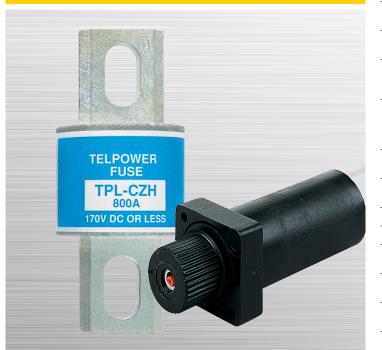
#### FIT-N BUSSMANN SERIES

# Circuit protection for **telecom** applications



Complete portfolio of Bussmann series Telpower<sup>™</sup> fuses, disconnects and holders specifically designed for telecom applications

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# **TPC fuses and TPCDS pullout disconnects**

Telpower TPC compact currentlimiting fuses mount in the TPCDS compact fused pullout disconnect that's available in two disconnect profiles and a variety of terminal styles. Recommended 0.75" center-tocenter product spacing.



#### Ratings

- Volts 80 Vdc
- Amps 3-125 A
- IR 100 kA

#### **Agency information**

- UL Recognized (investigated to UL 1801) as a disconnect switch for the interruption of load current by means of withdrawing the fuse pullout
- Recognized to US and Canadian requirements under the component recognition program of Underwriters Laboratories Inc. Files E219046 and E56412
- CE

#### **Typical applications**

- Telecommunications DC power circuit protection
- Replacement of DC telecom circuit breakers
- Applications where venting of arc or molten metals and gases during opening would pose a problem to surrounding devices

#### Features

- Highest interrupting rating (100 kA) available and complete system coordination for DC circuit protection for compact footprint providing a superior protection solution for replacement of existing DC telecom circuit breakers
- AmpColor ID<sup>™</sup> system makes fuse replacement easy
- Local and remote open fuse indication. Local alarm indication provided by LED on TPC fuse
- Remote alarm terminal available in three positions common to DC circuit protection devices

#### **TPC fuses**

Catalog no. (amps)			
TPC-3	TPC-8	TPC-25	TPC-75
TPC-4	TPC-10	TPC-30	TPC-90
TPC-5	TPC-12	TPC-40	TPC-100
TPC-6	TPC-15	TPC-50	TPC-125
TPC-7	TPC-20	TPC-60	

#### **TPCDS catalog number system**

Catal	og no. prefix			
TPCD	TPCDS		TPCDS-D-	
Term	inal style			
BB -	Bullet contact on the line, bullet contact on the load	CC -	Screw Clamp terminal on the line, screw Clamp terminal on the load	
BS -	Bullet contact on the line, stud terminal on the load	BC -	Bullet contact on the line, screw Clamp terminal on the load	
SS -	Stud terminal on the line, stud terminal on the load	SEC -	Stud terminal on the line, English threads for stud (10-32), screw Clamp terminal on the load	
_		SMC -	Stud terminal on the line, metric threads for stud (M5), screw Clamp terminal on the load	
Threa	ad			
M -	Metric threads for panel mount fasteners (M3) and stud (M5)			
E -	English threads for panel mount fasteners (6-32) and stud (10-32)			
Remo	ote alarm terminal distan	се		
1 -	0.645 inch from line terminal	1 -	Side ouput (available on CC and BC terminal styles)	
2 -	0.970 inch from line terminal	2 -	Bottom output, .970 inch from line terminal (available on BC terminal style only)	
3 -	1.285 inch from line terminal	_		

Catalog no.			
TPCDS-BBE-1	TPCDS-BSE-2	TPCDS-SSE-3	TPCDS-D-SEC1*
TPCDS-BBE-2	TPCDS-BSE-3	TPCDS-SSM-1	TPCDS-D-SEC2*
TPCDS-BBE-3	TPCDS-BSM-1	TPCDS-SSM-2	TPCDS-D-SMC1*
TPCDS-BBM-1	TPCDS-BSM-2	TPCDS-SSM-3	TPCDS-D-SMC2*
TPCDS-BBM-2	TPCDS-BSM-3	TPCDS-D-BC1*	
TPCDS-BBM-3	TPCDS-SSE-1	TPCDS-D-BC2*	
TPCDS-BSE-1	TPCDS-SSE-2	TPCDS-D-CC1*	

\* Not investigated to Canadian requirements.

