

## Introduction











Modules with
Intelligent Technology
Combinations for
Power Distribution Units



#### **Products**

- Fuse Holders
- Fuse Holders for PCB
- Relay Holders
- Holder Guides
- Fuse and Relay Boxes

#### **Product Features**

- Product dedicated to minifuse & autofuse applications (harness or aggregate)
- Product dedicated to plug in relay: micro, iso, power
- Direct wire fuse and relay solutions

#### **Applications**

- Body Harness
- Engine Harness
- Maxifuse Application

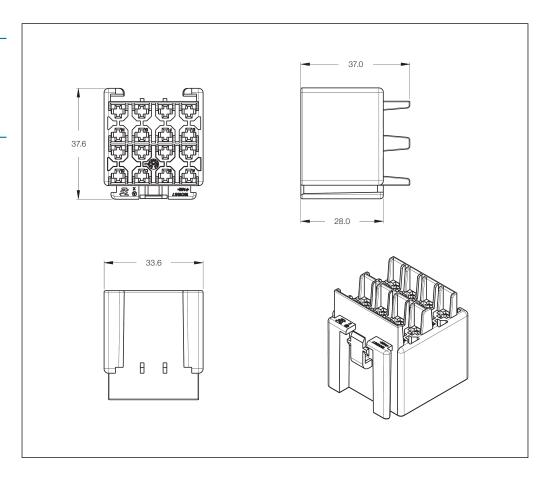
## 8 Position Modular Mini Fuse Holder

# **Applications**

Body Harness

## **Technical Features**

- Detection of partially-inserted receptacle
- Product Specification: 108-15399
- Instruction Sheet: 411-15744



#### **Fuse Holder**

Part Number	Package Quantity	Material	Color	Mating Contacts
1801567-1	550	PA66	Natural	AMP MCP 2.8 Terminal:

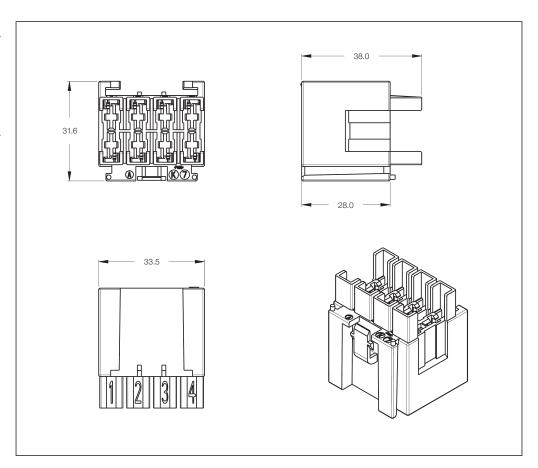


# **Applications**

Body Harness

## **Technical Features**

- Detection of a partially-inserted receptacle
- Temperature Class: -40 °C to +85 °C
- Vibration Class: 3 G
- Unsealed
- Product Specification: 108-15160
- Instruction Sheet: 411-15587



#### **Fuse Holder**

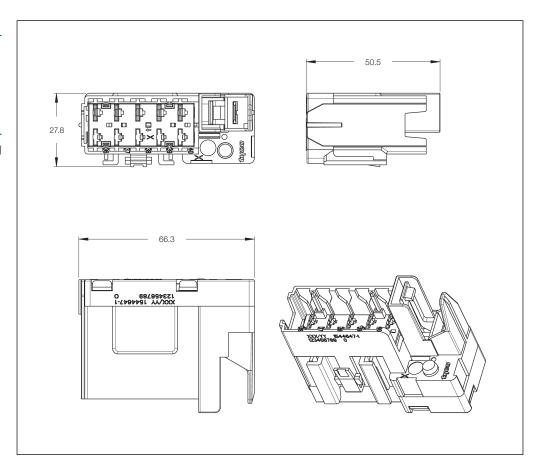
Part Number	Package Quantity	Material	Color	Mating Contacts
185847-1	550	PA66	Natural	SPT Receptacle:
185847-2	550	PA66	Natural	SPT Receptacle:

#### **Applications**

Body Harness

#### **Technical Features**

- Detection of a partially-inserted receptacle
- Possibility to use 1 to 5 ATO fuse
- Bus bar technology supplying current to 5 ATO fuse
- Material: PBT 10% GF
- Primary and secondary receptacle latch
- Bracket locking device
- Secondary lock
- Temperature Class: -40 °C to +100 °C
- Vibration Class: 3 G
- Sealing Class: 0
- Product Specification: 108-15332
- Instruction Sheet: 411-15678



#### 5 Position Ato Fuse Holder

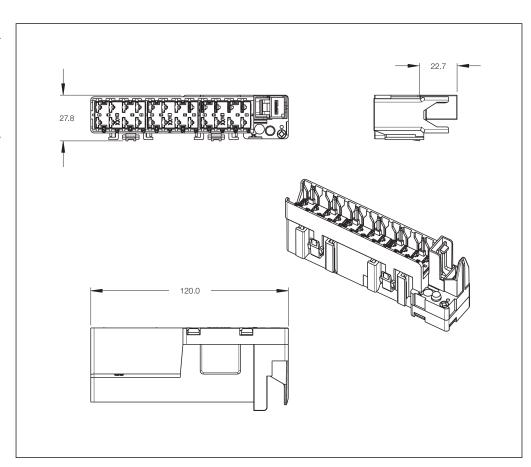
Part Number	Package Quantity	Material	Color	Mating Contacts 6.3 mm Terminals:
1544647-1	305	PBT, UL 94-HB rated	Black	<ul><li>963892-1</li><li>963893-1</li><li>963894-1</li><li>963894-2</li></ul>

#### **Applications**

Body Harness

#### **Technical Features**

- Bus bar technology supplying current to 5 ATO fuse
- Compact design
- Primary and secondary receptacle latch
- Detection of a partially-inserted receptacle
- Material: PBT 10% GF
- Fuse holder for 7 additional ATO fuse
- Temperature Class: -40 °C to +100 °C
- Vibration Class: 3 G
- Sealing Class: 0



#### 12 Position Ato Fuse Holder

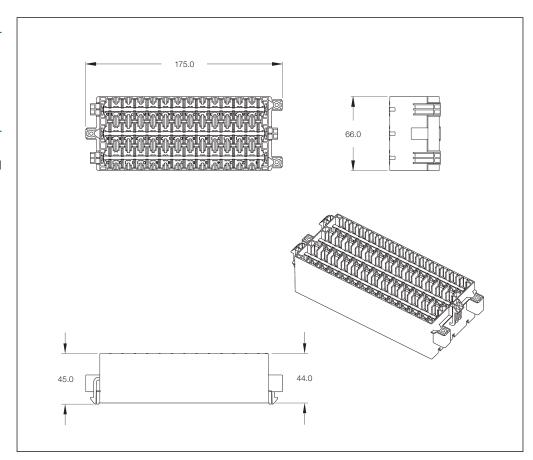
Part Number	Package Quantity	Material	Color	Mating Contacts 6.3 mm Terminals:
1544266-1	182	PBT, UL 94-HB rated	Black	<ul><li>963892-1</li><li>963893-1</li><li>963894-1</li><li>963894-2</li></ul>

## **Applications**

Body Harness

#### **Technical Features**

- Compact design
- Detection of a partially-inserted receptacle
- Temperature Class: -40 °C to +85 °C
- Vibration Class: 3 G
- Unsealed
- Product Specification: 108-15135
- Instruction Sheets: 411-15559 and 411-15593



# **Fuse Holder Housing**

Part Number	Package Quantity	Material	Color	Mating Contacts
185404-2	48	PC – ABS	Black	Fuse Holder Contact:  • 185353-1  • 185354-1  • 185355-1

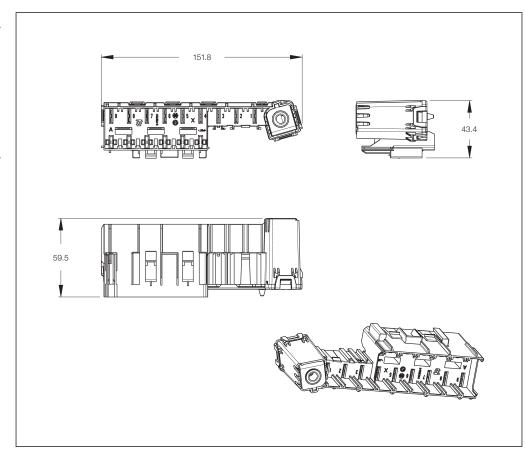
# 9 Position MAXIFUSE Housing

#### **Applications**

- Engine Harness
- Fuse box compatible MAXIFUSE® Technology

#### **Technical Features**

- The master harness is connected onto the box with screwed interconnection ring
- Possibility to connect 9 pos. with MAXIFUSE protection
- Material: PBT, tin plated copper alloy for bus bar
- Max Current Load:
  - 300 A during 15 s at 100 °C
  - 150 A during 45 min at 100 °C
- Max. Receptacle Wire Section: 10 mm<sup>2</sup>
- Temperature Class: -40 °C to +100 °C
- Vibration Class: 3 G
- Unsealed



#### 9 Position MAXIFUSE Box

Part Number	Package Quantity	Material	Color	Mating Contacts
1718700-1	60	PBT, UL 94-HB rated	Black	8 mm MAXIFUSE Terminals: • 1544106-1 • 1544107-1



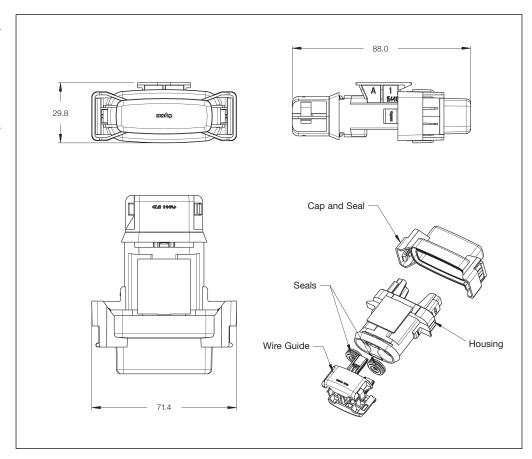
# Single Sealed MAXIFUSE Holder

#### **Applications**

Body and Engine Harness

#### **Technical Features**

- Designed for use in heavy duty vehicles (trucks, tractors, etc.) and for specific features in cars (police, ambulance etc.)
- IP68 sealed connector
- Primary and secondary receptacle latch
- Detection of a partially-inserted receptacle
- Material: PBT
- Usable with max. 80 A MAXIFUSE
- Instruction Sheet: 411-15696



Part Number	Package Quantity	Color	Mating Contacts
Cap (Seal included)			
1544108-1	600	Black	
lousing with Recep	tacle Latches		
1544109-1	256	Black	8.0 mm NG1 Receptacles:  • 1544227-1  • 1544228-1
Seals			
1544103-1	20,000	Green	Diameter 3.2-3.9 mm
1544104-1	20,000	Orange	Diameter 4.9-5.9 mm
Wire Guide (2 $ imes$ )			
1544102-1	3,000	Black	
Amperage Identifica	ation Caps		
1544105-1	20,000	Red	50 A
1544105-2	20,000	Blue	60 A
1544105-3	20,000	Yellow	20 A
1544105-4	20,000	Green	30 A
1544105-5	20,000	Orange	40 A

Each component has to be ordered separately and assembled.

