

# Badger<sup>®</sup> Heat Detector Links and Housing Kits



Effective: August 2013  
B-87-012

## FEATURES

- **For Use in:**
  - **Range Guard<sup>®</sup> Commercial Cooking Fire Suppression Systems**
  - **Industry Guard<sup>™</sup> Industrial Fire Suppression Systems**
- **For Use with Universal Control Head and A+ Control Box**
- **Wide Selection of Link Types and Temperature Ratings**
- **Rapid Response Links Available for Increased Spacing on Industry Guard Systems**
- **Low Cost, Reliable Detection**

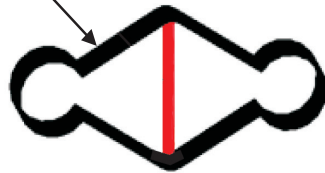
## DESCRIPTION

### Heat Detector Links

There are two types of mechanical heat detector links available for use with Badger Range Guard and Industry Guard fire suppression systems:

- Thermo Bulb links, available in Standard Response (BTBS) and Rapid Response (BTBR) (Figure 1)
- Fusible metal alloy links, Model ML (Figure 2) and Model RGA (Figure 3)

RAPID RESPONSE  
THERMO-BULB LINK



STANDARD RESPONSE  
THERMO-BULB LINK

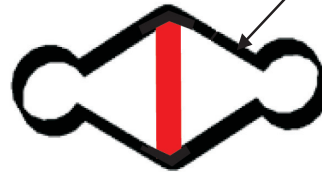


Figure 1. Thermo Bulb, P/N 87-12009X-XXX

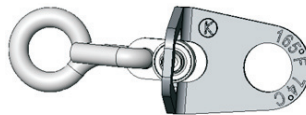


Figure 2. ML Heat Detector Links, P/N WK-282661-XXX

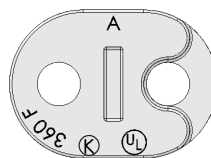


Figure 3. RGA Heat Detector Link, P/N 87-120060-001

Standard Response and Rapid Response Thermo Bulb Detector Links are available in six different temperature ratings (Table 1). RGA Detector Links are available in a 360°F (182°C) temperature rating only (Table 2). Thermo Bulb and RGA Detector Links can be used with the Universal Control Head (UCH) or the A+ Control Box.

ML Detector Links are available in four different temperature ratings (Table 2) and are listed for use with the Universal Control Head only.

Detector selection is based on the maximum expected exposure temperature determined via heat survey during normal operating conditions (refer to Table 1 and Table 2). Detector load ratings are shown in Table 3.

Table 1. Thermo Bulb Detector Link Ratings

Standard Response Part Number	Rapid Response Part Number	Detector Temperature Rating	Color	Maximum Exposure Temperature
87-120090-165	87-120095-165	165°F (74°C)	Red	100°F (38°C)
87-120090-212	87-120095-212	212°F (100°C)	Green	150°F (65°C)
87-120090-286	87-120095-286	286°F (141°C)	Blue	225°F (107°C)
87-120090-360	87-120095-360	360°F (182°C)	Mauve	300°F (149°C)
87-120090-450	87-120095-450	450°F (232°C)	Black	375°F (191°C)
87-120090-500	87-120095-500	500°F (260°C)	Black	435°F (224°C)

Table 2. ML and RGA Detector Link Ratings

Fusible Metal Detector Link Part Number	Detector Temperature Rating	Color	Maximum Exposure Temperature
<b>Model ML</b>			
WK-282661-000	165°F (74°C)	Yellow	100°F (38°C)
WK-282662-000	212°F (100°C)	White	150°F (65°C)
WK-282664-000	360°F (182°C)	Unpainted	300°F (149°C)
WK-282666-000	500°F (260°C)	Orange	440°F (226°C)
<b>Model RGA</b>			
87-120060-001	360°F (182°C)	Unpainted	300°F (149°C)

Table 3. Detector Link Load Ratings

Detector Type	Minimum Load	Maximum Load
Thermo Bulb	0 lb. (0 kg)	50 lb. (22.7 kg)
ML	10 lb. (4.5 kg)	40 lb. (18.1 kg)
A	3 lb. (1.4 kg)	45 lb. (20.4 kg)

**Detector Link Housing Kits**

Badger Heat Detector Links are installed in the detection line using one of two Detector Link Housing Kits with the Range Guard and Industry Guard Fire Suppression Systems:

- Low Profile Detector Link Housing Kit (P/N 804548) for use with the Universal Control Head only (Figure 4 and Table 4)
- Universal Detector Link Housing Kit (P/N 60-120064-001) for use with the Universal Control Head or A+ Control Box (Figure 5 and Table 5)

Thermo Bulb links are held together with a liquid-filled glass tube which bursts at a pre-determined temperature, allowing the link halves to separate. ML and RGA fusible metal alloy links are composed of a specific alloy which melts at a predetermined temperature, allowing the link halves to separate. Separation of the detector link halves releases tension on the detection line, causing the Universal Control Head or A+ Control Box to actuate the system cylinders.

