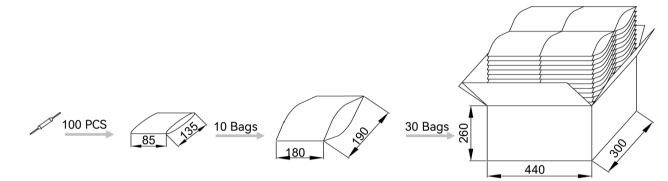


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Packaging Information

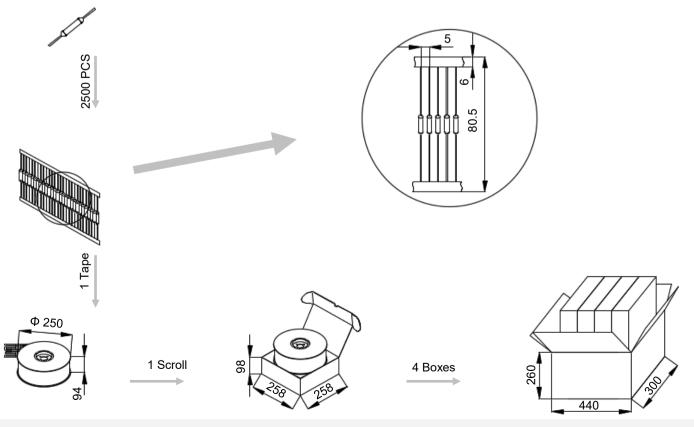
Bulk

Item	PE Bag	PE Bag	Carton							
Dimensions (mm)	135 × 85	190 × 180	440 × 300 × 260							
Quantity (PCS)	100	1000	30000							
Gross Weight (kg)	Gross Weight (kg)									



Taping

Item	Scroll	Box	Carton							
Dimensions (mm)	Φ 250 × 94	258 × 258 × 98	480 × 300 × 260							
Quantity (PCS)	2500	2500	10000							
Gross Weight (kg)	Gross Weight (kg)									





M Series

Part Numbering System

TCO - M 13 - A	N N A B - 001	
		Other Options
		Packing
		B Bulk
		T Taping
		Leads Forming
		A Straight Lead
		B Single Lead Bending
		C Leads Bending
		D Leads Kinking
		E Leads Bending and Kinking
		Color of Insulation Tube
		W White
		Y Yellow
		R Red
		K Black
		N None
		Insulation Tube Material
		T Teflon
		P Polyester
		N None
		— Lead Wire Type
		A Tinned Copper Wire
		B Tinned Copper Plated Wire
		Rated Functioning Temp.
		13 139 °C, See Specifications
		Series
		Series
		M See Specifications
		Product Category
		ATCO Alloy Thermal-Link



M Series

Glossary

Item	Description
тсо	Thermal-Link A non-resettable device incorporating a THERMAL ELEMENT which will open a circuit once only when exposed for a sufficient length of time to a temperature in excess of that for which it has been designed. — (GB 9816.1)
АТСО	Alloy Thermal-Link Alloy Type Thermal-Link, Alloy is the thermal element. — (GB 9816.1)
T _f	Rated Functioning Temp. The temperature of the Alloy Thermal-Link which causes it to change the state of conductivity with a detection current up to 10 mA as the only load.
14	— (GB 9816.1) Tolerance: 7 _f °C (GB 9816.1, EN 60691, K60691). Tolerance: 7 _f ± 7 °C (J60691).
Fusing Temp.	Fusing Temp. The temperature of the Alloy Thermal-Link which causes it to change its state of conductivity is measured with silicone oil bath in which the temperature is increased at the rate of 0.5 °C to 1 °C / minute, with a detection current up to 10 mA as the only load. — (GB 9816.1)
T _h	Holding Temp. The Maximum temperature at which a Alloy Thermal-Link will not change its state of conductivity when conducting rated current for 168 hours. — (GB 9816.1)
T _m	Maximum Temp. Limit The temperature of the Alloy Thermal-Link stated by the manufacturer, up to which the mechanical and electrical properties of the Alloy Thermal-Link having changed its state of conductivity, will not be impaired for a given time. — (GB 9816.1)
Ir.	Rated Current The current used to classify a Alloy Thermal-Link, which is the Maximum current that Alloy Thermal-Link allows to carry and is able to cut off the circuit safely. — (GB 9816.1)
U,	Rated Voltage The voltage used to classify a Alloy Thermal-Link, which is the Maximum voltage that Alloy Thermal-Link allows to carry and is able to cut off the circuit safely. — (GB 9816.1)
I _n	Nominal Discharge Current Being able to withstand 15 peak currents of waveform 8/20 µs to test the product's durability of withstanding pulse current.
I _{max}	 — (UL 1449) Max. Discharge Current Being able to withstand 1 peak current of waveform 8/20 μs to test max. pulse current that the product can withstand. — (UL 1449)