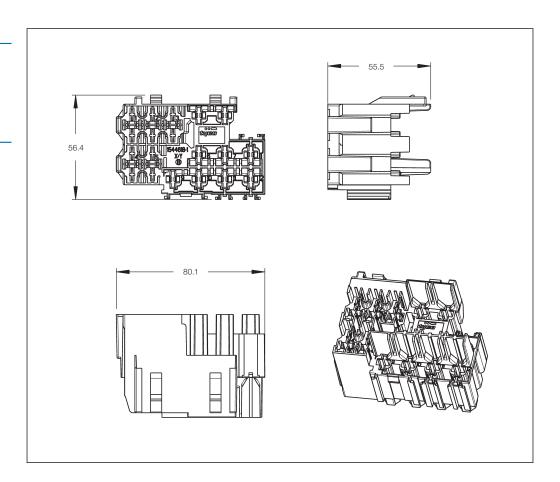
11 Fuse Holder (5 Atofuse + 6 MAXIFUSE)

# **Applications**

Body Harness

#### **Technical Features**

- Compact design
- Primary receptacle locking
- Temperature Class: -40 °C to +85 °C
- Vibration Class: 3 G
- Unsealed
- Material: PBT
- Product Specification: 108-15275
- Instruction Sheet: 411-15656 and 411-15657



#### 11 Fuse Holder

Part Number	Package Quantity	Material	Color	Mating Contacts
				Fuse Holder Receptacle:  • 185353-1
				• 185354-1
1544618-1	224	PBT, UL 94-HB	Black	• 185355-1
				8.0 mm MAXIFUSE Receptacle
				• 1544106-1
				• 1544107-1

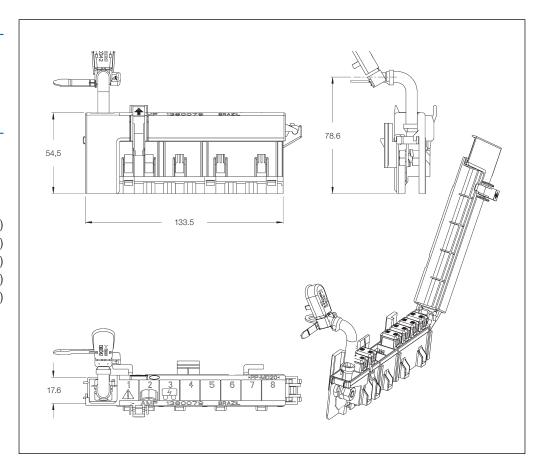
# MAXIFUSE Holder

# **Applications**

Engine Harness

#### **Technical Features**

- Compact Design
- Wire & Cable Technology
- Modular Concept
- Components:
  - 1380085-1 (1 Pos. Housing)
  - 1380085-2 (1 Pos. Housing)
  - 1380135-1 (2 Pos. Housing)
  - 1380135-2 (2 Pos. Housing)
  - 1380135-3 (2 Pos. Housing)



# **Fuse and Relay Holder 3 Positions**

Part Number	Package Quantity	Material	Color	<b>Mating Contacts</b>
1599826-1	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1599826-2	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1599826-3	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1599826-4	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1599826-5	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1599826-6	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1599826-7	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1

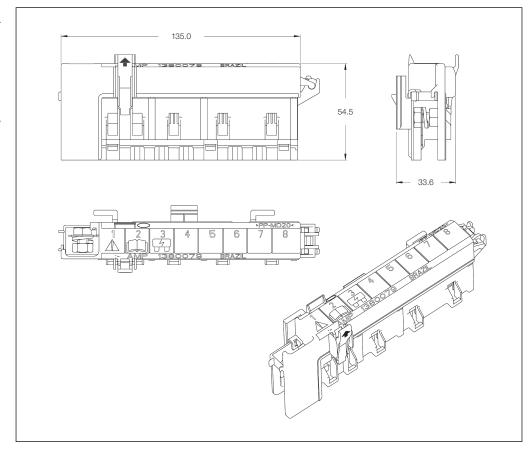
# MAXIFUSE Holder

# **Applications**

Engine Harness

#### **Technical Features**

- Compact Design
- Busbars Technology
- Components:
  - 1380085-1 (1 Pos. Housing)
  - 1380085-2 (1 Pos. Housing)
  - 1380135-1 (2 Pos. Housing)
  - 1380135-2 (2 Pos. Housing)
  - 1380135-3 (2 Pos. Housing)



#### **MAXIFUSE** Holder

Part Number	Package Quantity	Material	Color	Mating Contacts
1380077-1	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1380077-2	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1380077-3	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1380077-4	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1380077-5	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1380077-6	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1380077-7	48	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1

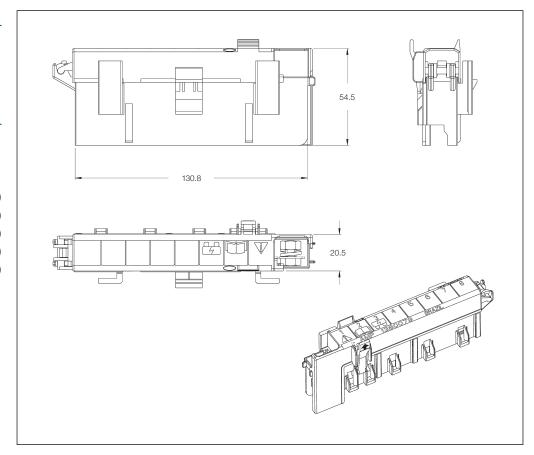
# MAXIFUSE Holder

## **Applications**

Engine Harness

#### **Technical Features**

- Compact Design
- Busbars Technology
- Components:
  - 1380085-1 (1 Pos. Housing)
  - 1380085-2 (1 Pos. Housing)
  - 1380135-1 (2 Pos. Housing)
  - 1380135-2 (2 Pos. Housing)
  - 1380135-3 (2 Pos. Housing)



#### **MAXIFUSE** Holder

Part Number	Package Quantity	Material	Color	Mating Contacts
1599962-1	24	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1599962-2	24	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1599962-3	24	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1
1599962-4	24	PBT Glass-Fiber	Black	.250 FASTIN-ON Tab • 1599052-1 • 1599053-1

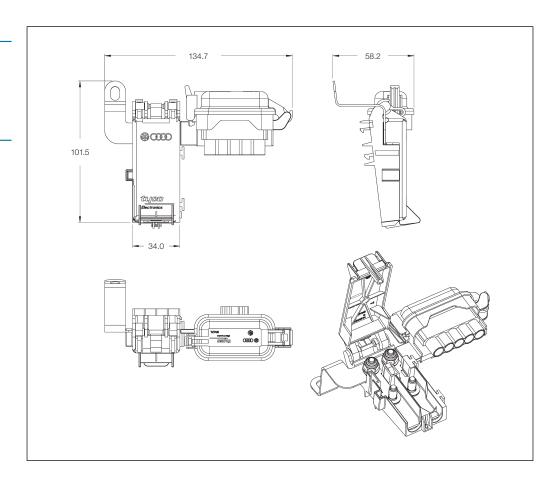
# MAXIFUSE Holder 2+5

# **Applications**

Engine Harness

## **Technical Features**

- Compact Design
- Busbars Technology
- Components:
  - 1599072-1 (MAXIFUSE Support)



# MAXIFUSE Holder 2+5

Part Number	Package Quantity	Material	Color	Mating Contacts
1480899-1	30	PBT Glass-Fiber	Black	SPT Receptacle

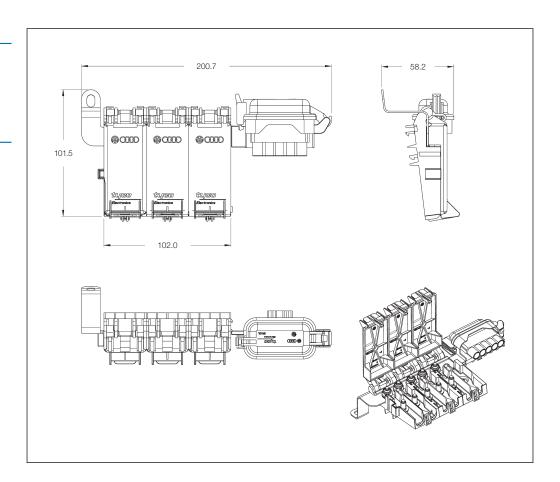
# MAXIFUSE Holder 5+5

# **Applications**

Engine Harness

## **Technical Features**

- Compact Design
- Busbars Technology
- Components:
  - 1599072-1 (MAXIFUSE Support)



#### MAXIFUSE Holder 5+5

Part Number	Package Quantity	Material	Color	Mating Contacts
1480910-1	18	PBT Glass-Fiber	Black	SPT Receptacle

