Telpower® Fused Disconnect Switch TP15914

DC Distribution/Protection System - Front Access

SYSTEM: TP15914 - 4 Pole Disconnect Switch and TPA Series Fuses.
CATALOG SYMBOL: TP15914
ELECTRICAL RATING: 145V DC, 50A per pole.

APPROVALS:
- U.L. recognized as a disconnect switch for interruption of load current by means of withdrawing the fuse carrier.
- U.L. recognized as a component for telecommunication power distribution equipment (U.L. category QPQYZ).
- U.L. recognized fuses for branch circuit protection.
- C.S.A. component acceptance for the system.

MATERIAL: UL rated 94V-0, - 150°C rated

FUSE

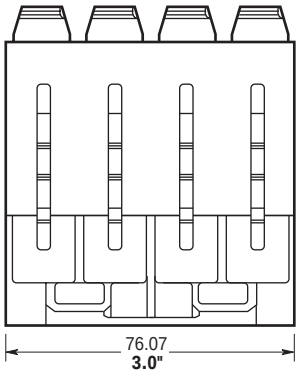
Fuse Type	TPA	TPA-B
Current	3, 5, 10, 15, 20, 25, 30, 40, 50	20, 25
Voltage	170V DC	65V DC
Interrupting	100 kA	20 kA

UL Recognized Guide JFHR2, File E56412,
CSA Certified Class 1422-30, File 53787

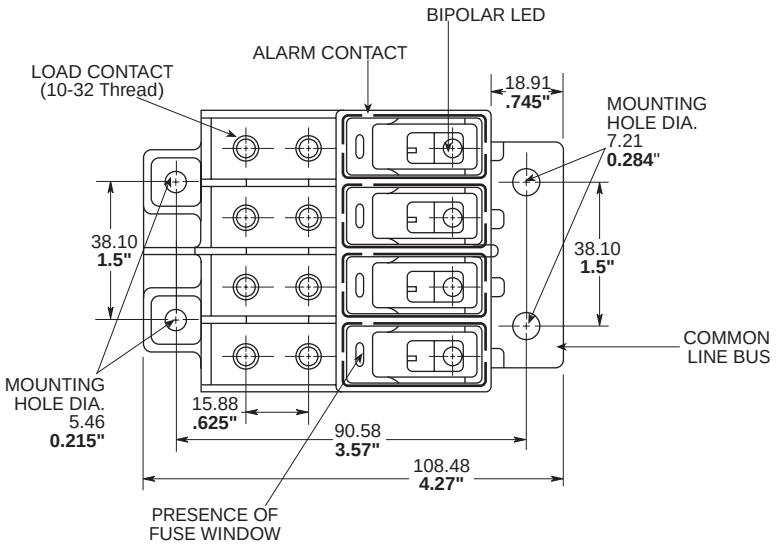
FEATURES:
- Front access load and line connection standard - double lug load connections 8 AWG wire
- Recognized branch circuit protection device
- Modular design - 4 poles per module up to four modules banked together
- Ease of installation - Connection directly to bus bar
- Eliminates external wiring - per pole
- LED alarm signaling (LED current 10mA max.)
- Blown fuse indication
- Alarm test probe point, to allow on-site checking of alarm circuitry
- Snap into alarm bus
- Bi-polar LED provides capability for both -48V DC and +24V DC applications
- Fuse presence indication
- Fuse orientation rejection feature
- Totally enclosed module - no moving parts
- Spare fuseholders available - See Part No. 5TPH and TPSFH-A.
- Contact Bussmann for options on standard module (Hardware, Color, Front line connection, Mounting bezel)

Dimensional Data:

MM
Inches



TOP



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Proper sizing of the current limiting resistor, referred to as R_{ALARM} in the diagram below, is essential to prevent excessive current, which could cause damage to the LED in the disconnect head, from passing through the remote alarm circuit. Because the LED is in series with the remote alarm circuit, the maximum available alarm circuit current should be limited to no more than 30 mA. This is the maximum sustained current that can be tolerated by the LED. It is important to note that when calculating the size of the resistor, the number of circuits in parallel on the remote alarm circuit is irrelevant. The resistor value should always be calculated assuming that the total available alarm circuit current is conducted through a single LED. This will insure that the 30 mA limitation is not exceeded. The calculations required to determine both the resistance and the wattage rating of R_{ALARM} are shown below.

By calculating the minimum value of R_{ALARM} as described above, the maximum available remote alarm circuit current will not exceed 30 mA. In the event of multiple fuse blows, where the fuses are connected in parallel on the same remote alarm bus, the total available remote alarm circuit current will be evenly divided between each of the LED's. For example, if three fuses blow, each LED, indicating the presence of a blown fuse, will conduct approximately 10 mA each, assuming the total available remote alarm circuit current is 30mA.

METHOD FOR CALCULATING THE **MINIMUM** SERIES RESISTANCE VALUE NECESSARY TO LIMIT THE AVAILABLE ALARM CIRCUIT CURRENT TO ≤ 30mA. THE **MINIMUM** RESISTOR WATTAGE CALCULATIONS IS ALSO SHOWN.

$$R_{ALARM} = \frac{V_{SYSTEM}}{I_{LED}} \quad \text{(where } I_{LED} \text{ - 30 mA max.)}$$

$$P_{RALARM} = (V_{SYSTEM})(I_{LED}) \quad \text{(where } I_{LED} \text{ - 30 mA max).}$$