International, LLC

## MP-1 Series Magnetic Safety Switches (IP68)

Technical Specifications

| Housing material | Glassfiber Reinforced Plastics |
| :--- | :--- |
| Ambient temperature | -25 to $70^{\circ} \mathrm{C}\left(-13\right.$ to $\left.158^{\circ} \mathrm{F}\right)$ |
| Degree of protection | IP67 (IEC/EN 60529) |
| Switching voltage | $100 \mathrm{~V} \mathrm{AC} / \mathrm{DC}$ |
| Switching current $\mathrm{I}_{\mathrm{e}} \max$. | 400 mA |
| Auxiliary contact | 24 V DC |
| Switching voltage <br> Switching current $\mathrm{I}_{\mathrm{e}} \mathrm{max}$. | 10 mA |
| Method of operation | Magnetic, reed contact |
| Mech. life | 10 milion cycles |
| Vibration resistance | As per IEC/EN 60947-5-2 |
| Impact strength | $50 \mathrm{~g} / \mathrm{ms}$ |
| Shock resistance | $11 \mathrm{~g} / \mathrm{ms}$ |
| EMC compliance | In acc. with EN 61496-1/EN 50022 Part A |



* Dimensions of the actuators are the same as switches except without cable

Ordering table

| Item | Actuator Part Number | Switching Distance <br> Son [mm] | Circuit Diagram Gate Closed | Maximum Contact Ratings |
| :---: | :---: | :---: | :---: | :---: |
| MP1-D.03P | MP 1-M | Son : 6 mm |  |  |
| MP1.D.03PM | MP 1-MM | Son : 9 mm | $\square{ }^{\circ}$ |  |
| MP1-D.03PL | MP 1-ML | Son : 18 mm | $\square^{* 1}$ | 100 V AC/DC 400 mA |
| MP1-D.035 | MP 1-M | Son : 6 mm | $\square^{\circ}$ |  |
| MP1.D.035M | MP 1-MM | Son: 9 mm |  |  |
| MP1-D.03SL | MP 1-ML | $S_{\text {on }}: 18 \mathrm{~mm}$ |  |  |
| MP1-D.11 | MP 1-M | $S_{\text {on }}: 6 \mathrm{~mm}$ Soff $: 15 \mathrm{~mm}$ |  |  |
| MP1-D.11M | MP 1-MM | $S_{\text {on }}: 9 \mathrm{~mm}$ Soff $: 18 \mathrm{~mm}$ |  | 100 V AC/DC 400 mA |
| MP1-D.11E | MP 1-M | Son : 6 mm Soff $: 15 \mathrm{~mm}$ |  |  |
| MP1-D.11ME | MP 1-MM | $S_{\text {on }}: 9 \mathrm{~mm}$ Soff $: 18 \mathrm{~mm}$ |  | $24 V D C 10 \mathrm{~mA}$ |
| MP1-D.12S | MP 1-M | $S_{\text {on }}: 6 \mathrm{~mm}$ S off $: 15 \mathrm{~mm}$ |  |  |
| MP1-D.125M | MP 1-MM | $S_{\text {on }}: 9 \mathrm{~mm}$ Soff $: 18 \mathrm{~mm}$ |  | 100 V AC/DC 400 mA |
| MP1-D.12SE | MP 1-M | Son : 6 mm Soff $: 15 \mathrm{~mm}$ | $\square^{81}$ |  |
| MP1-D.125ME | MP 1-MM | $S_{\text {on }}: 9 \mathrm{~mm}$ Soff $: 18 \mathrm{~mm}$ |  | 24VDC 10 mA |
| MP1-D. 12 | MP 1-M | $S_{\text {on }}: 6 \mathrm{~mm} \quad S_{\text {off }}: 15 \mathrm{~mm}$ | ${ }^{60}$ - ${ }^{\text {- }}$ - |  |
| MP1-D.12M | MP 1-MM | Son : 9 mm Soff : 18 mm |  | $100 \mathrm{~V} \mathrm{AC/DC} 400 \mathrm{~mA}$ |
| MP1-D.12E | MP 1-M | Son : 6 mm Soff $: 15 \mathrm{~mm}$ | ${ }^{60}$ - ar $^{\text {R0 }}$ |  |
| MP1-D.12ME | MP 1-MM | Son : 9 mm Soff : 18 mm | ${ }_{\text {Sl }}$ | 24VDC 10 mA |
| MP1.D.04E | MP 1-M | Son : 6 mm |  |  |
| MP1-D.04EM | MP 1-MM | Son : 9 mm |  | 24 VDC 10 mA |
| MP1-D. 02 | MP 1-M | Son : 6 mm | - ${ }^{80}$ |  |
| MP1-D.02M | MP1. MM | Son : 9 mm | ${ }^{\text {II }}$ | 100 V AC/ DC 400 mA |

