## Auto Switch Guide



Consolidate your auto switches. Simplify your onsite inventory control.



* The basic cylinder series is shown here. To use auto switches the magnetic version must be specified, unless a magnet for auto switches is standard. Eg. for CQ2 cylinders CDQ2 must be specified. See individual catalogue sections for details.


## Direct mounting style

 Round grooveD-M9 $\square$


Applicable Auto Switch/Direct mounting


- Since there are other applicable auto switches than those listed, refer to pages 11 to 15 or SMC's Best Pneumatics catalogue for details.
(*) Only solid state switches can be used.
(**) Bracket BMY3-016 is also required.



## Applicable Auto Switch/Short Body Type/Direct mounting

| Applicable Series | Solid state switch type |  |  |  | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 24 VDC 2-wire | 24 VDC <br> 3-wire (PNP) | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (NPN) } \end{gathered}$ | 24 VDC (2-colour indication) 3-wire (PNP) |  |
| CUJ <br> MGJ <br> CRJ * <br> MSQ (1~7) * | D-F8BL | D-F8PL | D-F8NL | - | - Lead wire length $=3 \mathrm{~m}$, refer to page 11 for other lengths. |

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- Since there are other applicable auto switches than those listed, refer to pages 11 to 15 or SMC's Best Pneumatics catalogue for details.
(*) Only solid state switches can be used.
(**) Bracket BMP1-032 is also required.
(***) Solid state switches must be used for all MY1 types and bore sizes. MY1B (ø40), MY1M (ø25, ø40), MY1C (ø40) and MY1HT ( $\varnothing 50$, ø63) use different switches, see separate table below.


Applicable Auto Switch (MY1B, bore sizes ø25 to ø100 and MY1HT bore sizes ø50, ø63)
(CXS bore sizes ø6 to ø32 and CXSW bore sizes ø6 to ø32)

| Applicable Series |  | Reed switch type |  | d state switch |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 24 VDC 2-wire | 24 VDC <br> 3-wire (PNP) | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (NPN) } \end{gathered}$ | 24 VDC <br> (2-colour indication) 3-wire (PNP) | Description |
| MY1B (ø40) <br> MY1M ( $\varnothing 25, \varnothing 40$ ) <br> MY1C (ø40) <br> MY1HT | $\begin{aligned} & \text { CXS } \\ & \text { CXSW } \end{aligned}$ | D-Z73L | D-Y7PL | D-Y59AL | D-Y7PWL | With lead wire length $=3 \mathrm{~m}$ Consult SMC for other lengths. |
|  |  | - | D-Y7PSAPC | D-Y59ASAPC | D-Y7PWSAPC | With pre-wired connector (M8-3pin). Lead wire length = |
| CXW |  | D-A73HL | D-F7PL | D-F79L | D-F7PWL | With lead wire length $=3 \mathrm{~m}$ Consult SMC for other lengths. |
|  |  | - | D-F7PSAPC | D-F79SAPC | D-F7PWSAPC | With pre-wired connector (M8-3pin). Lead wire length = |

Rail mounting style

D-M9 $\square$


## Applicable Auto Switch + Mounting Bracket (BQ2-012)

|  | Reed switch type | Solid state switch type |  |  | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 24 VDC 2-wire | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (PNP) } \end{gathered}$ | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (NPN) } \end{gathered}$ | 24 VDC (2-colour indication) 3-wire (PNP) |  |
| $\begin{aligned} & \text { CE1 (ø12 to 25) ** } \\ & \text { CJ2 (ه10, 16) } \\ & \text { CQ2 (ø12 to } 25) \\ & \text { MK }(\varnothing 20,25) \end{aligned}$ | $\begin{gathered} \text { D-A93L } \\ \text { BQ2-012 } \\ * * * \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ \text { BQ2-012 } \\ * * * \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \text { BQ2-012 } \\ * * * \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ + \\ \text { BQ2-012 } \\ * * * \end{gathered}$ | - Lead wire length $=3 \mathrm{~m}$, refer to page 11 for other lengths. |
| ```MU * MLU * MRQ RSQ (\varnothing16, 20)``` | - | $\begin{gathered} \text { D-M9PSAPC } \\ +\quad \text { BQ2-012 } \\ * * * \end{gathered}$ | $\begin{gathered} \text { D-M9NSAPC } \\ +\quad \text { BQ2-012 } \\ * * * \end{gathered}$ | $\begin{gathered} \text { D-M9PWSAPC } \\ +\quad+012 \\ \text { BQ2-012 } \\ * * * \end{gathered}$ | Auto switch with pre-wired connector (M8-3pin). <br> - Lead wire length $=0.5 \mathrm{~m}$, refer to page 15 for other lengths. |

- Since there are other applicable auto switches than those listed, refer to SMC's Best Pneumatics catalogue for details.
(*) Only solid state switches can be used.
(**) ø12 - Only solid state switches can be used.
(***) CE1, CQ2, MK, MK2, RSQ use BQ-1 and BQ2-012 as a set.
MU, MLU use BMU2-025 and BQ2-012 as a set.
MRQ use BQ-2 and BQ2-012 as a set.