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ATTENTION

Usage

- 1. When atmosphere pressure is from 80 kPa to 106 kPa, the related altitude shall be from 2000 meters to 500 meters.
- 2. Operating voltage less than rated voltage of ATCO, operating current less than rated current of ATCO.
- 3. Do not touch the ATCO body or lead wires directly when power is on, to avoid burn or electric shock.

Replace

ATCO is a non-repairable product. For safety sake, it shall be replaced by an equivalent ATCO from the same manufacturer, and mounted in the same way.

Storage

Do not store the ATCO at the high temp., high humidity or corrosive gas environment, avoid influencing the solder-ability of the lead wires, the product shall be used up within 1 year after receiving the goods.

Installation

Make Sure the Temp. of Installation Position.

- 1. It is recommended that a dummy ATCO with inbuilt thermo-couple shall be used to determine the proper temp.
- 2. The terminal product should be tested to ensure that potential abnormal conditions do not cause ambient temp. to exceed the T_m of the ATCO.
- 3. Mount the ATCO at the location where temp. rises evenly.

Installation position of mechanical performance requirements.

- 1. Do not locate the ATCO in a place where severe vibration always occurs.
- 2. Ensure that the lead wire is long enough, and avoid actions such as press, tensile or twist.
- 3. The seal or body of ATCO must not be damaged, burned or over heated.



M Series

Mechanical Connection

Riveting

- 1. Choose small resistivity riveting material and be riveted.
- 2. A flexible lead or lead with low resistance should be used to rivet the ATCO.
- 3. Contact resistance should be minimal, large contact resistance will lead to higher temp., ATCO Functioning in advance.

Crimping

- 1. Choose small resistivity crimping material and be crimped.
- 2. A flexible lead or lead with low resistance should be used to rivet the ATCO.
- 3. Contact resistance should be minimal, large contact resistance will lead to higher Temp., ATCO Functioning in advance.

Lead Wire Forming

- 1. If lead wire has to be bent, please pay attention to the distance between body and bending point. Refer to Table T-3.
- 2. When bending leads, please use pincher or similar tools to fix the product as shown in Fig.T-2, to avoid damaging the product.
- 3. During forming and mounting, lead wire should not be cut, nicked, bent sharply, to avoid breaking the product.
- 4. Tangential forces on the leads must be avoided (i.e. pushing or pulling on the leads at angle to ATCO body) as such forces may damage the seal of ATCO.

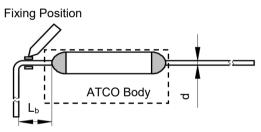


FIGURE T-2

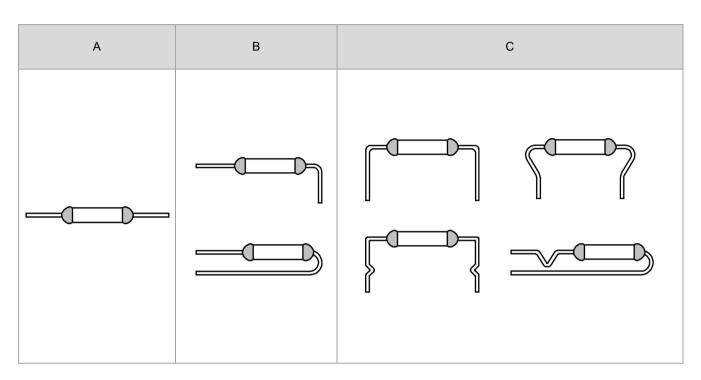
TABLE T-3 Distance between Body and Bending Point

	d	(mm)	< 1.0	1.0 - 1.2	> 1.2
Circular lead	L _b	(mm)	≥ 3	≥5	≥ 10

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M Series

Leads Forming Types The below leads forming is for reference, more leads forming can be customized. Axial