#### Dimensions

• See data sheet no. 5023



#### **TPM fuse and TPMDS pullout disconnect**

Telpower TPM miniature current-limiting fusses mount in the miniature TPMDS pullout disconnect. The TPM fuses feature local open fuse indication and TPMDS is easily integrated into remote indication systems.



# LINE BUS

**TPMDS** alarm schematic

#### CUSTOMER PROVIDED RESISTANCE

#### Notes:

- The resistance (R) must be provided by the end-user to limit the open fuse indication output current to a maximum of 20mA. The "R" value should be calculated using the system voltage value. If remote indication functionality is not required, the END-USER CIRCUITRY must still be supplied to provide a resistance path to the return for the local indication to properly function.
- 2 The fuse is polarized to maintain proper orientation with the switch housing. The line and load terminals are identified on the switch housing.

# Typical applications

Files E219046 and E56412

- Telecommunications DC power circuit protection
- Applications with restricted space, or mounting in 1 U (1.75"/44.5mm) panels

#### Features

• CE

Ratings

• Volts 80 Vdc

Amps 3-30 A

fuse pullout

Agency information

• IR 20 kA

 Smallest and most versatile fused disconnect switch available allowing for assembly into 1 U (1.75"/44.5mm) panel. Easy to connect; Load: 1/4" quick-connect or bolted connection with 10-32 (M5) captive nut, Line: 1/4" quick-connect or screw connection with clearance hole for #10 (M5) bolt

· UL Recognized (investigated to UL 1801) as a disconnect switch

• Recognized to US and Canadian requirements under the

for the interruption of load current by means of withdrawing the

component recognition program of Underwriters Laboratories Inc.

- AmpColor ID<sup>™</sup> System makes fuse replacement easy
- Switch design provides for easy panel mounting by single captive 4-40 (M3) nut and panel notch integral to switch footprint
- Complete system coordination capability with local and remote open fuse indication. Local alarm indication provided by LED on TPM fuse (maximum alarm circuit current: 20mA)

#### **TPM fuses**

Catalog no.	(amps)		
TPM-3	TPM-6	TPM-10	TPM-20
TPM-4	TPM-7	TPM-12	TPM-25
TPM-5	TPM-8	TPM-15	TPM-30

# TPMDS pullout disconnects (accept all TPM fuse amp ratings)

Catalog no.	Description	
TPMDS-E	Pullout fused disconnect, English hardware	
TPMDS-M	Pullout fused disconnect, metric hardware	

#### Dimensions

• See data sheet no. 5022

#### TP15900-4 fused pullout disconnect for TPA fuses

4-pole fused pullout disconnect for use with Telpower TPA and TPA-B fuses. Pullout disconnects feature remote open fuse indication capability.



# Ratings

- Volts
  - 145 Vdc@40 A per pole
  - 80 Vdc@50 A per pole

#### Agency information

- UL Recognized File E97649 as a disconnect switch for interruption of load current by means of withdrawing the fuse carrier
- UL Recognized as a component for telecommunication power distribution equipment (UL category QPQY2)
- UL Recognized fuses for branch circuit protection
- CSA Component Acceptance for the system
- CE

#### **Typical applications**

• Telecommunications DC power circuit protection

#### Features

- Ease of installation connection directly to busbar, reduces external wiring per pole. Rear accessibility for line and load terminations
- LED alarm signaling (LED current 30mA max)
- Local and remote open-fuse indication along with fuse orientation rejection feature and fuse presence indication
- · Alarm test probe point, to allow on-site checking of alarm circuitry