Applicable Auto Switch (CY1, REA, bore size ø6 to ø100)

| Applicable Series | Reed switch type | Solid state switch type |  |  | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} 24 \text { VDC } \\ \text { 2-wire } \end{gathered}$ | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (PNP) } \end{gathered}$ | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (NPN) } \end{gathered}$ | 24 VDC <br> (2-colour indication) 3-wire (PNP) |  |
| CY1H <br> CY1HT <br> REAH/REBH <br> REAHT/REBHT | D-Z73L | D-Y7PL | D-Y59AL | D-Y7PWL | With lead wire length $=3 \mathrm{~m}$ Consult SMC for other lengths. |
|  | - | D-Y7PSAPC | D-Y59ASAPC | D-Y7PWSAPC | With pre-wired connector (M8-3pin). Lead wire length $=$ |
| CY1S <br> CY1L <br> REAL <br> REAS | D-A73HL | D-F7PL | D-F79L | D-F7PWL | With lead wire length $=3 \mathrm{~m}$ Consult SMC for other lengths. |
|  | - | D-F7PSAPC | D-F79SAPC | D-F7PWSAPC | With pre-wired connector (M8-3pin). Lead wire length $=$ |



Applicable Auto Switch + Mounting bracket

| Applicable Series | Bore size (mm) | Reed switch type | Solid state switch type |  |  | Auto switch with pre-wired connector |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 24 VDC 2-wire | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (PNP) } \end{gathered}$ | 24 VDC <br> 3-wire (NPN) | 24 VDC (2-colour indication) 3-wire (PNP) |  |
| C95 ** <br> MB (ø32 to 125) <br> MNB (ø32 to 100) | 32, 40 | $\begin{gathered} \text { D-A93L } \\ +\stackrel{+}{4} \\ \text { BMB5-032 } \\ \hline \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ \text { BMB5-032 } \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \text { BMB5-032 } \end{gathered}$ | $\begin{aligned} & \text { D-M9PWL } \\ & \stackrel{+}{\text { BMB5-032 }} \\ & \hline \end{aligned}$ |  |
|  | 50,63 | $\begin{gathered} \hline \text { D-A93L } \\ ++ \\ \text { BA7-040 } \end{gathered}$ | $\begin{aligned} & \hline \text { D-M9PL } \\ & ++ \\ & \text { BA7-040 } \end{aligned}$ | $\begin{aligned} & \hline \text { D-M9NL } \\ & ++ \\ & \text { BA7-040 } \end{aligned}$ | $\begin{gathered} \text { D-M9PWL } \\ \text { B7-040 } \end{gathered}$ |  |
|  | 80, 100 | $\begin{gathered} \hline \text { D-A93L } \\ + \\ \text { BA7-063 } \end{gathered}$ | $\begin{gathered} \hline \text { D-M9PL } \\ \text { BA7-063 } \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ ++ \\ \text { BA7-063 } \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ ++ \\ \text { BA7-063 } \end{gathered}$ |  |
|  | 125 | $\begin{gathered} \text { D-A93L } \\ ++ \\ \text { BA7-080 } \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ ++ \\ \text { BA7-080 } \end{gathered}$ | $\begin{aligned} & \text { D-M9NL } \\ & \text { BA7-080 } \end{aligned}$ | $\begin{gathered} \text { D-M9PWL } \\ \text { BA7-080 } \end{gathered}$ | 24 VDC 3-wire (PNP): |
|  | 160, 200 | $\begin{gathered} \text { D-A93L } \\ \text { BS5-160 } \\ \hline \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ + \\ \text { BS5-160 } \\ \hline \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ + \\ \text { BS5-160 } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { D-M9PWL } \\ ++ \\ \text { BS5-160 } \\ \hline \end{gathered}$ | 24 VDC <br> 3-wire (NPN): |
| CA2 * CNA * CL1 * | 40, 50 | $\begin{gathered} \text { D-A93L } \\ ++ \\ \text { BA7-040 } \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ +\quad+ \\ \text { BA7-040 } \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ ++ \\ \text { BA7-040 } \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ ++040 \\ \text { BA7-040 } \end{gathered}$ | D-M9NSAPC |
|  | 63 | $\begin{gathered} \text { D-A93L } \\ \text { B7-063 } \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ \text { BA7-063 } \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \text { BA7-063 } \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \text { BA7-063 } \end{gathered}$ | 24 VDC <br> Diagnostic indication (2-colour indication) 3-wire (PNP): <br> D-M9PWSAPC |
|  | 80, 100 | $\begin{gathered} \text { D-A93L } \\ \text { BA7-080 } \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ ++ \\ \text { BA7-080 } \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \text { BA7-080 } \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ +\quad+ \\ \text { BA7-080 } \end{gathered}$ |  |
| CS1 <br> CLS *** <br> CNS (ه125 to 160) <br> CL1 (o125 to 160) | 125, 140 | $\begin{gathered} \text { D-A93L } \\ ++ \\ \text { BS5-125 } \\ \hline \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ ++ \\ \text { BS5-125 } \end{gathered}$ | $\begin{aligned} & \hline \text { D-M9NL } \\ & \text { B }+125 \\ & \hline \end{aligned}$ | $\begin{gathered} \hline \text { D-M9PWL } \\ \text { B }+125 \\ \hline \end{gathered}$ |  |
|  | 160 | $\begin{gathered} \hline \text { D-A93L } \\ ++160 \end{gathered}$ | $\begin{gathered} \hline \text { D-M9PL } \\ ++160 \\ \text { BS5-1 } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { D-M9NL } \\ & ++ \\ & \text { BS5-160 } \end{aligned}$ | $\begin{gathered} \hline \text { D-M9PWL } \\ \text { BS5-160 } \end{gathered}$ |  |
|  | 180 | $\begin{gathered} \text { D-A93L } \\ ++ \\ \text { BS5-180 } \\ \hline \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ +\quad+ \\ \text { BS5-180 } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { D-M9NL } \\ & ++ \\ & \text { BS5-180 } \\ & \hline \end{aligned}$ | $\begin{gathered} \text { D-M9PWL } \\ \text { BS5-180 } \\ \hline \end{gathered}$ |  |
|  | 200 | $\begin{gathered} \hline \text { D-A93L } \\ ++ \\ \text { BS5-200 } \end{gathered}$ | $\begin{gathered} \hline \text { D-M9PL } \\ ++ \\ \text { BS5-200 } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { D-M9NL } \\ ++ \\ \text { BS5-200 } \\ \hline \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ ++ \\ \text { BS5-200 } \end{gathered}$ | - Lead wire length $=0.5 \mathrm{~m}$, refer to page 15 for other lengths. |