Rated V	oltage — — — — — —																		Л Ш					
Γ _r (Rated C U _r (V	AC)	1	2	3	5	10	15	1	2	3	5	10	16	20 250	25 	30	40	2	3	10	10	10	16	
	76) VO	H0	B0	C0	U0	R0	F0	K0	X0	Y0	0	0 15	0	0	0	0	KG0	XG0	0	0	0	15	\rightarrow
	86	V18	H18	B18	C18	U18	R18	F18	K18	X18	Y18	0	0	0	0	0	0	KG18	XG18	0	0	0	0	
	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	97	V21	H21	B21	C21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ř	102	V1	H1	B1	C1	U1	R1	F1	K1	X1	Y1	S102	T102	0	0	N102	G102	KG1	XG1	SK102	0	SE102	TK102	
ate	105	0	0	0	02	02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
p	115	V2	H2	B2	C2	U2	R2	F2	K2	X2	Y2	S115	T115	P115	Q115	N115	G115	KG2	XG2	SK115	0	SE115	TK115	
_ <u>n</u> _	123 120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rated Functioning Temp. (<i>T</i> ,) °C	125	V3	H3	B3	C3	U3	R3	F3	K3	X3	Y3	S125	T125	0	0	N125	G125	KG3	XG3	SK125	0	SE125	TK125	
ior	130	V4	H4	B4	C4	U4	R4	F4	K4	X4	Y4	0	0	0	0	N130	G130	KG4	XG4	SK130	0	0	TK130	0
ir	133	V8	H8	B8	C8	0	0	F8	K8	X8	Y8	0	0	0	0	0	0	KG8	XG8	0	0	0	0	Model
6	135	V5	H5	B5	C5	U5	R5	0	K5	X5	0	0	0	0	0	0	0	KG5	XG5	SK135	0	SE135	TK135	Z
len	136	V9	H9	B9	C9	0	0		K9	X9	Y9	S136	T136	P136	Q136	N136	G136	KG9	XG9	0	0	0	0	
d.	139	V13	H13	B13	C13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
E)	145	V6	H6	B6	C6	U6	R6	F6	K6	X6	Y6	0	0	0	0	0	0	KG6	XG6	SK145	0	SE145	TK145	
-	150	V7	H7	B7	C7	U7	R7	F7	K7	X10	Y7	S150	T150	0	0	N150	G150	KG7	XG7	SK150	0	SE150	TK150	
S	160	V16	H16	B16	C16	U16	R16	F16	K17	X17	Y16	0	0	0	0	0	0	KG16	XG16	SK160	0	0	TK160	
	200 187	0	0	0	0	0	0	0	0 K17	0 X17	O Y17	0	0	0	0	0	0	0	0	0	SKL200	SE200	0	
	205	V32	H32	B32	C32	U32	R32	0	K32	X32	0	0	0	0	0	0	0	KG32	XG32	SK205	0	0	TK205	
	221	V31	H31	B31	C31	U31	R31	0	K31	X31	0	0	0	0	0	0	0	KG31	XG31	SK221	0	0	TK221	
	230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SKL230	SE230	0	

Radial Shape

Thermal-Link (ATCO)-Alloy Type Feature & Model List Overview

Axial Shape

Thermal-Link (ATCO)-Alloy Type

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Radial Shape (Screw Hole)