Catalog no.	Description
TP15900-4	4-pole common disconnect
TP15900-41	4-pole common disconnect w/ split alarm, split line

#### Available fuses

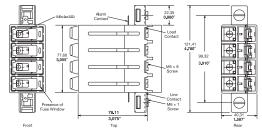
Catalog symbol	Amps	Volts DC	IR
TPA	3, 5, 10, 15, 20, 25, 30, 40, 50	170	100 kA
TPA-B	20, 25, 30	65	20 kA

#### Accessories

14-4

• Spare fuse holders: catalog numbers 5TPH and TPSFH-AS.

#### Dimensions - mm (in)



#### **TP15914 fused pullout disconnect**

Modular 4-pole fuse pullout disconnect for us with TPA fuses. 4-poles per module can be ganged up to four modules for a total of 16 poles. The TP15914 features open fuse indication and fuse presence indication along with fuse orientation rejection.



#### Ratings

- Volts 145 Vdc
- Amps 50 A max per pole

#### Agency information

- UL Recognized, Guide JFHR2, File E56412
- UL Recognized as a disconnect switch for interruption of load current by means of withdrawing the fuse carrier
- UL Recognized as a component for telecommunication power distribution equipment (UL category QPQYZ)
- UL Recognized fuses for branch circuit protection
- CSA Certified, Class 1422-30, File 53787
- CSA Component Acceptance for the system

#### **Typical applications**

• Telecommunications DC power circuit protection

#### Features

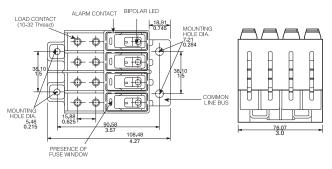
- Totally enclosed module directly connects to busbar for reduced external wiring—per pole and easy installation with front access load and line connection standard — double lug load connections 8 AWG wire
- LED alarm signaling (LED current 30mA max)
- Remote alarm with alarm test probe point to allow on-site checking of alarm circuitry

Catalog no.	Description	
TP15914	English hardware	
TP15914-1	Metric hardware	

#### Accessories

• Spare fuse holders: catalog numbers 5TPH and TPSFH-A

#### Dimensions — mm (in)







## **TPA and TPA-B indicating fuses**

Indicating DC power distribution fuse for use in TP15900-4 and TP15914 fused pullout disconnects.

#### Ratings

- Volts
  - 170 Vdc (TPA)
  - 65 Vdc (TPA-B)
- Amps
  - 3-50 A (TPA)
  - 20-30 A (TPA-B)
- IR
  - 100 kA (TPA)
  - 20 kA (TPA-B)

#### Agency information

- UL Recognized, Guide JFHR2, File E56412
- CSA Certified, Class 1422-30, File 53787
- · CE, RoHS compliant

#### **Typical applications**

• Telecommunications DC power circuit protection

#### Features

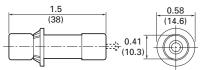
- Indication pin provides for local and remote indication when used with Bussmann series TP15900-4 and TP15914 disconnect switches
- Patented "orange ring" fuse orientation features assures correct fuse position
- The UL Recognized ratings and current-limiting capability make this fuse ideal for cable protection on existing DC power distribution systems
- A unique blue label is used on all Telpower fuses to designate their DC capability

Catalog no. (amps)				
170 Vdc				
TPA-3	TPA-10	TPA-20	TPA-30	TPA-50
TPA-5	TPA-15	TPA-25	TPA-40	
65 Vdc				
TPA-B-20	TPA-B-25	TPA-B-30		

#### Accessories

 Spare fuse holders: 5 position holder; 5TPH; 6 position holder; TPSFH-AS

#### Dimensions — in (mm)





#### 15800 fused pullout disconnect for the TPS fuse

Fused disconnect switch for use only with the TPS main fuses (1 to 70 amp) and GMT-A alarm fuses (see page 14-12). It is recommend to also use the GMT-X cover for the GMT-A fuses.