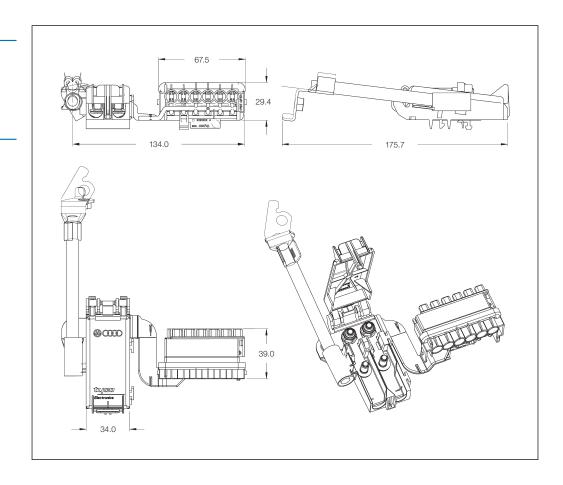
# MAXIFUSE Holder 6+2

# **Applications**

Engine Harness

## **Technical Features**

- Compact Design
- Busbars Technology
- Components:
  - 1599344-1 (MAXIFUSE Support)
  - 1599400-1 (ATO Cover)



#### MAXIFUSE Holder 6+2

Part Number	Package Quantity	Material	Color	Mating Contacts
1599483-1	28	PBT Glass-Fiber	Black	SPT Receptacle

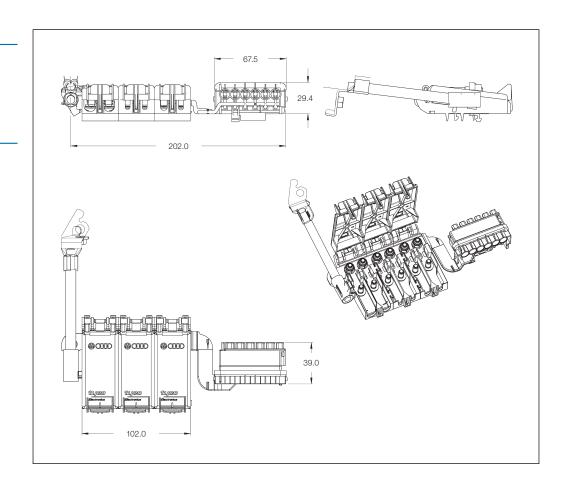
# MAXIFUSE Holder 6+6

# **Applications**

Engine Harness

## **Technical Features**

- Compact Design
- Busbars Technology
- Components:
  - 1599344-1 (MAXIFUSE Support)
  - 1599400-1 (ATO Cover)



#### MAXIFUSE Holder 6+6

Part Number	Package Quantity	Material	Color	Mating Contacts
1599391-1	20	PBT Glass-Fiber	Black	SPT Receptacle
1599391-2	20	PBT Glass-Fiber	Black	SPT Receptacle
1599391-3	20	PBT Glass-Fiber	Black	SPT Receptacle

# 2 Position MAXIFUSE Housing

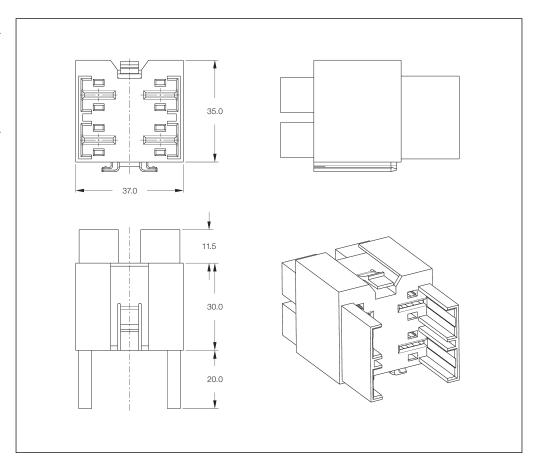
# **Applications**

Body Harness

Tyco Electronics

## **Technical Features**

- Max. Receptacle Wire Section: 10 mm<sup>2</sup>
- Temperature Class: -40 °C to +85 °C
- Unsealed



#### **MAXIFUSE** Holder

Part Number	Package Quantity	Material	Color	Mating Contacts
964595-1	300	PA66-GF13	Orange	MPT Receptacle:

# **Fuse and Relay Holders** Fuse Holders

Section Catalog 1654364-1 Issued 4-2010 Main Catalog 1654400-1 Chapter 17 – Issued 4-2010

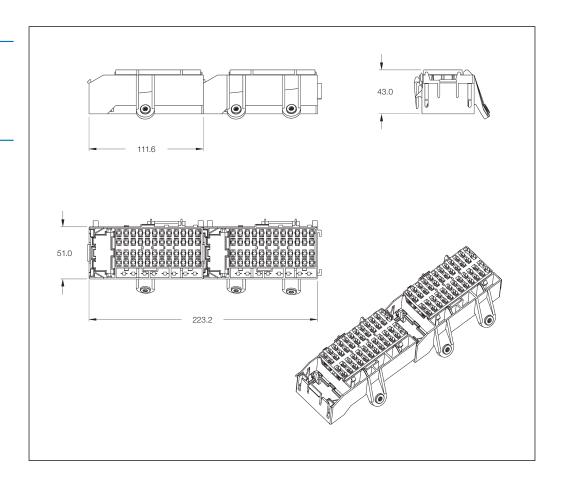
Fuse Box 48 Positions

# **Applications**

Body Harness

## **Technical Features**

- Compact Design
- Modular Concept
- Wire & Cable Technology
- Components:
  - 444495-1 (Diagnose Connector)



#### **Fuse Box 48 Positions**

Part Number	Package Quantity	Material	Color	Mating Contacts
1480915-2	24	PBT Glass-Fiber	Black	SPT Receptacle

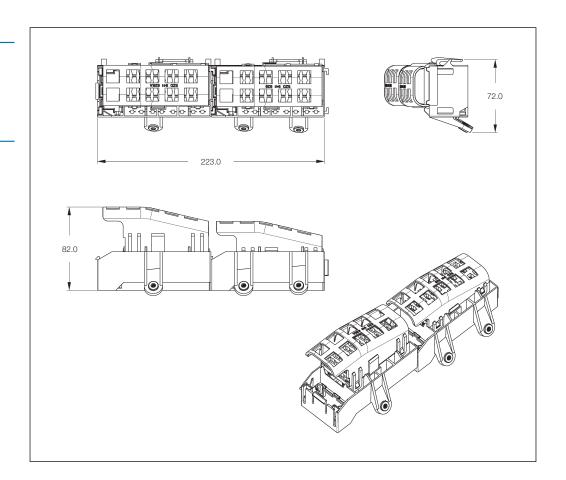
Fuse Box 48 Positions

# **Applications**

Body Harness

## **Technical Features**

- Compact Design
- Modular Concept
- Wire & Cable Technology
- Components:
  - 444495-1 (Diagnose Connector)



#### **Fuse Box 48 Positions**

Part Number	Package Quantity	Material	Color	Mating Contacts
1480915-1	16	PBT Glass-Fiber	Black	SPT Receptacle

# **Fuse and Relay Holders** Fuse Holders

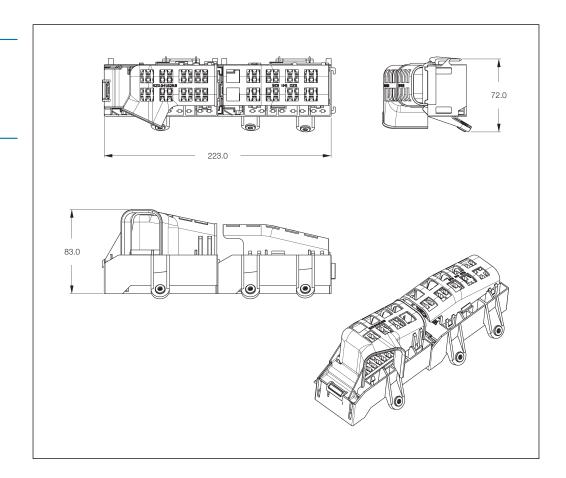
Fuse Box 48 Positions

# **Applications**

Body Harness

## **Technical Features**

- Compact Design
- Modular Concept
- Wire & Cable Technology
- Components:
  - 444495-1 (Diagnose Connector)



#### **Fuse Box 48 Positions**

Part Number	Package Quantity	Material	Color	Mating Contacts
1480915-3	16	PBT Glass-Fiber	Black	SPT Receptacle

# **Fuse and Relay Holders** Fuse Holders

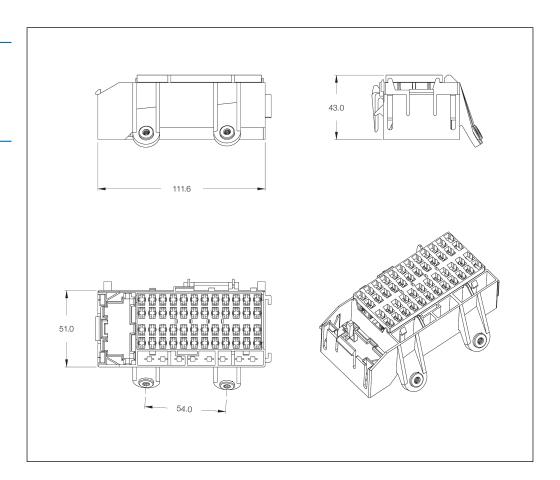
Fuse Box 24 Positions

# **Applications**

Body Harness

## **Technical Features**

- Compact Design
- Modular Concept
- Wire & Cable Technology
- Components:
  - 444495-1 (Diagnose Connector)



#### **Fuse Box 24 Positions**

Part Number	Package Quantity	Material	Color	Mating Contacts
1480917-2	54	PBT Glass-Fiber	Black	SPT Receptacle

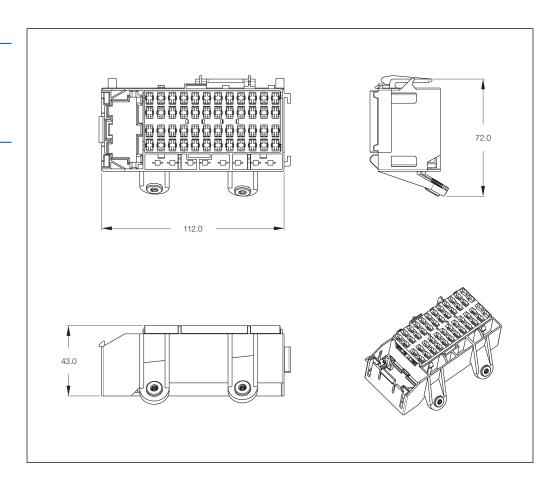
Fuse Box 24 Positions

# **Applications**

Body Harness

## **Technical Features**

- Compact Design
- Modular Concept
- Wire & Cable Technology
- Components:
  - 444495-1 (Diagnose Connector)



