

# OPTIMA™

## Overcurrent Protection Module - Fuseholder and Disconnect Switch for 1<sup>3</sup>/<sub>32</sub>" x 1 1/2" (10mm x 38mm) Fuses

**OPM-1038**  
**Switch Series**



### Catalog Symbol:

|                 |                                                                         |                                                              |
|-----------------|-------------------------------------------------------------------------|--------------------------------------------------------------|
| Series          | Fuse Type                                                               | Communication                                                |
| <b>OPM-1038</b> | <input type="checkbox"/> <b>Blank</b> - 10 x 38mm<br>or 13/32" x 1-1/2" | <input type="checkbox"/> <b>C</b> - Communication<br>Feature |
|                 | <input type="checkbox"/> <b>R</b> - Class CC                            |                                                              |

**Materials:** Grey Thermoplastic

**UL Flammability:** UL 94VO

### Horsepower Rating of Switch:

|     |    |     |     |     |
|-----|----|-----|-----|-----|
| 3PH | V  | 240 | 480 | 600 |
|     | HP | 5   | 10  | 15  |

### Physical Characteristics:

- Small size matches 45mm IEC starter width.
- Fits #8-18 AWG stranded wire, #10-18 AWG solid wire.
- 3-pole version.
- Handle and shaft required for through-the-door operation.  
(See ordering information on page 2).

### Product Features:

- "Open" fuse indication lights.
- Finger-safe terminals. (Qualified as IP20 per IEC529)
- Cam action handle for easy module removal.
- 35mm DIN-rail or screw panel mounting (#8 screw, 1 1/4" long).
- Dead front construction. No exposed contacts for added safety.
- Option for remote "open fuse" status indication feature available (reduces downtime).
- Offered with Class CC rejection clips or European 10mm x 38mm clips to meet global needs.
- Wire ready: Saves time as terminals are ready to accept wires.

### Agency Information:

UL (see table below)

CSA Certified, C22.2 No. 39, Class 6225-01, File 47235

IEC (see table below)

**Shipping Weight:** Approx. 335g (.74 lb.)

**Carton Quantity:** 1

| Catalog Number | Electrical Rating                                             | SC Rating | Clips                                            | Remote Open Fuse Indication | UL Information           |                 |               | IEC               |
|----------------|---------------------------------------------------------------|-----------|--------------------------------------------------|-----------------------------|--------------------------|-----------------|---------------|-------------------|
|                |                                                               |           |                                                  |                             | Std.                     | File            | Guide         |                   |
| OPM-1038SW     | 30A, 600Vac UL/CSA (Max. 3 Watts per fuse)<br>32A, 660Vac IEC | *         | Non-rejection<br>10 x 38mm or<br>13/32" x 1-1/2" | No                          | Recognized<br><br>UL 508 | <br><br>E161278 | <br><br>NLRV2 | <br><br>IEC 947-3 |
| OPM-1038RSW    | 30A, 600Vac UL/CSA                                            | 100kA     | Rejection                                        | No                          | Listed<br>UL 508         | <br><br>E161278 | <br><br>NLRV  |                   |
| OPM-1038SWC    | 30A, 600V UL/CSA (Max. 3 Watts per fuse)<br>32A, 660Vac IEC   | *         | Non-rejection<br>10 x 38mm or<br>13/32" x 1-1/2" | Yes                         | Recognized<br><br>UL 508 | <br><br>E161278 | <br><br>NLRV2 | <br><br>IEC 947-3 |
| OPM-1038RSWC   | 30A, 600Vac UL/CSA                                            | 100kA     | Rejection<br>Class CC                            | Yes                         | Listed<br>UL 508         | <br><br>E161278 | <br><br>NLRV  |                   |

\*Rating varies depending on fuse used in module, 100kA maximum..

### Recommended Fuse Types:

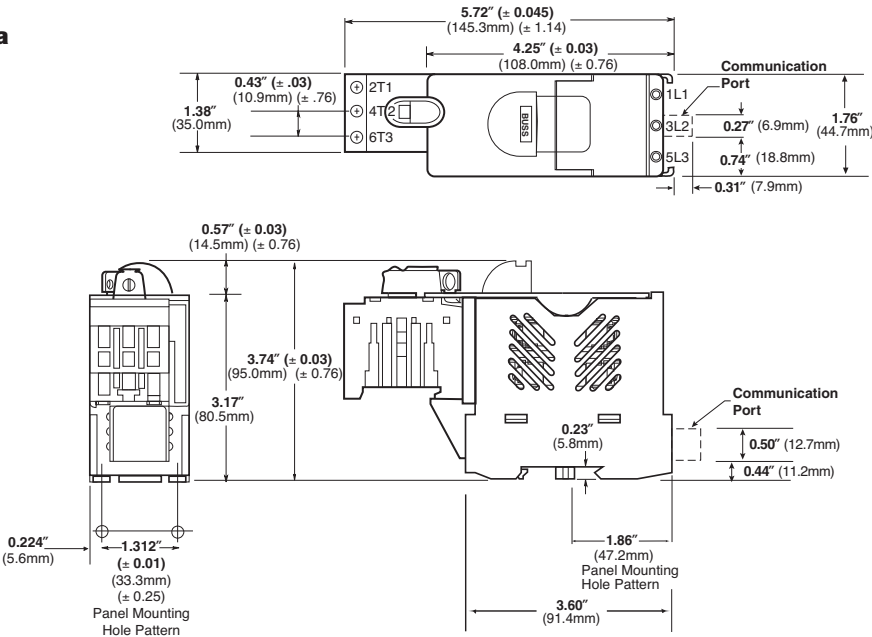
| Class CC | Midget (non-rejection) |
|----------|------------------------|
| LP-CC    | KTG                    |
| KTG-R    | FNM                    |
| FNQ-R    | FNQ                    |