- Ratings
- Volts 60 Vdc
- Amps 3-70 A
- SCCR 100 kA

#### Agency information

- UL Recognized, Guide QPQY2, File E97649
- CE

#### **Typical applications**

• Telecommunications DC power circuit protection

#### Features

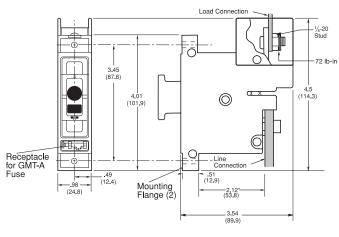
- Alarm output with wire wrap terminal or connection to 0.063" thick common alarm bus
- Spare alarm and power fuse compartment
- Mounting hardware included

Catalog no.	Description	
15800-R-200	Rear access panel mounting	
15800-F-200	Front access panel mounting	

#### Accessories

• Spare fuse holders: catalog numbers TPSFH-AS (TPS fuses) and TPSFH-T (GMT fuses)

#### Dimensions — in (mm)



Rear Access

#### **TPS** main power fuse

Non-indicating DC power distribution ferrule fuses specifically designed to meet the unique needs of DC power distribution systems. For use with Bussmann series 15800 fused pullout disconnect. Vertical and horizontal PCB tab versions available for circuit board applications.

### Ratings

- Volts 170 Vdc
- Amps 1-80 A
- IR 100 kA

#### Agency information

• UL Recognized, Guide JFHR2, File E56412, RoHS compliant, CE

#### **Typical applications**

- Telecommunications DC power circuit protection
- Applications requiring printed circuit board mounting

#### Features

- The UL Recognized ratings and current-limiting capability make this fuse ideal for cable protection on existing DC power distribution systems
- A unique blue label is used on all Telpower fuses to designate their DC capability
- PCB tab versions eliminate the need for fuseclips when mounting the fuse on a circuit board

Catalog no. (amps)			
Ferrule			
TPS-1	TPS-6	TPS-25	TPS-50
TPS-2	TPS-10	TPS-30	TPS-60
TPS-3	TPS-15	TPS-35	TPS-70
TPS-5	TPS-20	TPS-40	TPS-80
Horizontal PO	CB tabs		
TPS-1L	TPS-6L	TPS-25L	TPS-50L
TPS-2L	TPS-10L	TPS-30L	TPS-60L
TPS-3L	TPS-15L	TPS-35L	TPS-70L
TPS-5L	TPS-20L	TPS-40L	TPS-70LB*
Vertical PCB tabs			
TPS-40V	TPS-50V	TPS-80V	

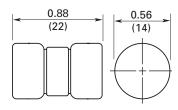
\* LB = Bolt tag

#### Accessories

• Spare fuse holder TPSFH-AS, see page 15-4

#### Dimensions — in (mm)

Data sheet no.5009









#### **TP158HC fused pullout disconnect**

High amp panel mount, rear access fuses pullout disconnect for use only with Telpower TPL-B main fuses (70-250 A) and GMT-A alarm fuses (see page 14-12). It is recommend to also use the GMT-X cover for the GMT-A fuses.

#### Ratings

- · Volts 80 Vdc
- Amps 70-250 A
- SCCR 100 kA

#### Agency information

• UL Recognized (investigated to UL 1801) as a disconnect switch for the interruption of load current by means of withdrawing the fuse pullout, Guide QPQY2, File E97649

#### Typical applications

Telecommunications DC power circuit protection

#### Features

- Similar profile, mounting method, and backplane configuration as 15800. The TP158HC can be installed into existing 15800 panels using the space of two 15800 pullout disconnects
- Innovative new fuse pullout design eliminates need for tools to replace the Telpower type TPL-B fuse
- · Alarm output with wire wrap terminal or connection to 0.063 inch (1.6mm) thick common alarm bus
- Hardware included: Load: washer, split lockwasher, and 5/16 18 nut (metric M8 x 1.25)