#### **Fuse Box 24 Positions**

Part Number	Package Quantity	Material	Color	Mating Contacts
1480917-1	81	PBT Glass-Fiber	Black	SPT Receptacle

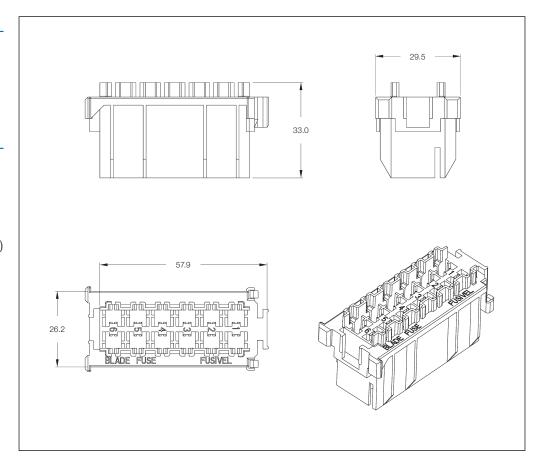
## Fuse Holder

# **Applications**

- Engine Harness
- Body Harness

#### **Technical Features**

- Modular Concept
- Used on:
  - 444308-1 (Fuse and Relay Frame)
  - 444442-1 (Fuse and Relay Adaptor, 6 Pos.)
  - 1380007-1 (Fuse and Relay Holder)



#### Fuse Holder

Part Number	Package Quantity	Material	Color	Mating Contacts
444502-1	450	PA66 Glass-Fiber	Black	Fuse Contact Receptacle
444502-2	450	PA66 Glass-Fiber	Blue	Fuse Contact Receptacle
444502-3	450	PA66 Glass-Fiber	Gray	Fuse Contact Receptacle

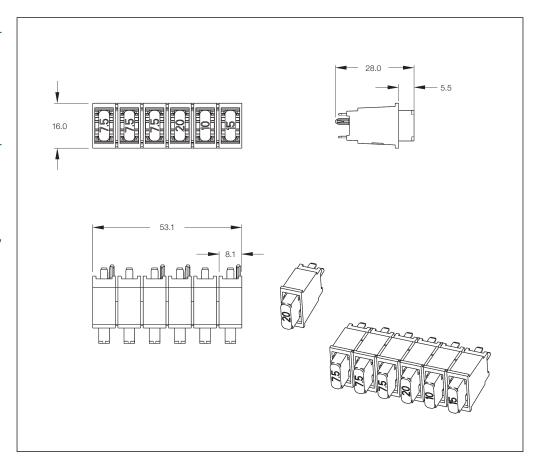
Mini Fuse Holder for PCB

#### **Applications**

 Designed for use on PCB in electronic boxes

#### **Technical Features**

- Modular Design: from 1 to 7 positions with different current rating fuses
- Delivered with mounted fuses
- Mechanical polarisation
- Contact Material: Copper-Alloy
- Post plated
- Holder Material: PBT 10% GF HB
- Stick packaging



	Part Nu	umber	
Description	Mini Fuse Holders	Package Quantity	Amperage Identification
	1544548-1	2,655	10 A
1 Position	1544548-2	2,655	20 A
	1544548-3	2,655	15 A
	1544548-4	1,260	10 A – 10 A
2 Positions	1544548-5	1,260	10 A – 15 A
	1544548-6	1,260	15 A – 15 A
4 Positions	1544548-8	630	10 A – 15 A – 10 A – 10 A
41 03110113	1-1544548-4	630	15 A – 7.5 A – 7.5 A – 15 A
5 Positions	1544548-9	495	10 A - 10 A - 10 A - 10 A - 20 A
O I OSITIONS	1-1544548-0	495	10 A - 10 A - 10 A - 10 A - NL*
	1-1544548-1	405	5 A - 10 A - 10 A - NL - 10 A - 20 A
	1-1544548-2	405	7.5 A – 7.5 A – 15 A – 5 A – 7.5 A – 5 A
6 Positions	1-1544548-3	405	NL – NL – 10 A – NL – NL – NL*
	1-1544548-5	405	7.5 A – 7.5 A – 7.5 A – 20 A – 10 A – 15 A
	1-1544548-6	405	10 A – 15 A – 25 A – 15 A – 15 A – 7.5 A
7 Positions	1-1544548-7	360	7.5 A - 15 A - 7.5 A - 7.5 A - 7.5 A - 7.5 A - 15 A

<sup>\*</sup> NL = Not Loaded

For any fuse equipment, please contact your sales engineer.

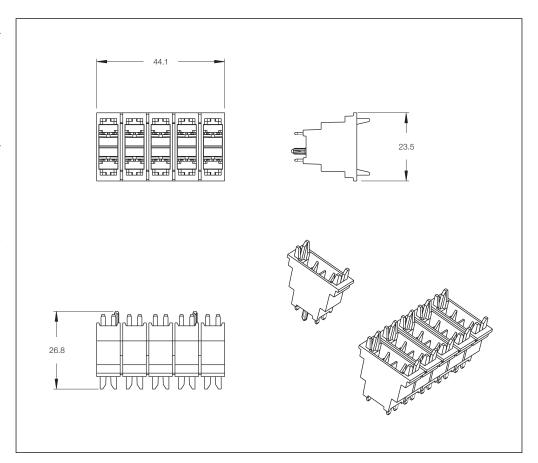
Ato Fuse Holder for PCB

### **Applications**

 Designed for use on PCB in electronic boxes

### **Technical Features**

- Modular Design: from 1 to 7 positions with different current rating fuses
- Delivered with mounted fuses
- Mechanical polarisation
- Contact Material: Copper-Alloy
- Post plated
- Holder Material: PBT 10% GF HB
- Stick packaging



	Part Nu	ımber	
Description	Auto Fuse Holders	Package Quantity	Amperage Identification
1 Position	1544550-1	1,829	30 A
T POSITION	1544550-2	1,829	40 A
3 Positions	1544550-4	589	30 A – 40 A – 25 A
4 Positions	1544550-5	434	25 A – 20 A – 20 A – 30 A
5 Positions	1544550-3	341	25 A - 25 A - 30 A - 25 A - 40 A

For any fuse equipment, please contact your sales engineer.

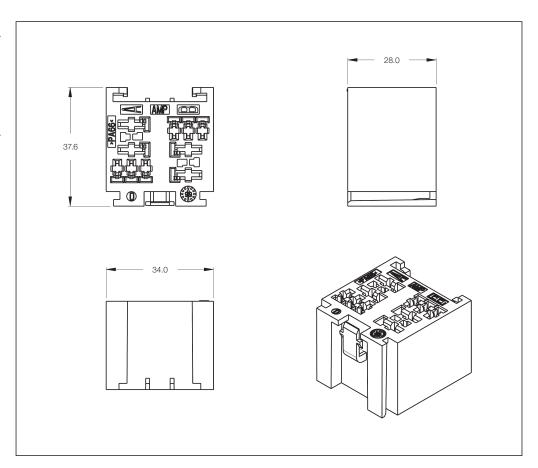
Modular 2 Relays Holder (2 Micro Relays)

#### **Applications**

Body Harness

## **Technical Features**

- Detection of a partially-inserted receptacle
- Temperature Class: -40 °C to +85 °C
- Vibration Class: 3 G
- Unsealed
- Product Specification: 108-15131
- Instruction Sheets: 411-15551 and 411-15591



Part Number	Package Quantity	Material	Color	Mating Contacts
185402-1	550	PA66	Natural	JPT Receptacle:
185402-2	550	PA66	Black	JPT Receptacle:
185402-3	550	PA66	Gray	JPT Receptacle:

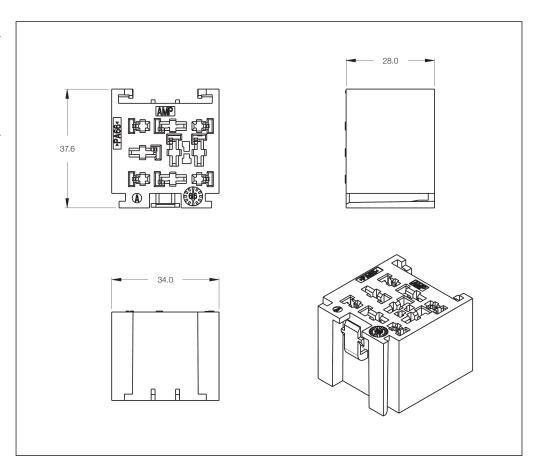
Modular Relays Holder (1 Relay 35-40 A)

## **Applications**

Body Harness

## **Technical Features**

- Detection of a partially-inserted receptacle
- Temperature Class: -40 °C to +85 °C
- Vibration Class: 3 G
- Unsealed
- Product Specification: 108-15131
- Instruction Sheet: 411-15551



Part Number	Package Quantity	Material	Color	Mating Contacts
185403-1	550	PA66	Natural	JPT Receptacle: • 185283-1
185403-2	550	PA66	Black	• 144432-1 SPT Receptacle:
185403-3	550	PA66	Gray	• 927831-2 • 144617-1
185403-4	550	PA66	Brown	<ul><li>144433-1</li><li>144434-1</li></ul>

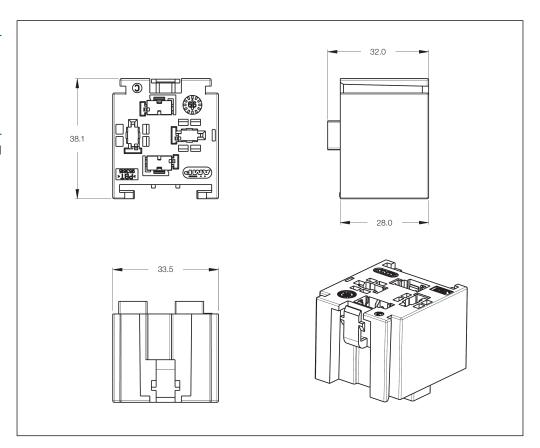
Modular Relay Holder 50-60 A

# **Applications**

Body Harness

## **Technical Features**

- Detection of a partially-inserted receptacle
- Temperature Class: -40 °C to +85 °C
- Vibration Class: 3 G
- Unsealed
- Product Specification: 108-15208
- Instruction Sheet: 411-15620