## MP-2 Series Magnetic Safety Switches (IP68)

Technical Specifications

| Housing material | Glassfiber Reinforced Plastics |
| :---: | :---: |
| Ambient temperature | -25 to $70^{\circ} \mathrm{C}$ ( -13 to $158^{\circ} \mathrm{F}$ ) |
| Degree of protection | IP67 (IEC/EN 60529) |
| Switching voltage | 100 V AC/DC |
| Switching current $\mathrm{I}_{\mathrm{e}}$ max. | 400 mA |
| Auxiliary contact <br> Switching voltage <br> Switching current $\mathrm{I}_{\mathrm{e}}$ max. | $\begin{aligned} & 24 \mathrm{~V} \text { DC } \\ & 10 \mathrm{~mA} \end{aligned}$ |
| Method of operation | Magnetic, reed contact |
| Mech. life | 10 million cycles |
| Vibration resistance | As per IEC/EN 60947-5-2 |
| Impact strength | $50 \mathrm{~g} / \mathrm{ms}$ |
| Shock resistance | $11 \mathrm{~g} / \mathrm{ms}$ |
| EMC compliance | In acc. with EN 61496-1/EN 50022 Part A |



## Ordering table

* Dimensions of the actuators are the same as switches except without cable

| Item | Actuator Part Number | Switch | Distance | Circuit Diagram Gate Closed | Maximum Contact Ratings |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MP2-D-03P | MP2-M | $S_{\text {on }}: 6 \mathrm{~mm}$ | Soff : 15 mm |  | 100 V AC/DC 400 mA |
| MP2-D-03S | MP2-M | Son : 6 m | $S_{\text {off }}: 15 \mathrm{~mm}$ |  |  |
| MP2-D-11 | MP2-M | Son : 6 m | Soff : 15 mm |  | 100V AC/DC 400mA |
| MP2-D-11E | MP2-M | Son : 6 mm | $S_{\text {off }}: 15 \mathrm{~mm}$ |  | 24VDC 10mA |
| MP2-D-12S | MP2-M | Son : 6 m | Soff : 15 mm |  | 100V AC/DC 400 mA |
| MP2-D-12SE | MP2-M | Son : 6 mm | Soff : 15 mm |  | 24VDC 10mA |
| MP2-D-02 | MP2-M | Son : 6 mm | $S_{\text {off }}$ : 15 mm | $\underbrace{-\underbrace{B N}_{B N}}$ | 100V AC/DC 400mA |
| MP2-D-12 | MP2-M | $S_{\text {on }}: 6 \mathrm{~mm}$ | $S_{\text {off }}: 15 \mathrm{~mm}$ |  | 100 V AC/DC 400 mA |

MP-3 Series Magnetic Safety Switches (IP68)

Technical Specifications

| Housing material | Glassfiber Reinforced Plastics |
| :--- | :--- |
| Ambient temperature | -25 to $70^{\circ} \mathrm{C}\left(-13\right.$ to $\left.158^{\circ} \mathrm{F}\right)$ |
| Degree of protection | IP67 (IEC/EN 60529) |
| Switching voltage | 100 V AC/DC |
| Switching current I $\mathrm{I}_{\mathrm{e}}$ max. | 400 mA |
| Auxiliary contact | 24 V DC |
| Switching voltage <br> Switching current $\mathrm{I}_{\mathrm{e}}$ max. | 10 mA |
| Method of operation | Magnetic, reed contact |
| Mech. life | 10 mi11ion cycles |
| Vibration resistance | As per IEC/EN 60947-5-2 |
| Impact strength | $50 \mathrm{~g} / \mathrm{ms}$ |
| Shock resistance | $11 \mathrm{~g} / \mathrm{ms}$ |
| EMC compliance | In acc. with EN 61496-1/EN 50022 Part A |



