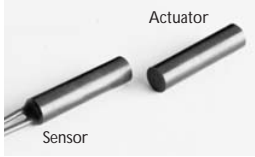


File E61760(N)

59025 Firecracker Features and Benefits



Features

- 2 part magnetically operated proximity sensor
- UL recognised
- Choice of normally open, normally closed or change over contacts
- Customer defined sensitivity
- Choice of cable length and connector

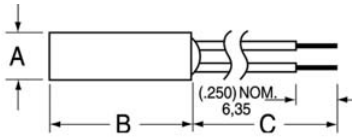
Benefits

- Quick and easy to install
- No standby power requirement
- Operates through non-ferrous materials such as wood, plastic or aluminium
- Hermetically sealed, magnetically operated contacts continue to operate long after optical and other technologies fail due to contamination

Applications

- Position and limit sensing
- Security
- Level sensing
- Linear actuators

DIMENSIONS (in) mm



| | A Max | B Max | C NOM. |
|-------|-------------|---------------|------------------------|
| 57025 | (.245) 6,22 | (1.000) 25,40 | - |
| 59025 | (.245) 6,22 | (1.000) 25,40 | Table 3 ± (.393) 10,00 |

| SCHEMATICS | Switch Type |
|------------|-------------|
| | 1 & 2 |
| | 3 |
| | 4 |

CUSTOMER OPTIONS - Switching Specifications

| TABLE I Contact Type | | | Normally Open | Normally Open High Voltage | Change Over | Normally Closed |
|-------------------------|------------------|---------------|------------------|----------------------------|-----------------|-----------------|
| Switch Type | | | 1 | 2 | 3 | 4 |
| | Power | Watt - max. | 10 | 10 | 5 | 5 |
| Voltage | Switching | Vdc - max. | 200 | 300 | 175 | 175 |
| | Breakdown | Vdc - min. | 250 | 450 | 200 | 200 |
| Current | Switching | A - max. | 0.5 | 0.5 | 0.25 | 0.25 |
| | Carry | A - max. | 1.2 | 1.5 | 1.5 | 1.5 |
| Resistance | Contact, Initial | Ω - max. | 0.2 | 0.2 | 0.2 | 0.2 |
| | Insulation | Ω - min. | 10 ¹⁰ | 10 ¹⁰ | 10 ⁹ | 10 ⁹ |
| Capacitance | Contact | pF - typ. | 0.3 | 0.2 | 0.3 | 0.3 |
| | Operating | °C | -40 to +105 | -20 to +105 | -40 to +105 | -40 to +105 |
| Temperature | Storage | °C | -65 to +105 | -65 to +105 | -65 to +105 | -65 to +105 |
| | Operate | ms - max. | 1.0 | 1.0 | 3.0 | 3.0 |
| Time | Release | ms - max. | 1.0 | 1.0 | 3.0 | 3.0 |
| | Shock | 11ms 1/2 sine | G - max. | 100 | 100 | 50 |
| Vibration | 50-2000 Hz | G - max. | 30 | 30 | 30 | 30 |