																						1	
	230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	221	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	205	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	200	0	0	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	
()	187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ŷ	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- L	150	0	0	KM7	XM7	Y7	YM7	SM150	TM150	0	KM7	XM7	0	0	HU7	HR7	0	0	HC7	0	HL7	HW7	
<u> </u>	145	SY145	TY145	0	0	0	0	0	0	0	0	0	0	0	HU6	HR6	HS145	HP145	HC6	HN145	HL6	HW6	
du	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ler	136	0	0	0	0	Y9	YM9	SM136	TM136	Q136	0	0	P136	Q136	0	0	HS136	HP136	0	HN136	0	0	
່ວ	135	0	0	KM5	XM5	0	0	0	0	0	KM5	XM5	0	0	HU5	HR5	0	0	HC5	0	HL5	HW5	Model
in	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	od
o	130	SY130	TY130	KM4	XM4	Y4	YM4	0	0	0	KM4	XM4	0	0	HU4	HR4	0	0		0	HL4	HW4	e
cti	125	SY125	TY125	0	0	0	0	0	0	0	KM3	XM3	P125	Q125	HU3	HR3	HS125	HP125	HC3	HN125	HL3	HW3	
un	123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<u>ш</u>	120	SY120	TY120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rated Functioning Temp. (<i>T</i> ,) °C	115	SY115	TY115	0	0	0	0	SM115	TM115	Q115	0	0	P115	Q115	HU2	HR2	0	0	HC2	0	HL2	HW2	
Sa	105	SY105	TY105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	102	0	0	0	0	0	0	SM102	TM102	0	0	0	P102	Q102	HU1	HR1	0	0	HC1	0	HL1	HW1	
	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	95	SY95	TY95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	86	0	0	0	0	0	0	0	0	0	0	0	0	0	HU18	HR18	0	0	HC18	0	HL18	HW18	
	76)	0	0	0	0	0	0	0	0	0	0	0	0	HU0	HR0	0	0	HC0	0	HL0	HW0	\rightarrow
r (Rated C		10	15	2	3	5	5	10	15 16	25	2	3	20	25	10	15	5	10	5	15	10	15	
Ur (N Rated V	/AC) /oltage	25	50				300				32	20	40	00		5	00		6	90	8	00	
Product Structure	Cylin	drical					Ę	L L L L L L L L L L L L L L L L L L L	pe					Axial 1]]] Shape		Shape ectrode)	Axial	Axial Shape (Flat	Axial]] Shape		

Thermal-Link (ATCO)-Alloy Type Feature & Model List Overview

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M Series

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Thermal-Link (ATCO)-Alloy Type