Each of the two Detector Link Housings can accommodate any of the heat detector links listed with Badger Range Guard and Industry Guard systems and can be set up for either in-line or end-of-line use. Detector links are installed using two 'S' Hooks, connected to the detection line cable or housing, depending on configuration. Up to 40 Heat Detector Links can be installed on each detection line of the Universal Control Head or A+ Control Box.

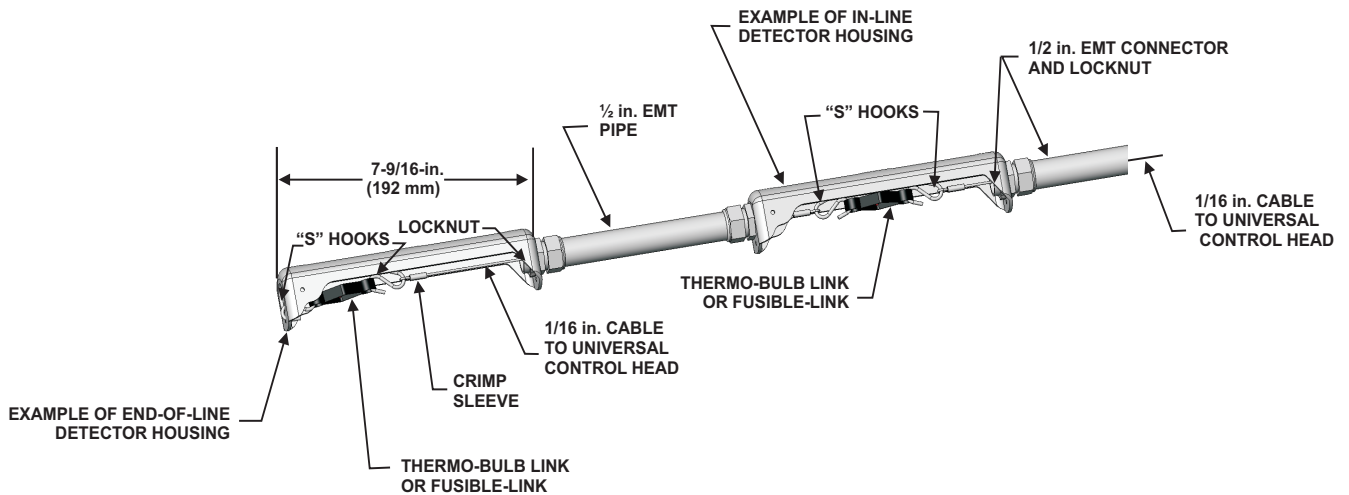


Figure 4. Low Profile Detector Link Housing (for use with Universal Control Head only)

Table 4. Low Profile Detector Link Housing Kit, P/N 804548

Description	Quantity
7-9/16 in. (192 mm) Link Housing	1
1/2-in. EMT Connector	2
Crimp Sleeve	4
'S' Hook	1