CE CE logo denotes compliance with European Union Low Voltage Directive (50-1000Vac, 75-1500Vdc). Refer to Data Sheet: 8002 or contact Bussmann Application Engineering at 636-527-1270 for more information. Applies to OPM-1038SW and OPM-1038RSW.



**Spare Fuseholder: Part No. 5TPH**

**Dimensional Data**



**Selector Handles - for use with shafts  $\square$  0.24" x 0.24" ( $\square$  6x6mm)**

| NEMA type | IEC type | Color   | Defeatable | Padlockable | Weight (lbs) | Catalog number |
|-----------|----------|---------|------------|-------------|--------------|----------------|
| 1         | IP54     | Black   | —          | —           | 0.09         | CBDH1S         |
| 1         | IP54     | Red/Yel | —          | —           | 0.09         | CBDH2S         |
| 1         | IP54     | Black   | —          | Yes         | 0.12         | CBDH15S        |
| 1         | IP54     | Red/Yel | —          | Yes         | 0.12         | CBDH16S        |
| 1,3R,12   | IP65     | Black   | —          | Yes         | 0.16         | CBDH3S         |
| 1,3R,12   | IP65     | Red/Yel | —          | Yes         | 0.16         | CBDH4S         |
| 1,3R,12   | IP65     | Black   | Yes        | Yes         | 0.16         | CBDH5S         |
| 1,3R,12   | IP65     | Red/Yel | Yes        | Yes         | 0.16         | CBDH6S         |

**Pistol Handles - for use with shafts  $\square$  0.24" x 0.24" ( $\square$  6x6mm)**

| NEMA type    | IEC type | Color   | Marking      | Length inches/mm | Defeatable | Padlockable | Weight (lbs) | Catalog number |
|--------------|----------|---------|--------------|------------------|------------|-------------|--------------|----------------|
| 1,3R,12      | IP65     | Black   | O/I & Off/On | 1.8/45           | Yes        | Yes         | 0.28         | BDH56          |
| 1,3R,12      | IP65     | Red/Yel | O/I & Off/On | 1.8/45           | Yes        | Yes         | 0.28         | BDH57          |
| 1,3R,12      | IP65     | Black   | O/I & Off/On | 2.6/65           | Yes        | Yes         | 0.29         | BDH58          |
| 1,3R,12      | IP65     | Red/Yel | O/I & Off/On | 2.6/65           | Yes        | Yes         | 0.29         | BDH59          |
| 1,3R,12,4,4X | IP66     | Black   | O/I & Off/On | 2.6/65           | Yes        | Yes         | 0.29         | CDHXB65L6      |
| 1,3R,12,4,4X | IP66     | Red/Yel | O/I & Off/On | 2.6/65           | Yes        | Yes         | 0.29         | CDHXY65L6      |

**Extended Shafts - Shaft Dimension ( $\square$  6x6mm )**

**Ordering Information for External Handle\*:**

**OPTIMA Module + CDRKBS12 + Handle + Shaft  
= Complete Disconnect Switch (without fuses)**

1. Order Cooper Bussmann part number CDRKBS12.
2. Select the appropriate handle style (Selector or Pistol).
3. Select the shaft corresponding to the handle type and mounting depth required.

\*All switchable OPM-1038 modules come standard with a small black handle Cooper Bussmann part number CDRKBS12 must be ordered for all through-the-door applications.

| For Handle Type | Mounting Depth** | Shaft Length  | Catalog Number |
|-----------------|------------------|---------------|----------------|
| Selector        | 4.2 - 5.0"       | 3.3" (85mm)   | BDS85S         |
|                 | 5.0 - 5.8"       | 4.1" (105mm)  | BDS105S        |
|                 | 5.6 - 6.4"       | 4.7" (120mm)  | BDS120S        |
|                 | 6.0 - 6.7"       | 5.1" (130mm)  | BDS130S        |
|                 | 7.1 - 8.7"       | 7.1" (180mm)  | BDS180S        |
|                 | 10.7 - 11.5"     | 9.8" (250mm)  | BDS250S        |
|                 | 13.8 - 14.6"     | 13.0" (330mm) | BDS330S        |
| Pistol          | 6.2 - 6.7"       | 5.9" (150mm)  | BDS150         |
|                 | 7.0 - 7.5"       | 6.7" (170mm)  | BDS170         |
|                 | 10.7 - 11.3"     | 10.4" (265mm) | BDS265         |
|                 | 16.0 - 16.6"     | 15.8" (400mm) | BDS400         |
|                 | 20.0 - 20.5"     | 19.7" (500mm) | BDS500         |

\*\*Mounting depth is the distance from the outside of the door to the disconnect switch. Shaft can be cut to desired length.