Catalog no.	Hardware type
TP158HC	English
TP158HC-M	Metric

#### Accessories

· Spare fuse holders: TPSFH-LB (TPL-B fuses) and TPSFH-T (GMT fuses)

#### Dimensions

• See data sheet no. 5021

#### Application notes

The line connection uses a 1/4-20 bolt (metric M6 x 1) that threads into the line terminal. The line terminal is designed with a float of ±0.02" (±0.50mm) to allow for variation in the distance between the TP158HC mounting flange and the line busbar (see Dimensions). Equipment should be designed to eliminate any relative movement between the TP158HC mounting flange and the line busbar.

The alarm circuit is not intended for pre-charging capacitive circuits. Maximum alarm circuit current 1 A.





#### 15100 fused pullout disconnect

Fused pullout disconnect system for use with TPL Telpower fuses.

#### Ratings

- Volts 60 Vdc
- Amps 70-800 A
- SCCR 100 kA

#### Agency information

- UL Recognized, Guide QPQY2, File E97649
- CE

#### Typical applications

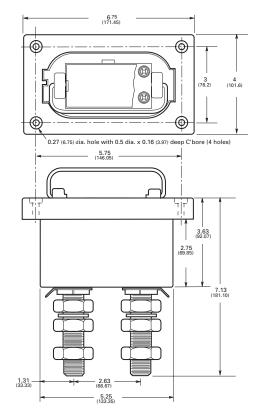
• Telecommunications DC power circuit protection

#### Features

- · Single-pole fusible disconnect switch for primary DC power distribution
- Robust housing and terminal construction for demanding applications
- · Panel mounting
- · Easily connected to line or load bus

Catalog no.	TPL fuse amp range	stion
15100-401	70-400	otec
15100-601	300-800	ла. ш

#### Dimensions — in (mm)



# Data sheet no. 5021

#### Data sheet no. 5003

**BUSSMANN SERIES FULL LINE CATALOG 1007 — JUNE 2017** 

# **TPHCS** high current fused pullout disconnect

High current fused pullout disconnect for use with TPL-B, TPL-C and TPH Telpower fuses. Available as a complete pullout disconnect or just the pullout. Base may be purchased separately.

#### • Volts 80 Vdc

Ratings

- Amps 70-800 A
- SCCR 100 kA

#### Agency information

- UL Recognized (investigated to UL 1801) as a disconnect switch for the interruption of load current by means of withdrawing the fuse carrier
- UL Recognized to meet the requir

#### Typical applications

• Telecommunications DC power circuit protection

#### **Features**

- Innovative design eliminates need for tools to replace the TPL-B, TPL-C or TPH fuses
- Easy to install-captive fasteners allow for direct busbar mounting (bolts not included). Standard 1/4" male quick- connect terminal for effortless remote alarm connection
- · Optional new electronic alarm eliminates need for parallel indicating fuses while providing local and remote open-fuse indications (maximum remote alarm current: 20mA); Bipolar alarm: designed for both central office and Radio applications, Local LED open fuse indication for ease-of-viewing
- · Fuse presence window allows for easy viewing of installed fuse amp rating
- Compact design is ideal for today's high power, high-density cabinets