- Lead wire length $=3 \mathrm{~m}$, refer to page 11 for other lengths.
- Since there are other applicable auto switches than those listed, refer to pages 11 to 15 or SMC's Best Pneumatics catalogue for details.
(*) Only solid state switches can be used on $\varnothing 50$ cylinders.
(**) See separate table for C95 with 250 mm bore size.
(***) Autoswitches cannot be fitted to CLS ø250 cylinder part.


## Applicable Auto Switch + Mounting bracket (C95, bore size ø250mm)

| Applicable Series | $\begin{aligned} & \text { Bore } \\ & \text { size } \\ & (\mathrm{mm}) \end{aligned}$ | Reed switch type | Solid state switch type |  |  | Description |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{gathered} 24 \text { VDC } \\ \text { 2-wire } \end{gathered}$ | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (PNP) } \end{gathered}$ | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (NPN) } \end{gathered}$ | 24 VDC <br> (2-colour indication) 3-wire (PNP) |  |
| C95 | 250 | $\begin{gathered} \text { D-A54L } \\ \text { BT-20 } \\ \hline \end{gathered}$ | $\begin{gathered} \text { D-F5PL } \\ +\quad+ \\ \text { BT-20 } \end{gathered}$ | $\begin{gathered} \text { D-F59L } \\ \text { BT-20 } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { D-F5PWL } \\ ++ \\ \text { BT-20 } \\ \hline \end{gathered}$ | With lead wire length $=3 \mathrm{~m}$ Consult SMC for other lengths. |
|  |  | - | $\begin{gathered} \text { D-F5PSAPC } \\ + \\ \text { BT- } 20 \end{gathered}$ | $\begin{gathered} \text { D-F59SAPC } \\ + \\ \text { BT-20 } \end{gathered}$ | $\begin{gathered} \text { D-F5PWSAPC } \\ ++ \\ \text { BT-20 } \end{gathered}$ | With pre-wired connector (M8-3pin). Lead wire length $=$ |


uto switch with pre-wired connector
Applicable Auto Switch + Mounting Bracket (BJ3-1) + Mounting band