Part Number	Package Quantity	Material	Color	Mating Contacts
953615-1	500	РВТ	Red	SPT Receptacle:  • 144433-1  • 185283-1  • 927831-2  • 144617-1  Positive Lock MK1:  • 160759-3  • 154718-3  • 154717-3
953615-2	500	РВТ	Purple	SPT Receptacle:  • 144433-1  • 185283-1  • 927831-2  • 144617-1  Positive Lock MK1:  • 160759-3  • 154718-3

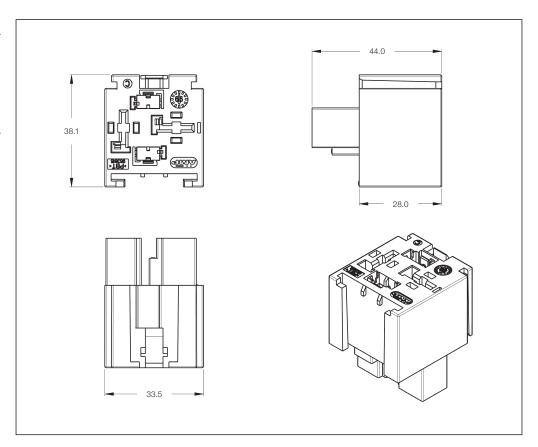
Modular Relay Holder 50-60 A and 70 A

## **Applications**

Body Harness

## **Technical Features**

- Detection of a partially-inserted receptacle
- Temperature Class: -40 °C to +85 °C
- Vibration Class: 3 G
- Unsealed
- Product Specification: 108-15208
- Instruction Sheet: 411-15620



Part Number	Package Quantity	Material	Color	Mating Contacts
1-953615-1	450	PBT	Red	MPT Receptacle:
1-953615-2	450	PBT	Purple	MPT Receptacle:
2-953615-1	400	PBT	Natural	MPT Receptacle:
2-953615-2	400	PBT	Black	MPT Receptacle:

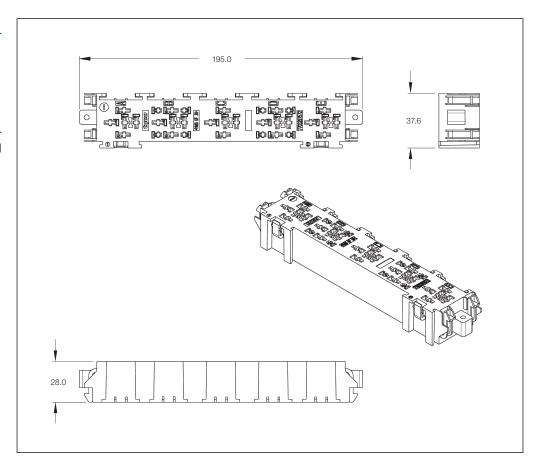
Modular 5 Relays Holder (3 Relays 50-60 A + 2 Relays 35-40 A)

## **Applications**

Body Harness

## **Technical Features**

- Detection of a partially-inserted receptacle
- Temperature Class: -40 °C to +85 °C
- Vibration Class: 3 G
- Unsealed
- Product Specification: 108-15131
- Instruction Sheet: 411-15550



Part Number	Package Quantity	Material	Color	Mating Contacts			
				JPT Receptacle: • 144431-1			
				• 144432-1			
185371-1	140	140	140 PA66 Glass Fiber Black	140 PA66 Glass Fiber Black	140 PA66 Glass Fiber Black	Black	SPT Receptacle: • 927831-2
				• 185283-1			

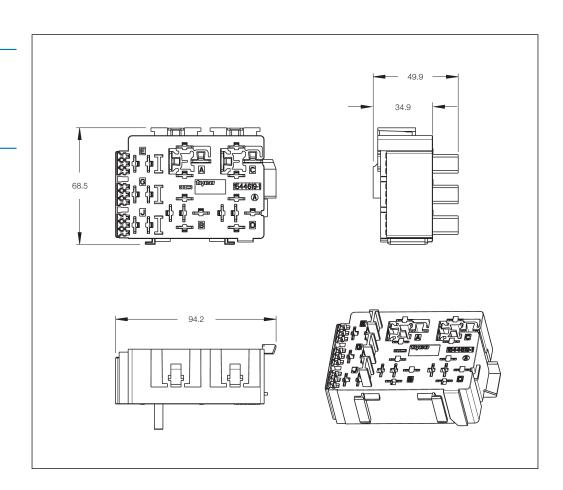
7 Relay Holder (3 Micro Relays + 2 Relays 35-40 A + 2 Relays 50-60 A)

## **Applications**

Body Harness

#### **Technical Features**

- Compact design
- Primary receptacle locking
- Temperature Class: -40 °C to +85 °C
- Vibration Class: 3 G
- Unsealed
- Material: PBT
- Product Specification: 108-15275
- Instruction Sheet: 411-15656 and 411-15657



# 7 Relay Holder (3 Micro Relays + 2 Relays 35-40 A + 2 Relays 50-60 A)

Part Number	Package Quantity	Material	Color	Mating Contacts
1544619-1	200	PBT, UL 94-HB	Black	JPT Receptacle:

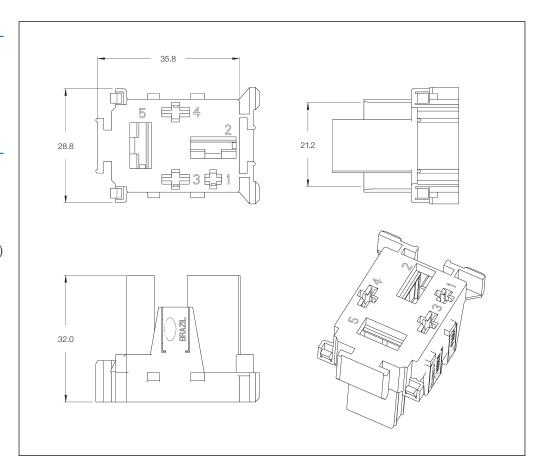
Maxi Relay Holder

## **Applications**

- Engine Harness
- Body Harness

#### **Technical Features**

- Modular Concept
- Used on:
  - 444308-1 (Fuse and Relay Frame)
  - 444442-1 (Fuse and Relay Adaptor, 6 Pos.)
  - 1380007-1 (Fuse and Relay Holder)
  - 1989063-1 (Fuse and Relay Holder)



# **Maxi Relay Adaptor**

P	art Number	Package Quantity	Material	Color	Mating Contacts
	1480838-2	800	PA66	Black	SPT Receptacle JPT Receptacle .375 FASTIN-ON Receptacle

Section Catalog 1654364-1 Issued 4-2010 Main Catalog 1654400-1 Chapter 17 – Issued 4-2010

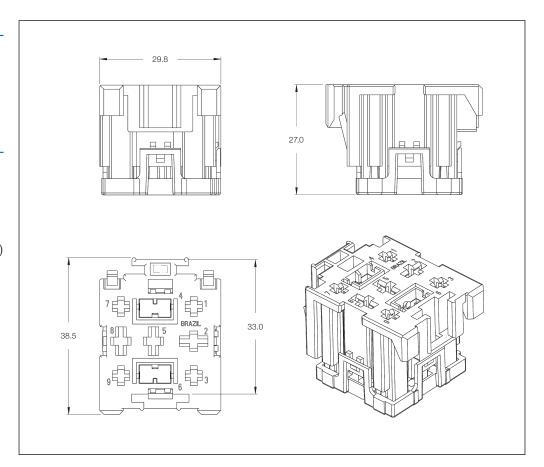
Relay Holder

## **Applications**

- Engine Harness
- Body Harness

#### **Technical Features**

- Modular Concept
- Used on:
  - 444308-1 (Fuse and Relay Frame)
  - 444442-1 (Fuse and Relay Adaptor, 6 Pos.)
  - 1380007-1 (Fuse and Relay Holder)
  - 1989063-1 (Fuse and Relay Holder)



Part Number	Package Quantity	Material	Color	Mating Contacts
444314-1			Black	
444314-3			Red	SPT Receptacle
444314-4	540	PA66 Glass-Fiber	Yellow	JPT Receptacle
444314-5			Blue	.375 FASTIN-ON Receptacle
444314-6			White	_

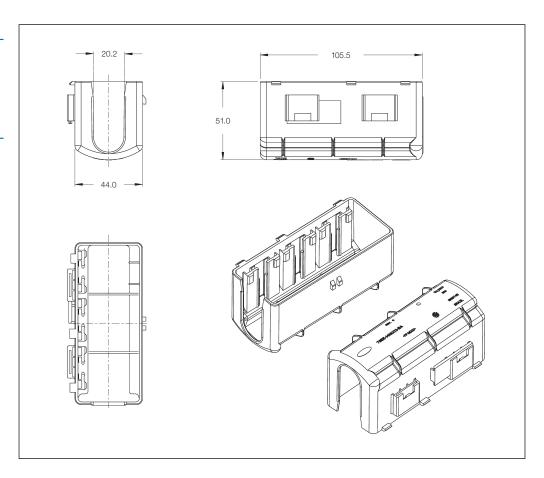
Relay Box 3 Positions

# **Applications**

Engine Harness

#### **Technical Features**

- Compact Design
- Wire & Cable Technology
- Modular Concept
- Components:
  - 1599746-1 (Cover)
  - 1599747-1 (Relay Support)
  - 444314-X (Relay Support)
  - 444510-X (Relay Support)



# **Fuse and Relay Holder 3 Positions**

Part Number	Package Quantity	Material	Color	Mating Contacts
1599745-1	100	PP	Black	SPT Receptacle JPT Receptacle Positive Lock Receptacle .375 FASTIN-ON Receptacle