* Dimensions of the actuators are the same as switches except without cable

Ordering table

| It em | Actuator Part Number | Switching distance $S_{\text {on }}[\mathrm{mm}]$ | Circuit diagram Gate Closed | Maximum Contact Ratings |
| :---: | :---: | :---: | :---: | :---: |
| MP3.D.03P | MP 3-M | $S_{\text {on }}: 6 \mathrm{~mm}$ |  |  |
| MP3.D.03PM | MP3-MM | $S_{\text {on }}: 9 \mathrm{~mm}$ |  |  |
|  |  | on |  | $100 \mathrm{~V} \mathrm{AC/DC} 400 \mathrm{~mA}$ |
| MP3.D.035 | MP3-M | Son : 6 mm |  |  |
| MP3.D.03SM | MP3-MM | Son : 9 mm |  |  |
| MP3-D.11 | MP 3-M | $S_{\text {on }}: 6 \mathrm{~mm}$ S off $: 15 \mathrm{~mm}$ |  |  |
| MP3-D.11M | MP3-MM | $S_{\text {on }}: 9 \mathrm{~mm}$ Soff $: 18 \mathrm{~mm}$ |  | $100 \mathrm{~V} \mathrm{AC/DC} 400 \mathrm{~mA}$ |
| MP3-D.11E | MP3-M | $S_{\text {on }}: 6 \mathrm{~mm} \quad S_{\text {off }}: 15 \mathrm{~mm}$ |  |  |
| MP3-D.11ME | MP3-MM | $S_{\text {on }}: 9 \mathrm{~mm} \quad S_{\text {off }}: 18 \mathrm{~mm}$ | $\underbrace{20}$ | 24 VDC 10 mA |
| MP3-D.12S | MP3-M | Son : 6 mm Soff $: 15 \mathrm{~mm}$ |  |  |
| MP3-D.12SM | MP3-MM | $S_{\text {on }}: 9 \mathrm{~mm} \quad S_{\text {off }}: 18 \mathrm{~mm}$ |  | $100 \mathrm{~V} \mathrm{AC/DC} 400 \mathrm{~mA}$ |
| MP3-D.12SE | MP 3-M | Son : $6 \mathrm{~mm} \quad S_{\text {off }}: 15 \mathrm{~mm}$ | $\%^{8 k}$ |  |
| MP3-D.12SME | MP3-MM | $S_{\text {on }}: 9 \mathrm{~mm}$ Soff $: 18 \mathrm{~mm}$ |  | 24 VDC 10 mA |
| MP3-D. 02 | MP 3-M | Son : $6 \mathrm{~mm} \quad S_{\text {off }}: 15 \mathrm{~mm}$ |  |  |
| MP3.D.02M | MP3-MM | $S_{\text {on }}: 9 \mathrm{~mm} \quad S_{\text {off }}: 18 \mathrm{~mm}$ |  | 100 V AC/ DC 40 |

## MP-4 Series Magnetic Safety Switches (IP68)

Technical Specifications

| Housing material | Glassfiber Reinforced Plastics |
| :--- | :--- |
| Ambient temperature | -25 to $70^{\circ} \mathrm{C}\left(-13\right.$ to $\left.158^{\circ} \mathrm{F}\right)$ |
| Degree of protection | IP67 (IEC/EN 60529) |
| Switching voltage | 100 V AC/DC |
| Switching current $\mathrm{I}_{\mathrm{e}}$ max. | 400 mA |
| Auxiliary contact | 24 V DC |
| Switching voltage <br> Switching current $\mathrm{I}_{\mathrm{e}}$ max. | 10 mA |
| Method of operation | Magnetic, reed contact |
| Mech. life | 10 million cycles |
| Vibration resistance | As per IEC/EN 60947-5-2 |
| Impact strength | $50 \mathrm{~g} / \mathrm{ms}$ |
| Shock resistance | $11 \mathrm{~g} / \mathrm{ms}$ |
| EMC compliance | In acc. with EN 61496-1/EN 50022 Part A |