																					1	N
230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0						0	0		0	0	0	0	0		R31	0	
	0	0	0	0	0	V32		0	B32	0	0	0		0	0	0	0	0	U32	R32	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
160	0	0	0	0	0	V16	H16	0	B16	0	0	0	C16	0	0	0	0	0	U16	R16	0	
150	V7	H7	B7	0	C7	0	0	0	0	0	0	0	0	0	0	0	0	0	U7	R7	0	
145	V6	H6	B6	0	C6	0	0	0	0	0	0	0	0	0	0	0	0	C6	U6	R6	0	
139	V13	H13	B13	0	C13	0	0	0	0	0	SF13	V13	0	0	0	C13	M13	0	0	0	CR13	
136	V9	H9	B9	0	C9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Model
135	V5	H5	B5	0	C5	0	0	0	0	0	0	0	0	0	0	0	0	0	U5	R5	0	
133	V8	H8	B8	0	C8	0	0	0	0	SF8	0	V8	0	0	0	0	0	0	0	0	0	bo
130	V4	H4	B4	0	C4	0	0	0	0	SF4	0	V4	0	0	0	0	0	0	U4	R4	0	e
125	V3		B3		C3	0	H3	0	0	0	0	0	0	0	0	0		0	U3	R3	0	
123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
115	V2	H2	B2	0	C2	0	0	0	0	SF2	0	V2	0	0	C2	0	0	0	U2	R2	0	
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
102	V1	H1	B1	C1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U1	R1	0	
97	V21	H21	B21	C21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	V18	H18	B18	C18	0	0	0	V18	0	0	0	0	0	C18	0	0	0	0	U18	R18	0	
76) VO	H0	B0	C0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U0	R0	0	\rightarrow
(A) Current	1	2	3	5	7	1	2	2.5	3	3	5	4	5	6	8	8.5	9	10	10	15	15	
VDC) Voltage							60															
duct cture		Axial Shape																				
	160 150 145 139 136 135 133 130 125 123 120 115 105 102 97 95 86 76((A) (Current VDC) Voltage	221 ○ 200 ○ 200 ○ 187 ○ 160 ○ 150 √7 145 √6 139 √13 136 √9 135 √5 133 √8 130 √4 125 √3 120 ○ 121 ○ 122 ○ 123 ○ 124 √2 105 ○ 102 √11 97 √21 95 ○ 86 √18 76 √0 (A) 1 VDC) 1	221 ○ ○ 205 ○ ○ 200 ○ ○ 187 ○ ○ 160 ○ ○ 160 ○ ○ 150 V7 H7 145 V6 H6 139 V13 H13 136 V9 H9 135 V5 H5 133 V8 H8 130 V4 H4 125 V3 ○ 120 ○ ○ 121 ○ ○ 122 V1 H1 97 V21 H21 95 ○ ○ 86 V18 H18 76 V0 H0 (A) current 1 2	221 ○ ○ ○ 205 ○ ○ ○ 200 ○ ○ ○ 200 ○ ○ ○ 200 ○ ○ ○ 200 ○ ○ ○ 200 ○ ○ ○ 187 ○ ○ ○ 160 ○ ○ ○ 150 V7 H7 B7 145 V6 H6 B6 139 V13 H13 B13 136 V9 H9 B9 135 V5 H5 B5 133 V8 H8 B8 130 V4 H4 B4 123 ○ ○ ○ 120 ○ ○ ○ ○ 120 ○ ○ ○ ○ 102 V1 H1 B1 97 V21 H21 B21 95 ○ ○ ○	221 ○ ○ ○ ○ 205 ○ ○ ○ ○ ○ 200 ○ ○ ○ ○ ○ 200 ○ ○ ○ ○ ○ 200 ○ ○ ○ ○ ○ 187 ○ ○ ○ ○ ○ 160 ○ ○ ○ ○ ○ 160 ○ ○ ○ ○ ○ 145 V6 H6 B6 ○ ○ 136 V9 H9 B9 ○ ○ 135 V5 H5 B5 ○ ○ 133 V8 H8 B8 ○ ○ 120 ○ ○ ○ ○ ○ 102 V1 H1 B1 C1 97 V21 H21 B21 C21 95 ○ ○ ○ ○ 86 V18 H18 B18 C18	221 ○ ○ ○ ○ ○ ○ 205 ○ ○ ○ ○ ○ ○ ○ 200 ○ ○ ○ ○ ○ ○ ○ 187 ○ ○ ○ ○ ○ ○ ○ 160 ○ ○ ○ ○ ○ ○ ○ 150 V7 H7 B7 ○ ○ ○ 130 V7 H7 B7 ○ ○ ○ 133 V6 H6 B6 ○ ○ ○ 135 V5 H5 B5 ○ C5 133 V8 H8 B8 ○ C3 120 ○ ○ ○ ○ ○ 121 V2 H2 B2 ○ ○ 120 ○ ○ ○ ○ ○ ○ 97 V21 H21 B21 C21 ○ 95 ○ ○	221 0	221 0 0 0 0 0 131 205 0 0 0 0 0 0 132 200 0 0 0 0 0 0 0 0 187 0 0 0 0 0 0 0 0 187 0 0 0 0 0 0 0 0 160 0 0 0 0 0 0 0 0 160 V7 H7 B7 0 C7 0 0 145 V6 H6 B6 0 C6 0 0 133 V13 H13 B13 0 C13 0 0 135 V5 H5 B5 0 C5 0 0 133 V8 H8 B8 0 C4 0 0 120 0 0 0 0 0 0 0 0 97 V21 <t< th=""><th>221 0 0 0 0 V31 H31 0 205 0 0 0 0 0 0 0 0 200 0 0 0 0 0 0 0 0 187 0 0 0 0 0 0 0 0 0 160 0 0 0 0 0 0 0 0 0 160 V7 H7 B7 0 C7 0 0 0 145 V6 H6 B6 C6 0 0 0 133 V13 H13 B13 0 C13 0 0 0 