# **Fuse and Relay Holders** Holder Guides

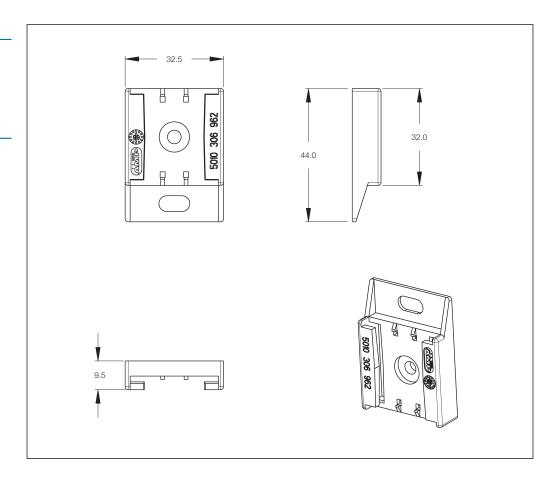
Holder Guide for 1 Modular Relay Holder

# **Applications**

Body Harness

## **Technical Features**

- Temperature Class: -40 °C to +85 °C
- Vibration Class: 3 G
- Product Specification: 108-15219
- Instruction Sheet: 411-15616



Part Number	Package Quantity	Material	Color	Mating Modular Relay Holder
				Mating Modular Relay Holder:
				• 185402-1
				• 185402-2
				• 185402-3
				Modular Relays Holder for Relays (5 + 4 Pos.)
				• 185403-1
				• 185403-2
				• 185403-3
953653-1	1,000	PA66 Glass Fiber	Black	• 185403-4
				4 Ato Fuse Holder:
				• 185847-1
				• 185847-2
				Modular Relay Holder 50-60 A
				• 953615-x
				Modular Relay Holder 50-60 A and 70 A

# **Fuse and Relay Holders** Holder Guides

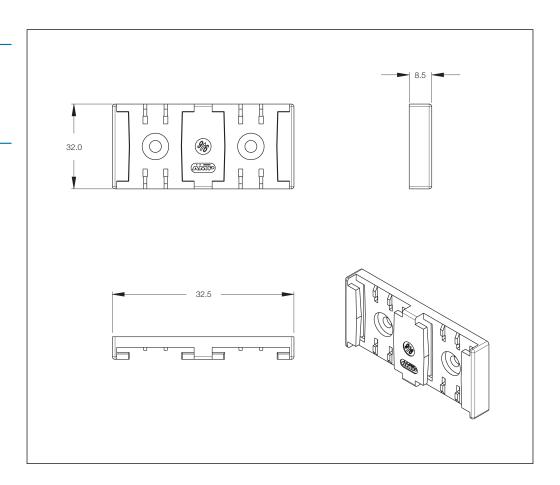
Holder Guide for 2 Modular Relay Holder

# **Applications**

Body Harness

## **Technical Features**

- Temperature Class: -40 °C to +85 °C
- Vibration Class: 3 G
- Product Specification: 108-15162
- Instruction Sheet: 411-15589



Part Number	Package Quantity	Material	Color	Mating Modular Relay Holder
				Mating Modular Relay Holder:
				• 185402-1
				• 185402-2
				• 185402-3
				Modular Relays Holder for Relays (5 + 4 Pos.):
				• 185403-1
				• 185403-2
				• 185403-3
185695-1	450	PA66 Glass Fiber	Black	• 185403-4
				4 Ato Fuse Holder:
				• 185847-1
				• 185847-2
				Modular Relay Holder 50-60 A
				• 953615-x
				Modular Relay Holder 50-60 A and 70 A • x-953615-x

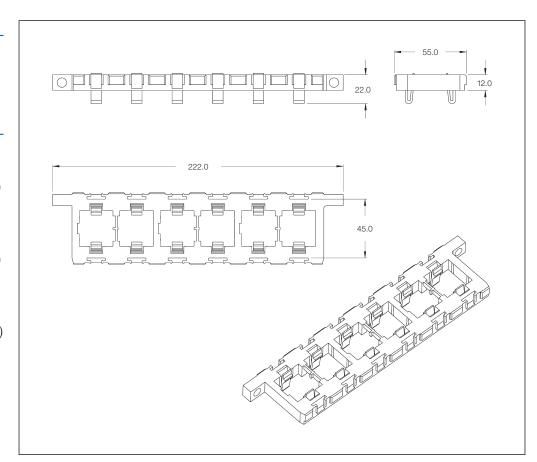
Fuse and Relay Adaptor – 6 Positions

## **Applications**

Body Harness

### **Technical Features**

- Modular Concept
- Components:
  - 444311-X (Diode Support)
  - 444312-X (Fuse Support)
  - 444313-X (Relay Support)
  - 444314-X (Relay Support)
  - 444309-1 (Power Ground)
  - 444502-X (Fuse Support)
  - 444510-1 (Relay Support)
  - 493688-1 (Fuse Support)
  - 1480838-2 (Relay Support )



## Fuse and Relay Adaptor - 6 Positions

Part Number	Package Quantity	Material	Color	Mating Contacts
444442-1	150	PA66 Glass-Fiber	Black	SPT Receptacle JPT Receptacle Positive Lock Receptacle .375 FASTIN-ON Receptacle .375 FASTIN-ON Receptacle • 880397-1 • 880397-2 • 880398-1 • 880398-1 • 880399-1 • 880399-2

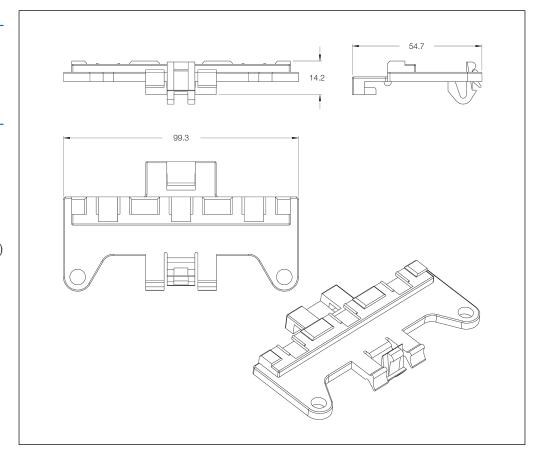
Fuse and Relay Adaptor – 3 Positions

# **Applications**

Body Harness

### **Technical Features**

- Compact Size
- Components:
  - 444314-X (Relay Support)
  - 444502-X (Fuse Support)
  - 444503-1 (Ruler)
  - 444510-1 (Relay Support)
  - 1480838-2 (Relay Support )



## Fuse and Relay Adaptor - 3 Positions

Part Number	Package Quantity	Material	Color	Mating Contacts
444148-1	400	PA66	Black	SPT Receptacle JPT Receptacle Positive Lock Receptacle .375 FASTIN-ON Receptacle Fuse Contact Receptacle  • 880397-1  • 880398-1  • 880398-2  • 880399-1  • 880399-2  • 880399-5

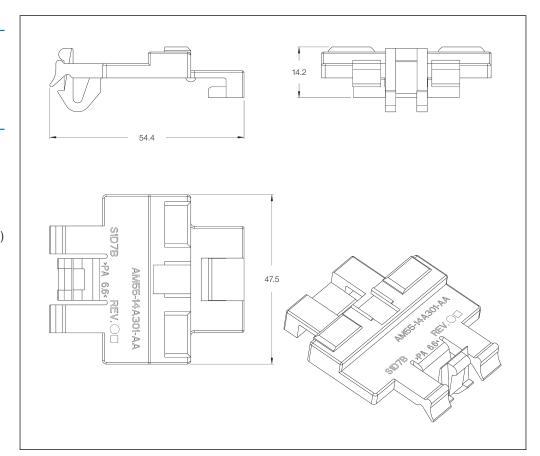
Fuse and Relay Adaptor - 1 Position

# **Applications**

Body Harness

### **Technical Features**

- Compact Size
- Components:
  - 444314-X (Relay Support)
  - 444502-X (Fuse Support)
  - 444510-1 (Relay Support)
  - 1480838-2 (Relay Support )



## Fuse and Relay Adaptor - 1 Position

Part Number	Package Quantity	Material	Color	Mating Contacts
1989792-1	400	PA66	Black	SPT Receptacle JPT Receptacle Positive Lock Receptacle .375 FASTIN-ON Receptacle .375 FASTIN-ON Receptacle Fuse Contact Receptacle • 880397-1 • 880398-2 • 880399-1 • 880399-2 • 880399-5

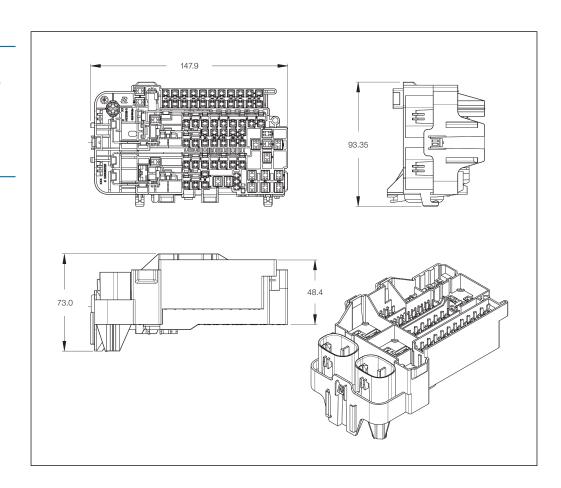
BFRH (Body Fuses and Relays Box)

## **Applications**

- Cockpit Harness
- Electrical protection of cars functions

## **Technical Features**

- Bus bar Technology
- Compact design
- Car fixation without screw
- 2 NG1 2W connectors
- 4 Relays
- 42 Fuses
- Material: PBT
- Secondary lock for 2.8 mm JPT
- Temperature Class: -40 °C to +70 °C
- Product Specification: 108-15376
- Instruction Sheet: 411-15732



## BFRH (Body Fuses and Relays Box)

Part Number	Package Quantity	Material	Color	Mating Contacts
				Clip 2.8 JPT Type A CuSn4: Wire Size: 0.2 – 0.5 mm <sup>2</sup> 964280-2 Wire Size: 0.5 – 1.0 mm <sup>2</sup> 964284-2 Wire Size: 1.0 – 2.5 mm <sup>2</sup> 965999-2
1801330-1	32	PBT, UL 94-HB rated	Black	Wire Size: 2.5–4.0 mm <sup>2</sup> 1241978-2  Clip 4.8 SPT CuSn4:  Wire Size: 1.0–3.0 mm <sup>2</sup> 144617-1  Wire Size: 3.0–5.0 mm <sup>2</sup> 144433-1
				From Competition:
				Tab 8.0 mm NG1 – Sn – Unsealed: Wire Size: 3.0 – 6.0 mm <sup>2</sup> 1544332-1 Wire Size: 7.0 – 10.0 mm <sup>2</sup> 1544333-1