Ordering table


| Item | Actuator Part Number | Switching distance $\mathrm{S}_{\text {on }}$ [mm] | Circuit diagra Gate Closed | Maximm Contact Ratings |
| :---: | :---: | :---: | :---: | :---: |
| MP4-D-03P | MP4-M | Son :6mm | $\square_{\text {- }}^{\text {BN }}$ B | $\begin{aligned} & 100 \mathrm{~V} \mathrm{AC} / \mathrm{DC} \\ & 400 \mathrm{~mA} \end{aligned}$ |
| MP4-D-03PM | MP4-MM | $\mathrm{S}_{\text {on }}: 9 \mathrm{~mm}$ |  |  |
| MP4-D-03S | MP4-M | Son $: 6 \mathrm{~mm}$ |  |  |
| MP4-D-03SM | MP4-MM | $\mathrm{S}_{\text {on }}: 9 \mathrm{~mm}$ |  |  |
| MP4-D-11 | MP4-M | $\mathrm{S}_{\text {on }}: 6 \mathrm{~mm} \quad \mathrm{~S}_{\text {off }}: 15 \mathrm{~mm}$ | $\square_{\square_{\mathrm{NH}}^{8 \mathrm{~N}}}^{\mathrm{BK}}$ | $\begin{aligned} & 100 \mathrm{~V} \mathrm{AC} / \mathrm{DC} \\ & 400 \mathrm{~mA} \end{aligned}$ |
| MP4-D-11M | MP4-MM | $\mathrm{S}_{\text {on }}: 9 \mathrm{~mm} \quad \mathrm{Soff}_{\text {off }}: 18 \mathrm{~mm}$ |  |  |
| MP4-D-11E | MP4-M | $\mathrm{Son}_{\text {on }}: 6 \mathrm{~mm} \quad \mathrm{~S}_{\text {off }}: 15 \mathrm{~mm}$ |  | $\begin{aligned} & 24 \mathrm{VDC} \\ & 10 \mathrm{~mA} \end{aligned}$ |
| MP4-D-11EM | MP4-MM | $\mathrm{Son}_{\text {on }}: 9 \mathrm{~mm} \quad \mathrm{~S}_{\text {ff }}: 18 \mathrm{~mm}$ |  |  |
| MP4-D-12S | MP4-M | $\mathrm{S}_{\text {on }}: 6 \mathrm{~mm}$ Soff $: 6 \mathrm{~mm}$ | $\square_{\square}^{\square}$ | $\begin{aligned} & 100 \mathrm{~V} \mathrm{AC} / \mathrm{DC} \\ & 400 \mathrm{~mA} \end{aligned}$ |
| MP4-D-12SM | MP4-MM | $S_{\text {on }}: 9 \mathrm{~mm}$ Soff $: 18 \mathrm{~mm}$ |  |  |
| MP4-D-12SE | MP4-M | $\mathrm{Son}_{\text {on }}: 6 \mathrm{~mm}$ S $\mathrm{Soff}: 15 \mathrm{~mm}$ |  | $\begin{aligned} & 24 \mathrm{VDC} \\ & 10 \mathrm{~mA} \end{aligned}$ |
| MP4-D-12SME | MP4-MM | $\mathrm{Son}_{\text {on }}: 9 \mathrm{~mm} \quad \mathrm{Sofft}: 18 \mathrm{~mm}$ |  |  |
| MP4-D-12 | MP4-M | $\mathrm{S}_{\text {on }}: 6 \mathrm{~mm} \quad \mathrm{~S}_{\text {off }}: 15 \mathrm{~mm}$ |  | $\begin{aligned} & 100 \mathrm{~V} \mathrm{AC} / \mathrm{DC} \\ & 400 \mathrm{~mA} \end{aligned}$ |
| MP4-D-12M | MP4-MM | $\mathrm{Son}_{\text {on }}: 9 \mathrm{~mm} \quad \mathrm{Soff}_{\text {off }}: 18 \mathrm{~mm}$ |  |  |
| MP4-D-12E | MP4-M | $\mathrm{Son}_{\text {on }}: 6 \mathrm{~mm}$ Soff $: 15 \mathrm{~mm}$ |  | $\begin{aligned} & 24 \mathrm{VDC} \\ & 10 \mathrm{~mA} \end{aligned}$ |
| MP4-D-12ME | MP4-MM | $\mathrm{Son}_{\text {on }}: 9 \mathrm{~mm} \quad \mathrm{Sofft}: 18 \mathrm{~mm}$ |  |  |