133 V5 H5 B5 0 C5 0 0 0 133 V8 H8 B8 C8 0 0 0 0 123 V3 B3 0 C3 0 1 0 0 0 0 0 120</th><th>221 0 0 0 0 V31 H31 0 B31 205 0 <</th><th>221 0 0 0 0 0 V31 H31 0 B31 0 205 0 0 0 0 0 0 V32 H32 0 B32 0 200 0</th></t<> <th>221 0 0 0 0 V31 H31 0 B31 0 0 205 0 0 0 0 0 0 V32 H32 0 B32 0 0 200 0<th>221 0 0 0 0 V31 H31 0 B31 0</th><th>221 0 0 0 0 V31 H31 0 B31 0 0 0 C31 205 0</th><th>221 0 0 0 0 V31 H31 0 B31 0 0 0 C31 0 205 0</th><th>221 0 0 0 0 0 V31 H31 0 B31 0 0 0 C31 0 0 205 0</th><th>221 0 0 0 0 0 V31 H31 0 B31 0 0 C31 C3 0 0 0 205 0</th><th>21 0 0 0 0 0 V3 H31 0 B31 0 0 0 C31 0 0 0 0 200 0 0 0 0 V32 H32 0 B32 0 0 0 C31 0 0 0 0 200 <th< th=""><th>21 0 0 0 0 V31 H31 0 B31 0 0 C31 0 0 0 0 205 0 0 0 0 0 V32 H32 0 B32 0 0 C32 0 0 0 0 0 0 200 <t< th=""><th>221 0 0 0 0 0 1 1 0 B31 0 0 C31 0 <t< th=""><th>221 0 0 0 0 0 0 131 131 0 B31 0 <</th><th>221 0 0 0 0 V3 H31 0 B31 0 0 C31 0 <</th></t<></th></t<></th></th<></th></th>	221 0 0 0 0 V31 H31 0 205 0 0 0 0 0 0 0 0 200 0 0 0 0 0 0 0 0 187 0 0 0 0 0 0 0 0 0 160 0 0 0 0 0 0 0 0 0 160 V7 H7 B7 0 C7 0 0 0 145 V6 H6 B6 C6 0 0 0 133 V13 H13 B13 0 C13 0 0 0 133 V5 H5 B5 0 C5 0 0 0 133 V8 H8 B8 C8 0 0 0 0 123 V3 B3 0 C3 0 1 0 0 0 0 0 120	221 0 0 0 0 V31 H31 0 B31 205 0 <	221 0 0 0 0 0 V31 H31 0 B31 0 205 0 0 0 0 0 0 V32 H32 0 B32 0 200 0	221 0 0 0 0 V31 H31 0 B31 0 0 205 0 0 0 0 0 0 V32 H32 0 B32 0 0 200 0 <th>221 0 0 0 0 V31 H31 0 B31 0</th> <th>221 0 0 0 0 V31 H31 0 B31 0 0 0 C31 205 0</th> <th>221 0 0 0 0 V31 H31 0 B31 0 0 0 C31 0 205 0</th> <th>221 0 0 0 0 0 V31 H31 0 B31 0 0 0 C31 0 0 205 0</th> <th>221 0 0 0 0 0 V31 H31 0 B31 0 0 C31 C3 0 0 0 205 0</th> <th>21 0 0 0 0 0 V3 H31 0 B31 0 0 0 C31 0 0 0 0 200 0 0 0 0 V32 H32 0 B32 0 0 0 C31 0 0 0 0 200 <th< th=""><th>21 0 0 0 0 V31 H31 0 B31 0 0 C31 0 0 0 0 205 0 0 0 0 0 V32 H32 0 B32 0 0 C32 0 0 0 0 0 0 200 <t< th=""><th>221 0 0 0 0 0 1 1 0 B31 0 0 C31 0 <t< th=""><th>221 0 0 0 0 0 0 131 131 0 B31 0 <</th><th>221 0 0 0 0 V3 H31 0 B31 0 0 C31 0 <</th></t<></th></t<></th></th<></th>	221 0 0 0 0 V31 H31 0 B31 0	221 0 0 0 0 V31 H31 0 B31 0 0 0 C31 205 0	221 0 0 0 0 V31 H31 0 B31 0 0 0 C31 0 205 0	221 0 0 0 0 0 V31 H31 0 B31 0 0 0 C31 0 0 205 0	221 0 0 0 0 0 V31 H31 0 B31 0 0 C31 C3 0 0 0 205 0	21 0 0 0 0 0 V3 H31 0 B31 0 0 0 C31 0 0 0 0 200 0 0 0 0 V32 H32 0 B32 0 0 0 C31 0 0 0 0 200 0 <th< th=""><th>21 0 0 0 0 V31 H31 0 B31 0 0 C31 0 0 0 0 205 0 0 0 0 0 V32 H32 0 B32 0 0 C32 0 0 0 0 0 0 200 <t< th=""><th>221 0 0 0 0 0 1 1 0 B31 0 0 C31 0 <t< th=""><th>221 0 0 0 0 0 0 131 131 0 B31 0 <</th><th>221 0 0 0 0 V3 H31 0 B31 0 0 C31 0 <</th></t<></th></t<></th></th<>	21 0 0 0 0 V31 H31 0 B31 0 0 C31 0 0 0 0 205 0 0 0 0 0 V32 H32 0 B32 0 0 C32 0 0 0 0 0 0 200 0 <t< th=""><th>221 0 0 0 0 0 1 1 0 B31 0 0 C31 0 <t< th=""><th>221 0 0 0 0 0 0 131 131 0 B31 0 <</th><th>221 0 0 0 0 V3 H31 0 B31 0 0 C31 0 <</th></t<></th></t<>	221 0 0 0 0 0 1 1 0 B31 0 0 C31 0 <t< th=""><th>221 0 0 0 0 0 0 131 131 0 B31 0 <</th><th>221 0 0 0 0 V3 H31 0 B31 0 0 C31 0 <</th></t<>	221 0 0 0 0 0 0 131 131 0 B31 0 <	221 0 0 0 0 V3 H31 0 B31 0 0 C31 0 <