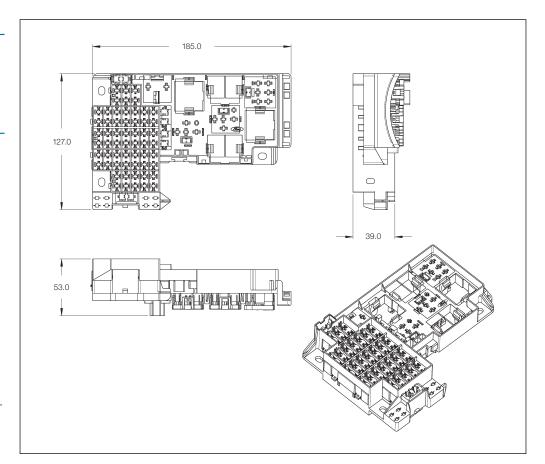


## **Applications**

Body Harness

### **Technical Features**

- Modular Concept
- Wire & Cable Technology
- Components:
  - 1380004-1 (Busbar)
  - 1380006-1 (Mini Relay Support)
  - 1380006-2 (Mini Relay Support)
  - 1380011-1 (Wire Dress)
  - 1599739-1 (Mini Relay Support)
  - 1599843-1 (Wire Dress)
  - 1599844-1 (Wire Dress)
  - 1480838-1 (Maxi Relay Holder)
  - 1480855-1 (Housing 4 Pos. .250 FF)



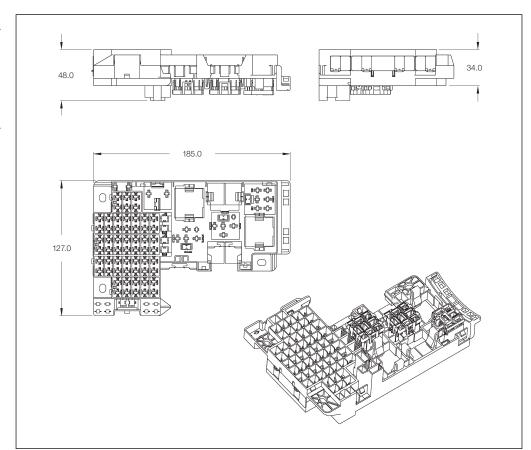
Part Number	Package Quantity	Material	Color	Mating Contacts
1380007-1	20	PA66 Miner. Reinf.	Black	SPT Receptacle JPT Receptacle Positive Lock Receptac Fuse Contact Receptac

## **Applications**

Body Harness

#### **Technical Features**

- Modular Concept
- Wire & Cable Technology
- Components:
  - 1480841-1 (Cover Lower Part)
  - 1480831-1 (Cover Upper Part)
  - 1480839-1 (MAXIFUSE Box)
  - 1380004-1 (Busbar)
  - 1380006-1 (Mini Relay Support)
  - 1380006-2 (Mini Relay Support)
  - 1599739-1 (Mini Relay Support)
  - 1480838-1 (Maxi Relay Holder)
  - 1480855-1 (Housing 4 Pos. .250 FF)



Part Number	Package Quantity	Material	Color	Mating Contacts
1480837-1	20	PA66 Miner. Reinf.	Black	SPT Receptacle JPT Receptacle Positive Lock Receptacle Fuse Contact Receptacle • 880397-1 • 880397-2 • 880398-1 • 880398-1 • 880399-1 • 880399-2 • 880399-5

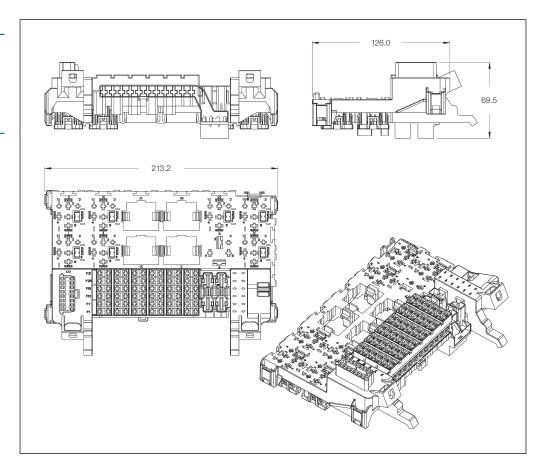


## **Applications**

Body Harness

### **Technical Features**

- Modular Concept
- Wire & Cable Technology
- Components:
  - 1989062-1 (Secondary Lock)
  - 1380006-2 (Mini Relay Support)
  - 444313-X (Relay Support)
  - 444314-X (Relay Support)
  - 444510-1 (Relay Support)
  - 1480838-2 (Relay Support)



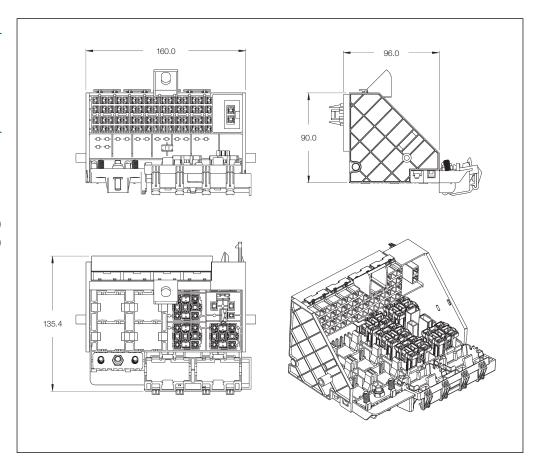
Part Number	Package Quantity	Material	Color	Mating Contacts
1989063-1	20	PBT Glass-Fiber	Black	SPT Receptacle JPT Receptacle Positive Lock Receptacle .375 FASTIN-ON Receptacle
1989063-2	36	PBT Glass-Fiber	Black	SPT Receptacle JPT Receptacle Positive Lock Receptacle .375 FASTIN-ON Receptacle

# **Applications**

Body Harness

### **Technical Features**

- Compact Design
- Modular Concept
- Wire & Cable Technology
- Components:
  - 1599443-X (16 W Connector)
  - 1599445-X (16 W Connector)
  - 444017-X (Relay Support)



Part Number	Package Quantity	Material	Color	Mating Contacts
1599448-1	12	PA66 Glass-Fiber	Black	SPT Receptacle JPT Receptacle Positive Lock Receptacle .375 FASTIN-ON Receptacle

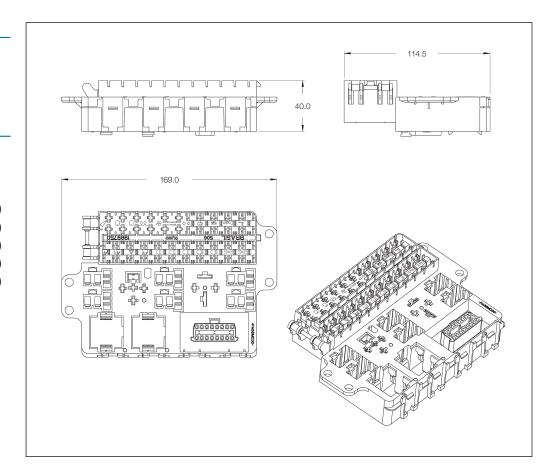
Fuse and Relay Box - Diagnose Connector

# **Applications**

Body Harness

### **Technical Features**

- Compact Design
- Modular Concept
- Components:
  - 881695-X (Relay Support)
  - 881696-X (Relay Support)
  - 281988-X (Relay Support)
  - 282435-X (Relay Support)
  - 281852-X (Relay Support)



## Fuse and Relay Box - Diagnose Connector

Part Number	Package Quantity	Material	Color	Mating Contacts
1989750-1	42	PA66 Miner. Reinf.	Black	SPT Receptacle JPT Receptacle Positive Lock Receptacle .375 FASTIN-ON Receptacle .375 FASTIN-ON Receptacle • 880397-1 • 880397-2 • 880398-1 • 880398-2 • 880399-1 • 880399-1 • 880399-2 • 880399-5

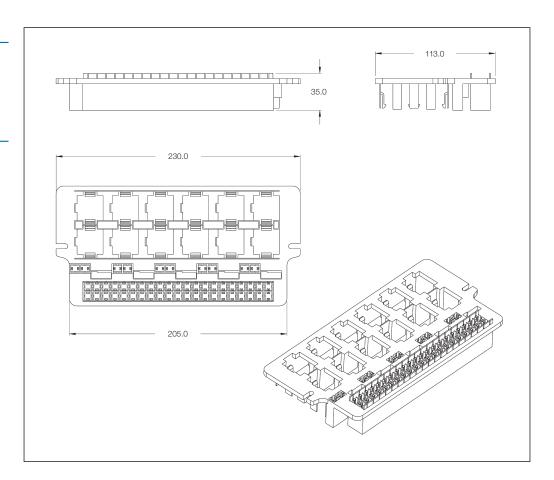
Fuse and Relay Box Frame

# **Applications**

Body Harness

## **Technical Features**

- Modular Concept
- Components:
  - 444017-X (Relay Support)
  - 444313-X (Relay Support)



### **Fuse and Relay Box Frame**

Part Number	Package Quantity	Material	Color	Mating Contacts
881569-1	36	PA66 Miner. Reinf.	Black	SPT Receptacle JPT Receptacle Positive Lock Receptacle .375 FASTIN-ON Receptacle .375 FASTIN-ON Receptacle .880397-1 .880398-1 .880398-1 .880398-1 .880399-1 .880399-2 .880399-5