## OPEN FUSE INDICATION

### Status Output Specifications:

\*Minimum operating voltage: 460Vac, 3-phase  
 \*Maximum operating voltage: 620Vac, 3-phase  
 Status output maximum conducting current: 40mA  
 Status output maximum on resistance: 35 ohms  
 @ 40mA  
 Status output typical off resistance: >10 Mohm  
 Status output maximum turn-on and  
 turn-off delay: 850 milli-second

### Status Output Interface Specifications:

Rated Voltage: Recommended 5-35Vdc, 300Vac max.  
 Rated Current: 40mA max.  
 Wire Size: #28-14 AWG  
 Torque: 2.25 lb. in.

### Open Fuse Indicator Status Output Description:

The open fuse indicator status output acts very much like an on/off switch. With all three fuses in place and operating properly, this status output has a high resistance value of greater than ten mega-ohms. When one or more of the fuses are open, the status output becomes turned-on with a resistance value less than 35 ohms. This status output withstands voltage (ac or dc) up to 35V at off-state and conducts current up to 40 milli-amps at on-state. Applying voltage and current exceeding these limits will result in damage to the components inside this status output device permanently. There is some time-delay when the status output changes on/off state. The open fuse communications or status output device includes optical isolators within the unit.

Communications output states:

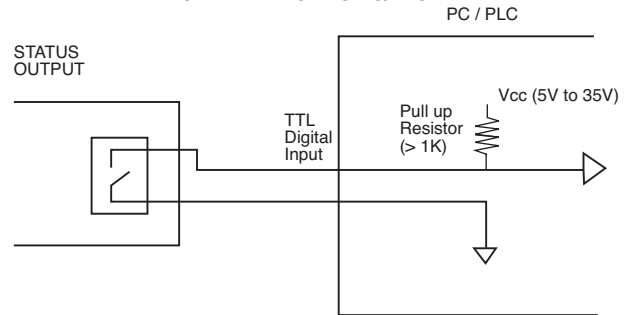
|             |                                   |
|-------------|-----------------------------------|
| Fuse Good   | NO - High Resistance, >10 megohms |
| Opened Fuse | NC - Low Resistance, < 35 ohms    |

**Note: Operating this device beyond the above limits will cause permanent damage to the components on the board.**

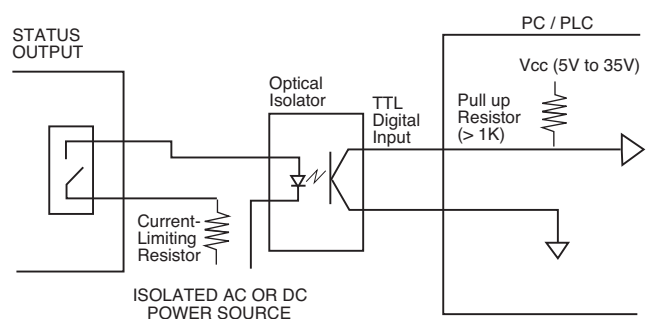
**For applications requiring status output below a system voltage of 460V, contact Bussmann.**

The examples shown below illustrate typical interface to Programmable Logic Controllers.

#### EXAMPLE 1: DIRECT INTERFACE TO PC/PLC



#### EXAMPLE 2: INTERFACE TO PC / PLC WITH OPTICAL ISOLATION



Note: When energized (switch in the "on" position), a low load terminal voltage will be present when fuses are open or when pullout module is removed. The leakage current is limited to .5mA maximum.

#### Example of Output Voltage with three open fuses or pullout module removed.

| Catalog Number<br>Types of Indication | OPM-1038RSW, OPM-1038SW<br>Standard    | OPM-1038-RSWC, OPM-1038SWC<br>Communication |
|---------------------------------------|----------------------------------------|---------------------------------------------|
| System Voltage<br>(1L1-3L2-5L3)       | Load Terminal Voltage<br>(2T1-4T2-6T3) |                                             |
| 125Vdc *                              | 12Vdc *                                | 31Vdc *                                     |
| 480Vac, 3-phase                       | 26Vac                                  | 56Vac                                       |
| 600Vac, 3-phase                       | 33Vac                                  | 88Vac                                       |

There is no voltage at the load terminals (2T1-4T2-6T3) on the switch version (SW suffix) when the switch is in the "off" position.

\*The communication device requires a minimum circuit voltage (1L1-3L2-5L3) of 460V for the status indicating device to operate. Below 460V, but above 120V, the indicator lights will luminate, but there will not be any communication status output.

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