## MP-5Series Magnetic Safety Switches (IP68)

Technical Specifications

| Housing material | Glassfiber Reinforced Plastics |
| :--- | :--- |
| Ambient temperature | -25 to $70^{\circ} \mathrm{C} \quad\left(-13\right.$ to $\left.158^{\circ} \mathrm{F}\right)$ |
| Degree of protection | IP67 (IEC/EN 60529) |
| Switching voltage | 100 V AC/DC |
| Switching current $\mathrm{I}_{\mathrm{e}} \mathrm{max}$. | 400 mA |
| Auxiliary contact | 24 V DC |
| Switching voltage <br> Switching current $\mathrm{I}_{\mathrm{e}} \mathrm{max}$. | 10 mA |
| Method of operation | Magnetic, reed contact |
| Mech. life | 10 million cycles |
| Vibration resistance | As per IEC/EN 60947-5-2 |
| Impact strength | $50 \mathrm{~g} / \mathrm{ms}$ |
| Shock resistance | $11 \mathrm{~g} / \mathrm{ms}$ |
| EMC compliance | In acc. with EN 61496-1/EN 50022 Part A |



Ordering table

| Item | Actuator Part Number | Switching distance $\mathrm{S}_{\text {on }}[\mathrm{mm}]$ | Circuit diagra Gate Closed | Maximm Contact Ratings |
| :---: | :---: | :---: | :---: | :---: |
| MP5-D-03P | MP5-M | $\mathrm{S}_{\text {on }}: 6 \mathrm{~mm}$ |  | $\begin{aligned} & 100 \mathrm{~V} \mathrm{AC} / \mathrm{DC} \\ & 400 \mathrm{~mA} \end{aligned}$ |
| MP5-D-03PM | MP5-MM | $\mathrm{Son}_{\text {on }}: 9 \mathrm{~mm}$ |  |  |
| MP5-D-03S | MP5-M | $\mathrm{S}_{\text {on }}: 6 \mathrm{~mm}$ |  |  |
| MP5-D-03SM | MP5-MM | $\mathrm{S}_{\text {on }}: 9 \mathrm{~mm}$ |  |  |
| MP5-D-11 | MP5-M | $\mathrm{S}_{\text {on }}: 6 \mathrm{~mm}$ Soff 15 mm |  | $\begin{aligned} & 100 \mathrm{~V} \mathrm{AC} / \mathrm{DC} \\ & 400 \mathrm{~mA} \end{aligned}$ |
| MP5-D-11M | MP5-MM | $\mathrm{S}_{\text {on }}: 9 \mathrm{~mm} \quad \mathrm{~S}_{\text {off }}: 18 \mathrm{~mm}$ | $\square_{B N}^{B U}$ |  |
| MP5-D-11E | MP5-M | $\mathrm{S}_{\text {on }}: 6 \mathrm{~mm} \quad \mathrm{~S}_{\text {off }}: 15 \mathrm{~mm}$ |  | $\begin{aligned} & 24 \mathrm{VDC} \\ & 10 \mathrm{~mA} \end{aligned}$ |
| MP5-D-11EM | MP5-MM | $\mathrm{Son}_{\text {on }}: 9 \mathrm{~mm} \quad S_{\text {ffi }}: 18 \mathrm{~mm}$ |  |  |
| MP5-D-12S | MP5-M | $\mathrm{S}_{\text {on }}: 6 \mathrm{~mm}$ S $\mathrm{Soff}_{\text {of }}: 6 \mathrm{~mm}$ |  | $\begin{aligned} & 100 \mathrm{~V} \mathrm{AC} / \mathrm{DC} \\ & 400 \mathrm{~mA} \end{aligned}$ |
