

# OPTIMA™ Overcurrent Protection Module - Fuseholder and Disconnect Switch for 1 3/32" x 1 1/2" (10mm x 38mm) Fuses

**OPM-1038  
Switch Series**



**Catalog Symbol:**

|                        |  |  |
|------------------------|--|--|
| Series                 | Fuse Type                                      | Communication                                  |
| <b>O P M - 1 0 3 8</b> | <input type="checkbox"/>                       | <input checked="" type="checkbox"/> <b>S W</b> |
|                        | <b>Blank</b> - 10 x 38mm<br>or 13/32" x 1-1/2" | <b>C</b> - Communication<br>Feature            |
|                        | <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>10x 38mm or<br>13/32" x 1-1/2" | No                          | Recognized<br>UL 508 | E161278 | NLRV2 | IEC 947-3 |
| OPM-1038RSW    | 30A, 600Vac UL/CSA  | 100kA     | Rejection                                       | No                          | Listed<br>UL 508     | E161278 | NLRV  |           |
| OPM-1038SWC    | 30A, 600V UL/CSA (Max. 3 Watts per fuse)<br>32A, 660Vac IEC   | *         | Non-rejection<br>10x 38mm or<br>13/32" x 1-1/2" | Yes                         | Recognized<br>UL 508 | E161278 | NLRV2 | IEC 947-3 |
| OPM-1038RSWC   | 30A, 600Vac UL/CSA  | 100kA     | Rejection<br>Class CC                           | Yes                         | Listed<br>UL 508     | E161278 | NLRV  |           |

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

**Recommended Fuse Types:**

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

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 |
|---|----------|---------|------------|-------------|--------------|----------------|
| <b>All marked both O/I &amp; Off/On</b> |          |         |            |             |              |                |
| 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 |
|---|----------|---------|--------------|------------------|------------|-------------|--------------|----------------|
| <b>All marked both O/I &amp; Off/On</b> |          |         |              |                  |            |             |              |                |
| 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)

| 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        |
| Pistol          | 13.8 - 14.6"     | 13.0" (330mm) | BDS330S        |
|                 | 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.

### 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.

## 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-amperes 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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