Thermal-Link (ATCO)-Alloy Type Feature & Model List Overview

14

SET safe **SET** fuse M Series

Thermal-Link (ATCO)-Alloy Type

	-																	/	N
np. (<i>T</i> ,) °C	230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	221	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	205	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	150	0	0	0	0	0	0	S150	T150	0	0	SD150	TD150	PD150	QD150	HS150	HP150	HN150	
	145	0	0	0	0	F6	X6	0	0	0	0	0	0	0	0	0	0	0	
	139	0	0	0	0	F13	0	0	0	0	0	0	0	0	0	0	0	0	Model
<u>e</u>	136	0	0	0	0	0	X9	S136	T136	P136	Q136	SD136	TD136	PD136	QD136	HS136	HP136	HN136	
Rated Functioning Temp. (<i>T</i> ,) °C	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	133	0	0	0	0	F8	0	0	0	0	0	0	0	0	0	0	0	0	
	130	0	0	0	0	F4	0	0	0	0	0	SD130	TD130	PD130	QD130	0	0	0	<u>e</u>
	125	KG3	XG3	K3	X3	0	0	S125	T125	P125	Q125	SD125	TD125	PD125	QD125	HS125	HP125	HN125	
	123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	120	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	
	115	KG2	XG2	K2	X2	F2	0	S115	T115	P115	Q115	SD115	TD115	PD115	QD115	0	0	0	
	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	102	KG1	XG1	K1	X1	F1	0	S102	T102	P102	Q102	SD102	TD102	PD102	QD102	0	0	0	
	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	86	KG18	XG18	K18	X18	F18	0	0	0	0	0	0	0	0	0	0	0	0	
	76)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\rightarrow
/r (A) Rated Current		2	3	2	3	3	4	10	15 16	20	25	10	15 16	20	25	5	10	15	
Ur (V Rated V	DC) oltage			50			1	00		120		1:	25		200				
Product Structure			Shape						Radial	Shape	Axial Sh								

Thermal-Link (ATCO)-Alloy Type Feature & Model List Overview

M Series

SET safe SET fuse