CUSTOMER OPTIONS - Sensitivity, Cable Length and Termination Specification

| TABLE 2 | | | | | | | | | TABLE 3 | | TABLE 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------------|-----------------------------|------------------|-----------------------------|------------------|-----------------------------|------------------|-----------------------------|---|---|--|---|--|---|--|---|--|-------------|------------------|-----------------------------|------------------|-----------------------------|------------------|-----------------------------|------------------|-----------------------------|-----------------|-------|--------|-------|--------|-------|--------|-------|--------|----------------|--|-----|--|-----|--|-----|--|-----|---------------|-------|--------|-------|--------|-------|--------|--|--|-------------------|--|-----|--|-----|--|-----|--|--|--|--|---------------|----------------------|----|-------------|----|---------------|----|-------------|----|-------------|----|--------------|--|--|--------|--------------------------|--|---|----------------|--|---|----------------------|--|---|---------------------|--|
| Sensitivity Options:- Activate Distances are approximate using Hamlin 57025 actuator as illustrated Switch AT before modification | | | | | | | | | Cable Type:- 24 AWG 7/32 PVC 105°C UL1430/UL1569 | | Termination Options:- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | Standard Lengths | | SELECT OPTION DESCRIPTION (2 WIRE VERSIONS ILLUSTRATED) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Select Option</th> <th colspan="2">S</th> <th colspan="2">T</th> <th colspan="2">U</th> <th colspan="2">V</th> </tr> <tr> <th>Switch Type</th> <th>Pull In AT Range</th> <th>Activate Distance d (in) mm</th> <th>Pull In AT Range</th> <th>Activate Distance d (in) mm</th> <th>Pull In AT Range</th> <th>Activate Distance d (in) mm</th> <th>Pull In AT Range</th> <th>Activate Distance d (in) mm</th> </tr> </thead> <tbody> <tr> <td>1 Normally Open</td> <td>12-18</td> <td>(.315)</td> <td>17-23</td> <td>(.236)</td> <td>22-28</td> <td>(.197)</td> <td>27-33</td> <td>(.157)</td> </tr> <tr> <td>2 High Voltage</td> <td></td> <td>8.0</td> <td></td> <td>6.0</td> <td></td> <td>5.0</td> <td></td> <td>4.0</td> </tr> <tr> <td>3 Change Over</td> <td>15-20</td> <td>(.276)</td> <td>20-25</td> <td>(.216)</td> <td>25-30</td> <td>(.177)</td> <td></td> <td></td> </tr> <tr> <td>4 Normally Closed</td> <td></td> <td>7.0</td> <td></td> <td>5.5</td> <td></td> <td>4.5</td> <td></td> <td></td> </tr> </tbody> </table> | | | | | | | | | Select Option | S | | T | | U | | V | | Switch Type | Pull In AT Range | Activate Distance d (in) mm | Pull In AT Range | Activate Distance d (in) mm | Pull In AT Range | Activate Distance d (in) mm | Pull In AT Range | Activate Distance d (in) mm | 1 Normally Open | 12-18 | (.315) | 17-23 | (.236) | 22-28 | (.197) | 27-33 | (.157) | 2 High Voltage | | 8.0 | | 6.0 | | 5.0 | | 4.0 | 3 Change Over | 15-20 | (.276) | 20-25 | (.216) | 25-30 | (.177) | | | 4 Normally Closed | | 7.0 | | 5.5 | | 4.5 | | | <table border="1"> <thead> <tr> <th>SELECT OPTION</th> <th>CABLE LENGTH (in) mm</th> </tr> </thead> <tbody> <tr> <td>02</td> <td>(11,81) 300</td> </tr> <tr> <td>05</td> <td>(39,37) 1,000</td> </tr> <tr> <td>03</td> <td>(19,69) 500</td> </tr> <tr> <td>04</td> <td>(29,53) 750</td> </tr> <tr> <td>05</td> <td>(39,37) 1000</td> </tr> </tbody> </table> | | SELECT OPTION | CABLE LENGTH (in) mm | 02 | (11,81) 300 | 05 | (39,37) 1,000 | 03 | (19,69) 500 | 04 | (29,53) 750 | 05 | (39,37) 1000 | <table border="1"> <tbody> <tr> <td>A or F</td> <td>Tinned or untinned leads</td> <td></td> </tr> <tr> <td>C</td> <td>6.35mm fastons</td> <td></td> </tr> <tr> <td>D</td> <td>AMP MTE 2.54mm pitch</td> <td></td> </tr> <tr> <td>E</td> <td>IST XHP 2.5mm pitch</td> <td></td> </tr> </tbody> </table> | | A or F | Tinned or untinned leads | | C | 6.35mm fastons | | D | AMP MTE 2.54mm pitch | | E | IST XHP 2.5mm pitch | |
| Select Option | S | | T | | U | | V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Switch Type | Pull In AT Range | Activate Distance d (in) mm | Pull In AT Range | Activate Distance d (in) mm | Pull In AT Range | Activate Distance d (in) mm | Pull In AT Range | Activate Distance d (in) mm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Normally Open | 12-18 | (.315) | 17-23 | (.236) | 22-28 | (.197) | 27-33 | (.157) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 High Voltage | | 8.0 | | 6.0 | | 5.0 | | 4.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 Change Over | 15-20 | (.276) | 20-25 | (.216) | 25-30 | (.177) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 Normally Closed | | 7.0 | | 5.5 | | 4.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SELECT OPTION | CABLE LENGTH (in) mm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 02 | (11,81) 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 05 | (39,37) 1,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 03 | (19,69) 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 04 | (29,53) 750 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 05 | (39,37) 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A or F | Tinned or untinned leads | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | 6.35mm fastons | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | AMP MTE 2.54mm pitch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E | IST XHP 2.5mm pitch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

ORDERING INFORMATION

N.B. 57025 actuator sold separately



- Series 59025
- Switch Type — Table I
- Sensitivity — Table 2
- Cable Length — Table 3
- Termination — Table 4

Hamlin USA Tel: +1 920 648 3000 • Fax: +1 920 648 3001 • Email: sales.us@hamlin.com
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Hamlin Germany Tel: +49 (0) 6142 923920 • Fax: +49 (0) 6142 923921 • Email: sales.de@hamlin.com
Hametrol France Tel: +33 (0) 1 6047 3000 • Fax: +33 (0) 1 6015 9136 • Email: sales.fr@hamlin.com

ISSUE No: 4 DATE: 1/5/3

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