| Applicable Series | $\begin{aligned} & \text { Bore } \\ & \text { size } \\ & (\mathrm{mm}) \end{aligned}$ | Reed switch type | Solid state switch type |  |  | Auto switch with pre-wired connector |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 24 VDC 2-wire | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (PNP) } \end{gathered}$ | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (NPN) } \end{gathered}$ | 24 VDC <br> (2-colour indication) 3-wire (PNP) |  |
| $\begin{aligned} & \text { C85 ( } 08 \text { to 16) * } \\ & \text { CJ2 (ø6, 10, 16) } \\ & \text { CLJ2 (ø16) } \end{aligned}$ | 6 | $\begin{gathered} \mathrm{D}-\mathrm{A} 93 \mathrm{~L} \\ ++ \\ \mathrm{BJ} 3-1+\mathrm{BJ} 2-006 \end{gathered}$ | D-M9PL ++ BJ3-1 BJ2-006 | $\begin{gathered} \text { D-M9NL } \\ ++ \\ \text { BJ3-1 }+ \text { BJ2-006 } \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ +\quad+\quad \text { BJ2-006 } \\ \text { BJ3-1 } \end{gathered}$ | 24 VDC <br> 3-wire (PNP): <br> D-M9PSAPC <br> 24 VDC <br> 3-wire (NPN): |
|  | 8 | - | $\begin{gathered} \hline \text { D-M9PL } \\ ++ \\ \text { BJ3-1 }+ \text { BJ2-008 } \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ ++\quad \\ \text { BJ3-1 }+ \text { BJ2-008 } \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \text { BJ3-1 + }{ }^{+} J 2-008 \end{gathered}$ |  |
|  | 10 | $\begin{gathered} \mathrm{D}-\mathrm{A} 93 \mathrm{~L} \\ \mathrm{~B} \mathrm{+} 3-1+\mathrm{BJ} 2-010 \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ \text { BJ3- }+\mathrm{BJ} 2-010 \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \text { + }{ }^{\text {BJ3- }} \text { + } \mathrm{BJ} 2-010 \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \text { BJ3-1 + BJ2-010 } \end{gathered}$ |  |
|  | 12 | - | $\begin{gathered} \text { D-M9PL } \\ \text { BJ3- }+ \text { + }{ }^{2} \text { J2-012 } \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \text { + } \\ \text { BJ3- } \mathrm{BJ} 2-012 \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ ++\quad \mathrm{BJ} 2-012 \end{gathered}$ |  |
|  | 16 | $\begin{gathered} \hline \text { D-A93L } \\ ++ \\ \text { BJ3-1 }+ \text { BJ2-016 } \end{gathered}$ | $\begin{gathered} \hline \text { D-M9PL } \\ +\quad+\quad \text { BJ2-016 } \\ \text { BJ3-1 } \end{gathered}$ | $\begin{gathered} \hline \text { D-M9NL } \\ ++ \\ \text { BJ3-1 }+ \text { BJ2-016 } \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \text { BJ3-1 }+ \text { BJ2-016 } \end{gathered}$ |  |
| $\begin{aligned} & \text { C85 }(ø 20,25) \text { * } \\ & \text { C76 }(ø 32,40) \\ & \text { CM2 } \\ & \text { CLM2 } \end{aligned}$ | 20 | $\begin{gathered} \hline \mathrm{D}-\mathrm{A} 93 \mathrm{~L} \\ \stackrel{+}{\mathrm{B}} 22-020 \\ \mathrm{BJ} 3-1 \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ \stackrel{+}{\mathrm{BM}} 2-020 \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \stackrel{+}{\mathrm{BM} 2-020} \\ \mathrm{BJ} 3-1 \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \stackrel{+}{\mathrm{BM}} 2-020 \\ \mathrm{BJ} 3-1 \end{gathered}$ | D-M9NSAPC <br> 24 VDC <br> Diagnostic indication (2-color indication) 3-wire (PNP): <br> D-M9PWSAPC |
|  | 25 | $\begin{gathered} \hline \text { D-A93L } \\ \stackrel{+}{\mathrm{B}} \mathrm{M} 2-025 \end{gathered}$ | $\begin{gathered} \hline \text { D-M9PL } \\ \stackrel{+}{\mathrm{B}} 2 \mathrm{C} 2-025 \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \stackrel{+}{\mathrm{B}} 22-025 \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \text { BJ3-1 }+\stackrel{+}{\mathrm{B}} \mathrm{M}_{2}-025 \end{gathered}$ |  |
|  | 32 | $\begin{gathered} \mathrm{D}-\mathrm{A} 93 \mathrm{~L} \\ \stackrel{+}{\mathrm{B} M 2-032} \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ \text { BJ3- } 1+\stackrel{+}{\mathrm{B}} 2-032 \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \stackrel{+}{\text { BM2 }} 2-032 \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \stackrel{+}{\text { BM2-032 }} \end{gathered}$ |  |
|  | 40 | $\begin{gathered} \mathrm{D}-\mathrm{A} 93 \mathrm{~L} \\ \stackrel{+}{\mathrm{B}} \mathrm{M} 2-040 \\ \mathrm{BJ} 3-1 \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ \stackrel{+}{\text { BM2 }} 2-040 \\ \hline \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \stackrel{+}{\text { BM2-040 }} \\ \text { BJ3-1 } \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \text { BJ3-1 }+\stackrel{+}{\mathrm{B}} \text { 2-040 } \end{gathered}$ | - Lead wire length $=0.5 \mathrm{~m}$, refer to page 15 for other lengths. |
| CG1 ** <br> CLG1 (ø20 to 40) <br> CNG (o20 to 40) <br> MGC (o20 to 50) <br> MGG <br> REC (o20 to 40) <br> RHC ** <br> RSG $(\varnothing 40,50)$ | 20 | $\begin{gathered} \text { D-A93L } \\ \text { BJ3-1 + }{ }^{\text {BMA }} \text { (2-020 } \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ \text { BJ3-1 + }{ }^{\text {B MA2 }} \text {-020 } \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \stackrel{+}{\mathrm{B}} \text { MA2-020 } \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \stackrel{+}{\mathrm{B}} \mathrm{MA} 2-020 \end{gathered}$ |  |
|  | 25 | $\begin{gathered} \hline \text { D-A93L } \\ \text { BJ3-1 }+\stackrel{+}{\text { BMA2-025 }} \end{gathered}$ | $\begin{gathered} \hline \text { D-M9PL } \\ \stackrel{+}{\text { BJ3-1 }}+{ }^{\text {BMA2-025 }} \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \stackrel{+}{\mathrm{B}} \text { MA2-025 } \\ \text { BJ3-1 } \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \stackrel{+}{\mathrm{B}} \mathrm{MA} 2-025 \end{gathered}$ |  |
|  | 32 | $\begin{gathered} \text { D-A93L } \\ \text { + } \\ \text { BJ3-1 }+{ }^{\text {BMA2-032 }} \\ \hline \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ \text { BJ3-1 }+\stackrel{+}{\text { BMA2-032 }} \\ \hline \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \stackrel{+}{\text { BJ3-1 }}+{ }^{\text {BMA2-032 }} \end{gathered}$ | $\begin{gathered} \mathrm{D}-\mathrm{M} 9 \mathrm{PWL} \\ \mathrm{~B} 3-1+\mathrm{B} \text { A2-032 } \\ \hline \end{gathered}$ |  |
|  | 40 | $\begin{gathered} \text { D-A93L } \\ \text { BJ3-1 + }{ }^{\text {BMA MA2-040 }} \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ \stackrel{+}{\mathrm{B}} \text { MA2-040 } \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \text { BJ3-1 + + BMA2-040 } \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \text { BJ3-1 }+\stackrel{+}{\text { BMA2 }} \text {-040 } \end{gathered}$ |  |
|  | 50 | $\begin{gathered} \text { D-A93L } \\ \text { BJ3-1 + + } \mathrm{B} \text { MA2-050 } \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ \stackrel{+}{\mathrm{B}} \mathrm{MA} 2-050 \\ \mathrm{BJ} 3-1 \end{gathered}$ | $\begin{gathered} \text { D-M9NL } \\ \stackrel{+}{\text { BJ3-1 }}+{ }^{\text {BMA2-050 }} \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \stackrel{+}{\text { BJ3-1 }}+\mathrm{BMA2-050} \end{gathered}$ |  |
|  | 63 | $\begin{gathered} \hline \text { D-A93L } \\ \stackrel{+}{\text { BJ3 }} \text { - } 12-063 \end{gathered}$ | $\begin{gathered} \text { D-M9PL } \\ \stackrel{+}{\text { BJ3-1 }}+{ }^{\text {BMA2-063 }} \end{gathered}$ | $\begin{gathered} \hline \text { D-M9NL } \\ \text { BJ3-1 + }{ }^{\text {B MA2 }} \text {-063 } \end{gathered}$ | $\begin{gathered} \text { D-M9PWL } \\ \text { BJ3-1 + + BMA2-063 } \end{gathered}$ |  |