| MP5-D-12SM | MP5-MM | $\mathrm{Son}_{\text {on }}: 9 \mathrm{~mm} \quad \mathrm{~S}_{\text {off }}: 18 \mathrm{~mm}$ |  |  |
| MP5-D-12SE | MP5-M | $\mathrm{Son}_{\text {on }}: 6 \mathrm{~mm} \quad \mathrm{~S}_{\text {off }}: 15 \mathrm{~mm}$ |  | $\begin{aligned} & 24 \mathrm{VDC} \\ & 10 \mathrm{~mA} \end{aligned}$ |
| MP5-D-12SME | MP5-MM | $\mathrm{Son}_{\text {on }}: 9 \mathrm{~mm} \quad \mathrm{~S}_{\text {off }}: 18 \mathrm{~mm}$ |  |  |
| MP5-D-12 | MP5-M | $\mathrm{Son}_{\text {on }}: 6 \mathrm{~mm} \quad \mathrm{~S}_{\text {off }}: 15 \mathrm{~mm}$ | $\mathrm{GY}_{\mathrm{GN}}^{\mathrm{GN}}$ | $\begin{aligned} & 100 \mathrm{~V} \mathrm{AC} / \mathrm{DC} \\ & 400 \mathrm{~mA} \end{aligned}$ |
| MP5-D-12M | MP5-MM | $\mathrm{S}_{\text {on }}: 9 \mathrm{~mm} \quad \mathrm{Soff}_{\text {off }}: 18 \mathrm{~mm}$ |  |  |
| MP5-D-12E | MP5-M | $\mathrm{S}_{\text {on }}: 6 \mathrm{~mm}$ Soff $: 15 \mathrm{~mm}$ |  | $\begin{aligned} & 24 \mathrm{VDC} \\ & 10 \mathrm{~mA} \end{aligned}$ |
| MP5-D-12ME | MP5-MM | $\mathrm{Son}_{\text {on }}: 9 \mathrm{~mm} \quad \mathrm{~S}_{\text {off }}: 18 \mathrm{~mm}$ |  |  |

## MP-6 Series Magnetic Safety Switches (IP68)

Technical Specifications

| Housing material | Glassfiber Reinforced Plastics |
| :--- | :--- |
| Ambient temperature | -25 to $70^{\circ} \mathrm{C}\left(-13\right.$ to $\left.158^{\circ} \mathrm{F}\right)$ |
| Degree of protection | IP67 (IEC/EN 60529) |
| Safety Contact Rating | $230 \mathrm{Vac} / 2 \mathrm{Amps} \quad 30 \mathrm{Vdc} / 1 \mathrm{Amp}$ |
| Auxiliary contact <br> Switching voltage | $15 \mathrm{~W} / 10 \mathrm{VA}$ |
| Method of operation | Magnetic, reed contact |
| Mech. life | 10 million cycles |
| Vibration resistance | As per IEC/EN 60947-5-2 |
| Impact strength | $50 \mathrm{~g} / \mathrm{ms}$ |
| Shock resistance | $11 \mathrm{~g} / \mathrm{ms}$ |
| EMC compliance | In acc. with EN 61496-1/EN 50022 Part A |



Ordering table


| Item | Actuator <br> Part Number | Switching distance $S_{\text {on }}[\mathrm{mm}]$ | Circuit diagram Gate Closed |
| :---: | :---: | :---: | :---: |
| MP6-01 | MP6-M | S on : 10 mm Soff: 30 mm |  |
| MP6-02 | MP6-M | Son $: 10 \mathrm{~mm}$ Soff: 30 mm | $\underbrace{80}$ |
| MP6-11 | MP6-M | Son : 10 mm Soff: 30 mm |  |
| MP6-12 | MP6-M | $\mathrm{S}_{\text {on }}: 10 \mathrm{~mm}$ Soff: 30 mm |  |