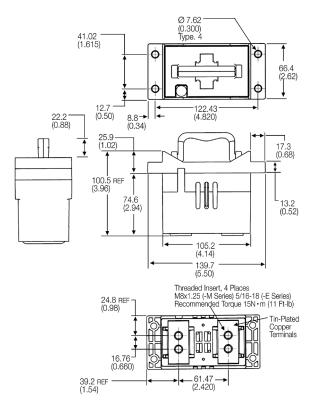
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Catalog no. (components)	Description rating/ hardware/option	For fuse symbol	Amp range
TPHCS250-P	Pullout only (250 A)	TPL-B	70-250
TPHCS800-P	Pullout only (800 A)	TPL-C or TPH	300-800
TPHCS-B-M	Base only, metric		800 max
TPHCS-B-E	Base only, English	_	800 max
TPHCS-B-ML	Base only, metric, LED	_	800 max
TPHCS-B-EL	Base only, English, LED	—	800 max
TPHCS-B-MAV	Base only, metric, alarm		800 max
TPHCS-B-EAV	Base only, English, alarm	_	800 max

#### Notes

- 1. TPHCS250 and TPHCS800 pullouts and bases are the same with exception to the fuse type the pullout will hold (TPL-B, TPL-C or TPH).
- 2. Plastic rated UL 94V0, 140°C RTI.

#### Dimensions — mm (in)



#### Data sheet no. 5020 14-8





#### FIT-N BUSSMANN SERIES

# TPL high amp DC fuses

High amp DC power distribution fuses for use with Telpower 15100, 15200, TP158HC and TPHCS fused pullout disconnects. TPL-TA adapter kit is necessary when replacing a UBO fuse.

#### Ratings

- Volts 170 Vdc
- Amps 70-800 A
- IR 100 kA

#### Agency information

- UL Recognized Guide JFHR2, File E56412 Bellcore
- CE

#### **Typical applications**

• Telecommunications power circuit protection

#### Features

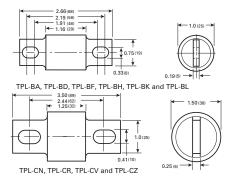
- Current-limiting capability designed for DC power distribution systems
- Recognized branch circuit protection
- · Complete system coordination capability
- Energy savings with low watts loss, low operating temperatures, and minimum  ${\rm l}^2 t$  levels

Catalog no.	Amps	Catalog no.	Amps
TPL-BA	70	TPL-BL	250
TPL-BB	80	TPL-CN	300
TPL-BC	90	TPL-CO	350
TPL-BD	100	TPL-CR	400
TPL-BE	125	TPL-CU	450
TPL-BF	150	TPL-CV	500
TPL-BG	175	TPL-CZ	600
TPL-BH	200	TPL-CZH	800
TPL-BK	225		

#### Accessories

• Spare fuse holders: TPSFH-LB (for TPL-B fuses) TPSFH-LC (for TPL-C fuses)

#### Dimensions — in (mm)





# TPN high amp current limiting DC fuses

The TPN fuse is a currentlimiting DC power distribution fuse that's dimensionally similar to UL Class R branch circuit fuses making them easy to install using standard RM60\_ modular Class R fuse blocks.



- RatingsVolts 170 Vdc
- Amps 1-600 A
- IR 100 kA

#### Agency information

• UL Recognized, Guide JFHR2, File E56412

#### **Typical applications**

• Telecommunications power circuit protection

#### Features

- Current-limiting capability designed for DC power distribution systems
- Recognized branch circuit protection
- Complete system coordination capability
- Energy savings with low watts loss, low operating temperatures, and minimum  $\mathsf{I}^2\mathsf{t}$  levels

#### Catalog no. (amps)

TPN-1	TPN-30	TPN-90	TPN-250	
TPN-3	TPN-35	TPN-100	TPN-300	
TPN-5	TPN-40	TPN-110	TPN-350	
TPN-6	TPN-45	TPN-125	TPN-400	
TPN-10	TPN-50	TPN-150	TPN-450	
TPN-15	TPN-60	TPN-175	TPN-500	
TPN-20	TPN-70	TPN-200	TPN-600	
TPN-25	TPN-80	TPN-225		

#### Accessories

Spare fuse holders:TPSFH-N30 (for TPN 1-30) TPSFH-N60 (for TPN 35-60)

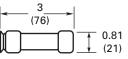
#### Recommended modular\* Class R fuse blocks

Catalog no.	Amps
RM25030-1CR	30
RM25060-1CR	60
RM25100-1CR	100
RM25200-1CR	200
RM25400-1CR	400
RM25600-1CR	600

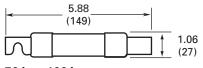
\* Blocks can be snapped together to create the number of required poles. Optional indicating and non-indicating finger-safe covers available for all blocks.