- Lead wire length $=3 \mathrm{~m}$, refer to page 11 for other lengths.
- Since there are other applicable auto switches than those listed, refer to pages 11 to 15 or SMC's Best Pneumatics catalogue for details.
(*) $\varnothing 8$ to $\varnothing 12$, solid state switches only can be used.
(**) See separate table for CG1 and RHC with 80 and 100 mm bore size.

Stainless Steel Cylinder:

Water resistant 2-colour indication type. Solid state switch, 2-wire, 24VDC

Series CJ5-S

| Auto switch <br> model | Mounting bracket no. |  |
| :---: | :---: | :---: |
|  | $\varnothing 10$ | $\varnothing 16$ |
| D-H7BAL | BJ2- | BJ2- |
|  | 010 S | 016 S |

Series CG5-S

| Auto switch model | Mounting bracket no. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $ø 20$ | $ø 25$ | $ø 32$ | ø40 | $ø 50$ | ø63 | $ø 80$ | $\varnothing 100$ |
| D-G5BAL | NBA- | NBA- | BGS1 | BAF | BAF | BAF | BAF | BAF |
|  | 088S | 106S | -032S | -04S | -05S | -06S | -08S | -10S |

Band mounting style


Applicable Auto Switch + Mounting Bracket (CG1, RHC, bore size ø80, ø100)

| Applicable Series | $\begin{aligned} & \text { Bore } \\ & \text { size } \\ & (\mathrm{mm}) \end{aligned}$ | Reed switch type | Solid state switch type |  |  | Description |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 24 VDC 2-wire | 24 VDC <br> 3-wire (PNP) | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (NPN) } \end{gathered}$ | 24 VDC <br> (2-colour indication) <br> 3-wire (PNP) |  |
| $\begin{aligned} & \text { CG1 } \\ & \text { RHC } \end{aligned}$ | 80 | $\begin{gathered} \text { D-B54L } \\ +\quad \\ \text { BA }^{2}-08 \end{gathered}$ | $\begin{gathered} \text { D-G5PL } \\ + \\ \text { BA-08 } \end{gathered}$ | $\begin{gathered} \text { D-G59L } \\ ++ \\ \text { BA-08 } \end{gathered}$ | $\begin{gathered} \hline \text { D-G5PWL } \\ ++ \\ \text { BA-08 } \end{gathered}$ | With lead wire length $=3 \mathrm{~m}$ Consult SMC for other lengths. |
|  |  | - | $\begin{gathered} \hline \text { D-G5PSAPC } \\ + \\ \text { BA-08 } \end{gathered}$ | $\begin{gathered} \text { D-G59SAPC } \\ + \\ \text { BA-08 } \end{gathered}$ | $\begin{gathered} \hline \text { D-G5PWSAPC } \\ ++ \\ \text { BA-08 } \end{gathered}$ | With pre-wired connector (M83pin). Lead wire length $=0.5 \mathrm{~m}$ Consult SMC for other lengths. |
|  | 100 | $\begin{gathered} \text { D-B54L } \\ +\quad+10 \end{gathered}$ | $\begin{gathered} \text { D-G5PL } \\ \text { BA-10 } \end{gathered}$ | $\begin{gathered} \text { D-G59L } \\ +\quad+10 \end{gathered}$ | $\begin{gathered} \text { D-G5PWL } \\ ++10 \end{gathered}$ | With lead wire length $=3 \mathrm{~m}$ Consult SMC for other lengths. |
|  |  | - | $\begin{gathered} \text { D-G5PSAPC } \\ + \\ \text { BA-10 } \end{gathered}$ | $\begin{gathered} \text { D-G59SAPC } \\ + \\ \text { BA-10 } \end{gathered}$ | $\begin{gathered} \text { D-G5PWSAPC } \\ + \\ \text { BA-10 } \end{gathered}$ | With pre-wired connector (M83pin). Lead wire length $=0.5 \mathrm{~m}$ Consult SMC for other lengths. |

## Direct mounting style For rotary actuators (CRB2, CRBU2, CRB1, MSU)

D-93AL
Size (1, 3, 10, 15)
(size 1, 3, 10, 15)


D-S99/D-S9P


D-R73/D-S79/D-S7P
(Size 7, 20, 30, 40, 50, 63, 80, 100)