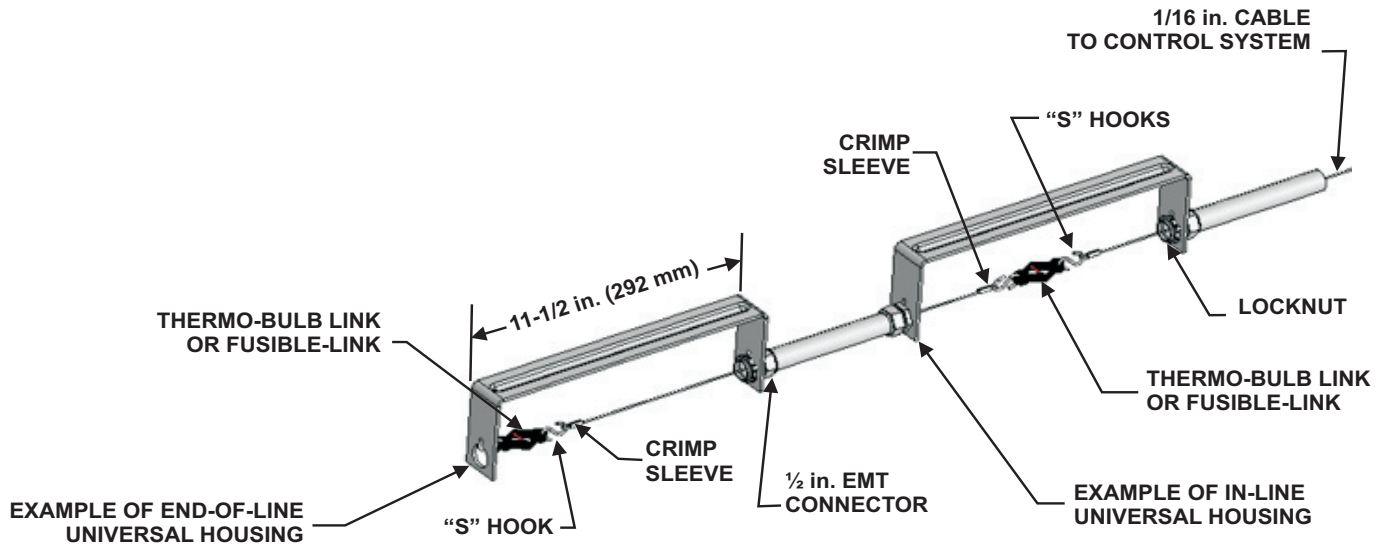


Figure 5. Universal Detector Link Housing (for use with UCH or A+ Control Box)

Table 5. Universal Detector Link Housing Kit, P/N 60-120064-001

Description	Quantity
11-1/2-in. (292 mm) Link Housing	1
Crimp Sleeve	2
"S" Hook	2

### REFERENCE INFORMATION

- Range Guard systems designed and installed in accordance with manual P/N 60-9127100-000
- Industry Guard systems designed and installed in accordance with manual P/N 60-900000-001
- Vehicle Spray Booth Systems designed and installed in accordance with manual P/N 60-900007-001

## ORDERING INFORMATION

Description	Part Number
<b>Detector Housings &amp; Control Equipment</b>	
Universal Detector Link Housing Kit	60-120064-001
Low Profile Detector Link Housing Kit	WK-804548-000
EMT Connector Kit (set of 3)	87-120058-001
'S' Hooks (pack of 50)	60-9197288-000
Crimp Sleeves (pack of 50)	60-9197287-000
Control Cable (1/16-in. x 500 ft.)	WK-219649-000
<b>Thermo Bulb Links</b>	<b>Part Number (5-Pack)</b>
BTBS-165, Standard Response 165°F (74°C), Red	87-120091-165
BTBS-212, Standard Response 212°F (100°C), Green	87-120091-212
BTBS-286, Standard Response 286°F (141°C), Blue	87-120091-286
BTBS-360, Standard Response 360°F (182°C), Mauve	87-120091-360
BTBS-450, Standard Response 450°F (232°C), Black	87-120091-450
BTBS-500, Standard Response 500°F (260°C), Black	87-120091-500
BTBR-165, Rapid Response 165°F (74°C), Red	87-120096-165
BTBR-212, Rapid Response 212°F (100°C), Green	87-120096-212
BTBR-286, Rapid Response 286°F (141°C), Blue	87-120096-286
BTBR-360, Rapid Response 360°F (182°C), Mauve	87-120096-360
BTBR-450, Rapid Response 450°F (232°C), Black	87-120096-450
BTBR-500, Rapid Response 500°F (260°C), Black	87-120096-500
<b>ML Type Fusible Alloy Links (XV Only)</b>	<b>Part Number (each)</b>
ML-165 Link, 165°F (74°C), Yellow	WK-282661-000
ML-212 Link, 212°F (100°C), White	WK-282662-000
ML-360 Link, 360°F (182°C), Unpainted	WK-282664-000
ML-500 Link, 500°F (260°C), Orange	WK-282666-000
<b>A Type Fusible Alloy Links</b>	<b>Part Number (each)</b>
RGA-360 Link, 360°F (182°C)	87-120060-001
<b>Control Systems</b>	
Universal Control Head	87-120099-002
A+ Control Box	87-120010-001

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B-87-012 Rev AC

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