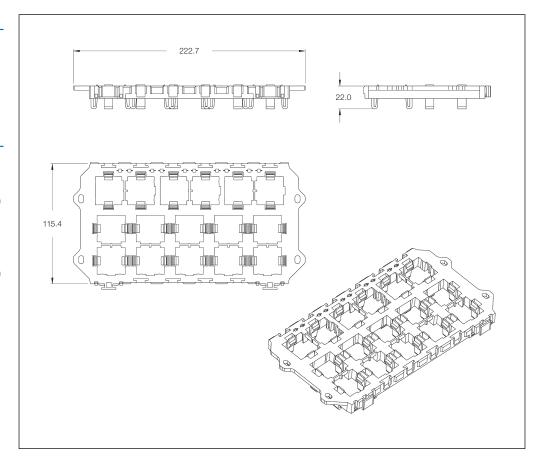
Fuse and Relay Box Frame

## **Applications**

- Engine Harness
- Body Harness

#### **Technical Features**

- Modular Concept
- Components:
  - 444311-X (Diode Support)
  - 444312-X (Fuse Support)
  - 444313-X (Relay Support)
  - 444314-X (Relay Support)
  - 444309-1 (Power Ground)
  - 444502-X (Fuse Support)
  - 444510-1 (Relay Support)
  - 493688-1 (Fuse Support)
  - 1480838-2 (Relay Support)
  - 444442-1 (Frame)



## **Fuse and Relay Box Frame**

Part Number	Package Quantity	Material	Color	Mating Contacts
444308-1	48	PA66 Glass-Fiber	Black	SPT Receptacle JPT Receptacle Positive Lock Receptacle .375 FASTIN-ON Receptacle .375 FASTIN-ON Receptacle • 880397-1 • 880397-2 • 880398-1 • 880398-2 • 880399-1 • 880399-1 • 880399-2 • 880399-5

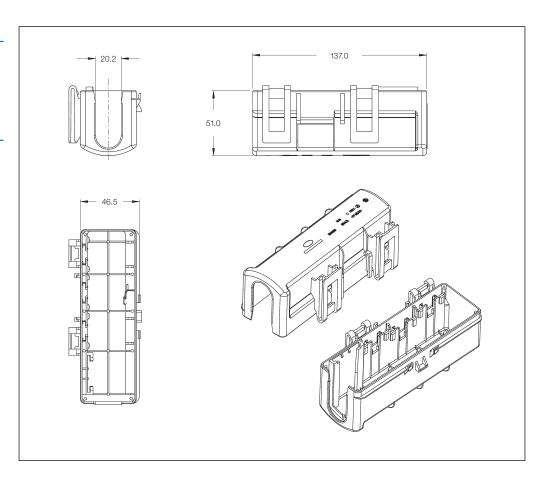
Fuse and Relay Holder 4 Positions

# **Applications**

Engine Harness

### **Technical Features**

- Compact Design
- Wire & Cable Technology
- Modular Concept
- Components:
  - 1599920-1 (Cover)
  - 1599747-1 (Relay Support)
  - 444314-X (Relay Support)
  - 444510-X (Relay Support)
  - 1989173-1 (Fuse Support)



## **Fuse and Relay Holder 4 Positions**

Part Number	Package Quantity	Material	Color	Mating Contacts
1599919-1	100	PP	Black	SPT Receptacle JPT Receptacle Positive Lock Receptacle .375 FASTIN-ON Receptacle

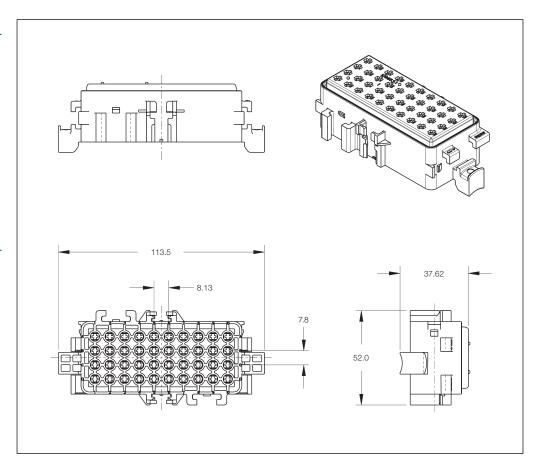


## **Applications**

- Electric and Hybrid Vehicles
- Truck and Bus Segments
- Motorcycles
- Construction and Agriculture Vehicles
- Marine
- AVT, Personal Water Craft and Snowmobiles

### **Technical Features**

- Designed for 2.8 mm Plug-In Components
- Utilizes Sealed AMP MCP2.8 mm Receptacle Terminals
- Multiple Mounting Configurations
- 18 AWG SLX-12 AWG GXL
- Splash-Proof
- Cover Latch Position Assurance



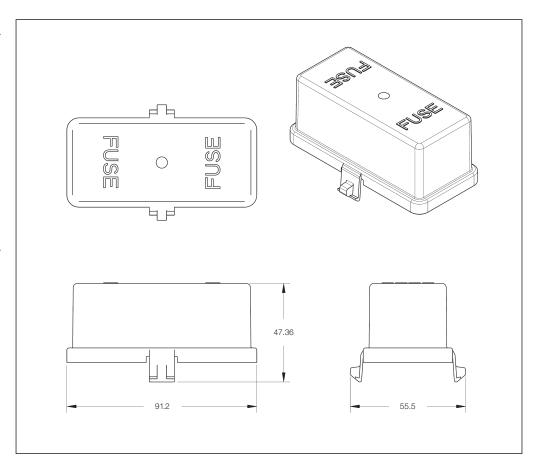
Part Number	Package Quantity	Description	Color	Applicable Components
1587335-1	-	Base with CPA	Black	1-968857-1 14–16 AWG AMP MCP 2.8 Contact . 828905-1 Wire Seal for 1-968857-1 828922-1 Cavity Plug 1443998-1 Fuse Removal Tool
109853-1	-	Base	Black	

### **Applications**

- Electric and Hybrid Vehicles
- Truck and Bus Segments
- Motorcycles
- Construction and Agriculture Vehicles
- Marine
- AVT, Personal Water Craft and Snowmobiles

### **Technical Features**

- Designed for 2.8 mm Plug-In Components
- Utilizes Sealed AMP MCP2.8 mm Receptacle Terminals
- Multiple Mounting Configurations
- 18 AWG SLX-12 AWG GXL
- Splash-Proof
- Cover Latch Position Assurance



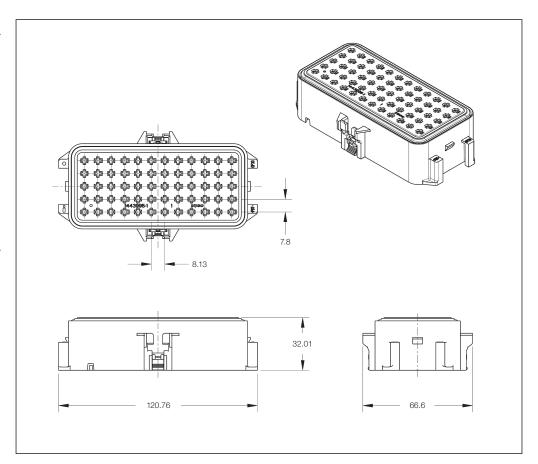
Part Number	Package Quantity	Description	Color	Applicable Components
			Black	1-968857-1 14-16 AWG AMP MCP 2.8 Contact
109854-1	_	Cover with Seal and Top Side Graphics		828905-1 Wire Seal for 1-968857-1
		and top side draphics		828922-1 Cavity Plug
				1443998-1 Fuse Removal Tool

### **Applications**

- Electric and Hybrid Vehicles
- Truck and Bus Segments
- Motorcycles
- Construction and Agriculture Vehicles
- Marine
- AVT, Personal Water Craft and Snowmobiles

### **Technical Features**

- Designed for 2.8 mm Plug-In Components
- Utilizes Sealed AMP MCP2.8 mm Receptacle Terminals
- Multiple Mounting Configurations
- 18 AWG SLX-12 AWG GXL
- Sealed to IP67
- Cover Latch Position Assurance



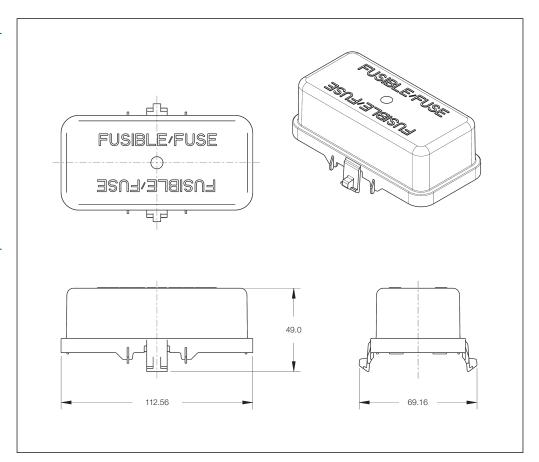
Part Number	Package Quantity	Description	Color	Applicable Components
1443997-1	-	Base with Seal and CPA	Black	1-968857-1 14-16 AWG AMP MCP 2.8 Contact
1443997-2	-	Base with Seal	Black	828905-1 Wire Seal for 1-968857-1 828922-1 Cavity Plug 1443998-1 Fuse Removal Tool
1443995-1	-	Base without Seal	Black	

### **Applications**

- Electric and Hybrid Vehicles
- Truck and Bus Segments
- Motorcycles
- Construction and Agriculture Vehicles
- Marine
- AVT, Personal Water Craft and Snowmobiles

### **Technical Features**

- Designed for 2.8 mm Plug-In Components
- Utilizes Sealed AMP MCP2.8 mm Receptacle Terminals
- Multiple Mounting Configurations
- 18 AWG SLX-12 AWG GXL
- Sealed to IP67
- Cover Latch Position Assurance



Part Number	Package Quantity	Description	Color	Applicable Components
1443996-1	-	Cover with Spare Fuse Holders and Top Side Graphic, Standard Height	Black	
1443996-2	-	Cover without Spare Fuse Holders, Standard Height	Black	- 1-968857-1 14–16 AWG AMP MCP 2.8 Contact . 828905-1 Wire Seal for 1-968857-1 . 828922-1 Cavity Plug - 1443998-1 Fuse Removal Tool
1443996-3	-	Cover without Top Side Graphics, Standard Height	Black	
1443996-4	-	Cover without Spare Fuse Holders and and without Top Side Graphics, Standard Height	Black	
2098164-1	-	Cover with Spare Fuse Holders and Top Side Graphic, Raised Height	Black	
2098164-2	-	Cover without Spare Fuse Holders, Raised Height	Black	
2098164-3	-	Cover without Top Side Graphics, Raised Height	Black	
2098164-4	-	Cover without Spare Fuse Holders and and without Top Side Graphics, Standard Height	Black	