Applicable Auto Switch/ Rotary actuators (CRB2, CRBU2, CRB1, MSU)

| Applicable Series | Size | Reed switch type | Solid state switch type |  | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $24 \text { VDC }$ 2-wire | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (PNP) } \end{gathered}$ | $\begin{gathered} 24 \text { VDC } \\ \text { 3-wire (NPN) } \end{gathered}$ |  |
| CRB2 <br> CRBU2 <br> CRB1 <br> MSU | $\begin{gathered} 1 \\ 3 \\ 10 \\ 15 \end{gathered}$ | D-93AL | $\begin{aligned} & \text { D-S9P1L* } \\ & +\quad \\ & \text { D-S9P2L } \end{aligned}$ | $\begin{aligned} & \text { D-S991L* } \\ & +\quad \\ & \text { D-S992L } \end{aligned}$ | - Lead wire length $=3 \mathrm{~m}$, consult SMC for other lengths. |
|  |  | - | $\begin{aligned} & \text { D-S9P1SAPC* } \\ & +\quad+\quad \\ & \text { D-S9P2SAPC } \end{aligned}$ | $\begin{gathered} \text { D-S991SAPC* } \\ +\quad+\quad \\ \text { D-S992SAPC } \end{gathered}$ | Auto switch with pre-wired connector (M8-3pin). <br> - Lead wire length $=0.5 \mathrm{~m}$, |
|  | $\begin{gathered} 7 \\ 20 \\ 30 \\ 40 \\ 50 \\ 63 \\ 80 \\ 100 \end{gathered}$ | $\begin{aligned} & \text { D-R731L* } \\ & +\quad+\quad \\ & \text { D-R732L } \end{aligned}$ | $\begin{aligned} & \text { D-S7P1L* } \\ & \quad++ \\ & \text { D-S7P2L } \end{aligned}$ | $\begin{gathered} \text { D-S791L* } \\ +\quad+\quad \\ \text { D-S792L } \end{gathered}$ | - Lead wire length $=3 \mathrm{~m}$, consult SMC for other lengths. |
|  |  | - | $\begin{aligned} & \text { D-S7P1SAPC* } \\ & \text { } \begin{array}{l} + \\ \text { D-S7P2SAPC } \end{array} \end{aligned}$ | $\begin{aligned} & \text { D-S791SAPC* } \\ & +\quad \\ & \text { D-S792SAPC } \end{aligned}$ | Auto switch with pre-wired connector (M8-3pin). <br> - Lead wire length $=0.5 \mathrm{~m}$, consult SMC for other lengths. |

* Note, left handed and right handed switches are needed so order one off each part number.
- Since there are other applicable auto switches than those listed, refer to pages 11 to 15 or SMC's Best Pneumatics catalogue for details.

Applicable Auto Switch/ Rotary actuators (CRA1)

| Applicable Series | Size | Reed switch type <br> 24 VDC <br> 2-wire | Solid state switch type |  |  | Description |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 24 VDC 3-wire (PNP) | 24 VDC 3-wire (NPN) | 24 VDC <br> (2-colour indication) 3-wire (PNP) |  |
| CRA1 | 30 | D-A73L | D-F7PL | D-F79L | D-F7PWL | - Lead wire length $=3 \mathrm{~m}$, consult SMC for other lengths. |
|  |  | - | D-F7PSAPC | D-F79SAPC | D-F7PWSAPC | Auto switch with pre-wired connector (M8-3pin). <br> - Lead wire length $=0.5 \mathrm{~m}$, consult SMC for other lengths. |
|  | $\begin{gathered} 50 \\ 63 \\ 80 \\ 100 \end{gathered}$ | D-A53L | D-F5PL | D-F59L | D-F5PWL | - Lead wire length $=3 \mathrm{~m}$, consult SMC for other lengths. |
|  |  | - | D-F5PSAPC | D-F59SAPC | D-F5PWSAPC | Auto switch with pre-wired connector (M8-3pin). <br> - Lead wire length $=0.5 \mathrm{~m}$, consult SMC for other lengths. |

- Since there are other applicable auto switches than listed, refer to SMC's Pneumatics catalogue for details.

Applicable Auto Switch/ Rotary actuators (CRJ, CRQ2, MSQ, MSZ)

[^1]
## Auto Switch Specifications

## Auto Switch Common Specifications

| Type | Reed switch | Solid state switch |
| :---: | :---: | :---: |
| Leakage current | None | 3-wire: $100 \mu \mathrm{~A}$ or less 2 -wire: 0.8 mA or less |
| Operating time | 1.2 ms | 1 ms or less |
| Impact resistance | $300 \mathrm{~m} / \mathrm{s}^{2}$ | $1000 \mathrm{~m} / \mathrm{s}^{2}$ |
| Insulation resistance | $50 \mathrm{M} \Omega$ or more at 500 Mega VDC (between lead wire and case) |  |
| Withstand voltage | 1000 VAC for 1 minute (between lead wire and case) | 1000 VAC for 1 minute (between lead wire and case) |
| Ambient temperature | -10 to $60^{\circ} \mathrm{C}$ |  |
| Enclosure | IEC529 standard IP67, JIS C 0920 waterproof construction |  |
| Standard | Conforming to CE Standards |  |

## How to Order



Note 1) Applicable auto switch with 5 m lead wire " $Z$ "
Solid state switch: Manufactured upon receipt of order as standard.
Note 2) For $1 \mathrm{~m}(\mathrm{M})$, available with $\mathrm{D}-\mathrm{M} 9 \square \mathrm{~W}(\mathrm{~V})$ only.

## Applicable Wire Stripper

When the cable sheath is stripped, confirm the stripping direction. The insulator may be split or damaged depending on the direction. (D-M9 $\square(\mathrm{V})$ only)


Recommended Tool

| Model name | Model no. |
| :---: | :---: |
| Wire stripper | D-M9N-SWY |

[^2]
## Contact Protection Boxes: CD-P11, CD-P12

## <Applicable switch model>

D-A9/A9■V
The auto switches above do not have a built-in contact protection circuit. Therefore, please use a contact protection box with the switch for any of the following cases:
(1) Where the operation load is an inductive load.
(2) Where the wiring length to load is greater than 5 m .
(3) Where the load voltage is 100 VAC.