Dimensions — in (mm)

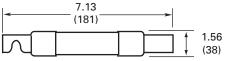




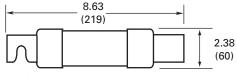




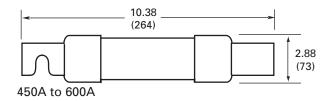








225A to 400A





# 70 Type pin indicating fuses

Pin indicating fuse for use in the 15087 panel-mount fuse holder

#### Ratings

- Volts
  - 125 Vac
  - 300 Vdc
- Amps 1/10-10 A
- IR 1 kA @ 300 Vdc

#### Agency information

- UL Recognized, Guide JDYX2, File E19180 Bellcore
- CE

Catalog no. (amps)	Color code	Lucent comcode ref. no.	Code/list no.
70P-1/10A*	Gray/White	100203413	KS23751-L10
70R-15/100A*	Red/White	101384550	KS23751-L11
70E-18/100A*	Yellow	100203363	KS23751-L5
70X-2/10A	Black	_	_
70F-1/4A*	Violet	100203371	KS23751-L6
70K-1/4A*	Violet/White	100203405	KS23751-L9
70G-1/2A*	Red	100203389	KS23751-L7
70H-3/4A*	Brown	100203397	KS23751-L8
70I-1A	Pink	_	_
70A-1-1/3A*†	White	100203322	KS23751-L1
70B-2A*	Orange	100203330	KS23751-L2
70C-3A*	Blue	100203348	KS23751-L3
70J-3-1/2A	Black/White	_	_
70D-5A*	Grn/Black	100203355	KS23751-L4
70L-6A	Grn/White	_	_
70M-8A	Brown/White	_	_
70N-10A	Violet/Yellow	_	_
GKB-10A	Violet/Yellow	—	_
72A Plastic Case	e (dummy)	100203421	_
72B Blister Pack	(dummy)	103757977	_

Product designed to comply with Bellcore Technical Reference TR-TSY-000799 Issue 1, December 1988.

† Not UL Recognized.

#### 15087 fuse holder

Panel mount fuse holder for use with 70 Type fuses.

#### Ratings

- Volts 300 Vdc
- Amps 12 A

#### Agency information

- UL Recognized, Guide IZLT2, File E14853
- CE

#### **Flammability rating**

• UL 94V0

#### Catalog number 15087

#### **Typical applications**

• Telecommunications DC power circuit protection

#### **Features**

- Panel mount fuse holder for 70 type fuses supplied with two screws
- Remote alarm capability

#### **Optional color-code eyelets**

Remote alarm capability			
Optional color-code eyelets			
Color-coded eyelets are used with the fuse holder to indicate its fuse amp rating.			
Catalog no.	Amps	Color coding	Telecom protection products
1A1706-17	15/100	Red/White	_
1A1706-01	18/100	Yellow	_
1A1706-15	1/10	Gray/White	
1A1706-02	2/10	Black	
1A1706-03	1/4	Violet	
1A1706-04	1/4	Violet/White	
1A1706-05	1/2	Red	
1A1706-06	3/4	Brown	
1A1706-07	1	Pink	
1A1706-08	1-1/3	White	
1A1706-09	2	Orange	
1A1706-10	3	Blue	
1A1706-16	3-1/2	Black/White	_
1A1706-11	5	Green/Black	
1A1706-12	6	Green/White	
1A1706-13	8	Brown/White	_
1A1706-14	10	Violet/Yellow	_