The contact life may be shortened. (Due to permanent energising conditions.)

## Specifications

| Part no. | CD-P11 |  | CD-P12 |
| :---: | :---: | :---: | :---: |
| Load voltage | 100 VAC | 200 VAC | 24 VDC |
| Maximum load current | 25 mA | 12.5 mA | 50 mA |

* Lead wire length - Switch connection side 0.5 m Load connection side 0.5 m


Internal Circuit

| CD-P11 |  | - OUT Brown - OUT Blue |
| :---: | :---: | :---: |
| CD-P12 |  | $\begin{aligned} & \text { —OUT (+) } \\ & \text { Brown } \\ & \text { — OUT (-) } \\ & \text { Blue } \end{aligned}$ |

## Dimensions



## Connection

To connect a switch unit to a contact protection box, connect the lead wire from the side of the contact protection box marked SWITCH to the lead wire coming out of the switch unit. Keep the switch as close as possible to the contact protection box, with a lead wire length of no more than 1 metre.

# Solid State Switch: Direct Mounting Style D-M9N(V)/D-M9P(V)/D-M9B(V) ( E 

## Grommet

- 2-wire load current is reduced (2.5 to 40 mA ).


## - Lead free

- UL certified (style 2844) lead cable is used.
- Flexibility is 1.5 times greater than the conventional model (SMC comparison).
- Using flexible cable as standard spec.


## ©Caution

Operating Precautions
Fix the switch with the existing screw installed on the switch body. The switch may be damaged if a screw other than the one supplied, is used.

## Auto Switch Internal Circuit



Auto Switch Specifications

|  |  |  |  | PLC: Programmable Logic Controller |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| D-M9 $\square / \mathrm{D}-\mathrm{M} 9 \square \mathrm{~V}$ (With indicator light) |  |  |  |  |  |  |
| Auto switch part no. | D-M9N | D-M9NV | D-M9P | D-M9PV | D-M9B | D-M9BV |
| Electrical entry direction | In-line | Perpendicular | In-line | Perpendicular | In-line | Perpendicular |
| Wiring type | 3-wire |  |  |  | 2-wire |  |
| Output type | NPN |  | PNP |  | - |  |
| Applicable load | IC circuit, Relay, PLC |  |  |  | 24 VDC relay, PLC |  |
| Power supply voltage | 5, 12, 24 VDC (4.5 to 28 V ) |  |  |  | - |  |
| Current consumption | 10 mA or less |  |  |  | - |  |
| Load voltage | 28 VDC or less |  | - |  | 24 VDC (10 to 28 VDC) |  |
| Load current | 40 mA or less |  |  |  | 2.5 to 40 mA |  |
| Internal voltage drop | 0.8 V or less |  |  |  | 4 V or less |  |
| Leakage current | 100 A or less at 24 VDC |  |  |  | 0.8 mA or less |  |
| Indicator light | Red LED illuminates when ON. |  |  |  |  |  |
| Standard | Conforming to CE Standards |  |  |  |  |  |
| - Lead wires |  |  |  |  |  |  |
| Oilproof heavy-duty vinyl cable: $\varnothing 2.7 \times 3.2$ ellipse |  |  |  |  |  |  |
| $\begin{array}{ll}\text { D-M9B(V) } & 0.15 \mathrm{~mm}^{2} \times 2 \text { cores } \\ \text { D-M9N(V), D-M9P(V) } & 0.15 \mathrm{~mm}^{2} \times 3 \text { cores }\end{array}$ |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Note 1) Refer to page 15 for details of solid state switch with pre-wired connector. |  |  |  |  |  |  |
| Note 2) Refer to page 11 for solid state switch common specifications and for lead wire lengths. |  |  |  |  |  |  |
| Weight Unit: g |  |  |  |  |  |  |


| Auto switch part no. |  |  |  | D-M9N(V) |
| :---: | :---: | :---: | :---: | :---: |
| Lead wire length <br> $(\mathrm{m})$ | $0.5(-)$ | 8 | D-M9P(V) | D-M9B(V) |
|  | $1(\mathrm{M})$ | 14 | 8 | 7 |
|  | $3(\mathrm{~L})$ | 41 | 41 | 13 |
|  | $5(\mathrm{Z})$ | 68 | 68 | 38 |

Dimensions
Unit: mm
D-M9 $\square$

D-M9■V



## Normally Closed Solid State Auto Switch Direct Mounting Type D-M9NE(V)/D-M9PE(V)/D-M9BE(V) C $\epsilon$

## Grommet

- Output signal turns on when no magnetic force is detected.
- Can be used for the actuator adopted by the solid state auto switch D-M9 series (excluding special order products)



## ©Caution

## Precautions

Fix the auto switch with the existing screw installed on the auto switch body. The auto switch may be damaged if a screw other than the one supplied is used.

Refer to SMC website for the details of the products conforming to the international standards.

| D-M9 $\square$ E, D-M9 $\square$ EV (With indicator light) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Auto switch model | D-M9NE | D-M9NEV | D-M9PE | D-M9PEV | D-M9BE | D-M9BEV |
| Electrical entry direction | In-line | Perpendicular | In-line | Perpendicular | In-line | Perpendicular |
| Wiring type | 3-wire |  |  |  | 2-wire |  |
| Output type | NPN |  | PNP |  | - |  |
| Applicable load | IC circuit, Relay, PLC |  |  |  | 24 VDC relay, PLC |  |
| Power supply voltage | 5, 12, 24 VDC ( 4.5 to 28 V ) |  |  |  | - |  |
| Current consumption | 10 mA or less |  |  |  | - |  |
| Load voltage | 28 VDC or less |  | - |  | 24 VDC (10 to 28 VDC) |  |
| Load current | 40 mA or less |  |  |  | 2.5 to 40 mA |  |
| Internal voltage drop | 0.8 V or less at $10 \mathrm{~mA}(2 \mathrm{~V}$ or less at 40 mA$)$ |  |  |  | 4 V or less |  |
| Leakage current | $100 \mu \mathrm{~A}$ or less at 24 VDC |  |  |  | 0.8 mA or less |  |
| Indicator light | Red LED illuminates when turned ON. |  |  |  |  |  |
| Standard | CE marking, RoHS |  |  |  |  |  |

Oilproof Heavy-duty Lead Wire Specifications

| Auto switch model |  | D-M9NE(V) | D-M9PE(V) | D-M9BE(V) |
| :---: | :---: | :---: | :---: | :---: |
| Sheath | Outside diameter $[\mathrm{mm}]$ | 2.6 |  |  |
| Insulator | Number of cores | 3 cores (Brown/Blue/Black) | 2 cores (Brown/Blue) |  |
|  | Outside diameter $[\mathrm{mm}]$ | 0.88 |  |  |
|  | Effective area $\left[\mathrm{mm}{ }^{2}\right]$ | 0.15 |  |  |
|  | Strand diameter $[\mathrm{mm}]$ | 0.05 |  |  |
| Minimum bending radius $[\mathrm{mm}]$ (Reference values) |  | 17 |  |  |

Note 1) Refer to page 11 for solid state auto switch common specifications.
Note 2) Refer to page 11 for lead wire lengths.

## Weight

| Auto switch model |  | D-M9NE(V) | D-M9PE(V) | D-M9BE(V) |
| :---: | :---: | :---: | :---: | :---: |
| Lead wire length | $0.5 \mathrm{~m}(-)$ | 8 | 7 |  |
|  | $1 \mathrm{~m}(\mathbf{M})^{*}$ | 14 | 13 |  |
|  | $3 \mathrm{~m}(\mathbf{L})$ | 41 | 38 |  |
|  | $5 \mathrm{~m}(\mathbf{Z})^{*}$ | 68 | 63 |  |

* The 1 m and 5 m options are produced upon receipt of order.

Dimensions

D-M9 $\square E$


D-M9 $\square E V$


Mounting screw M2.5 x $4 \mathrm{~L} \quad$ Indicator light


Most sensitive position



## 2-Colour Indication Solid State Switch: Direct Mounting Style <br> D-M9NW(V)/D-M9PW(V)/D-M9BW(V) ( €

## Grommet

- 2-wire load current is reduced (2.5 to 40 mA ).
- RoHS compliant
- UL certified (style 2844) lead cable is used.
- Flexibility is 1.5 times greater than the conventional model (SMC comparison)
- Using flexible cable as standard spec.
- The optimum operating position can be determined by the colour of the light.
(Red $\nVdash$ Green $Æ$ Red)


Auto Switch Internal Circuit
D-M9NW(V)


## D-M9PW(V)



## D-M9BW(V)



Indicator light / Display method


Auto Switch Specifications
PLC: Programmable Logic Controller

| D-M9 $\square$ W/D-M9 $\square$ WV (With indicator light) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Auto switch part no. | D-M9NW | D-M9NWV | D-M9PW | D-M9PWV | D-M9BW | D-M9BWV |
| Electrical entry direction | In-line | Perpendicular | In-line | Perpendicular | In-line | Perpendicular |
| Wiring type | 3-wire |  |  |  | 2-wire |  |
| Output type | NPN |  | PNP |  | - |  |
| Applicable load | IC circuit, Relay IC, PLC |  |  |  | 24 VDC relay, PLC |  |
| Power supply voltage | 5, 12, 24 VDC (4.5 to 28 VDC) |  |  |  | - |  |
| Current consumption | 10 mA or less |  |  |  | - |  |
| Load voltage | 28 VDC | or less |  |  | 24 VDC (10 | to 28 VDC$)$ |
| Load current | 40 mA or less |  |  |  | 2.5 to 40 mA |  |
| Internal voltage drop | 0.8 V or less at 10 mA ( 2 V or less at 40 mA ) |  |  |  | 4 V or less |  |
| Leakage current | 100 A or less at 24 VDC |  |  |  | 0.8 mA or less |  |
| Internal voltage drop | Operating position .......... Red LED illuminates. <br> Optimum operating position .......... Green LED illuminates. |  |  |  |  |  |
| Standard | Conforming to CE Standards |  |  |  |  |  |

- Lead wires

Oilproof heavy-duty vinyl cable: ø2.7 x 3.2 ellipse
D-M9BW(V) $\quad 0.15 \mathrm{~mm}^{2} \times 2$ cores
D-M9NW(V), D-M9PW(V) $0.15 \mathrm{~mm}^{2} \times 3$ cores
Note 1) Refer to page 15 for details of solid state switch with pre-wired connector.
Note 2) Refer to page 11 for solid state switch common specifications and for lead wire lengths.

## Weight

Unit: g

| Auto switch part no. |  | D-M9NW(V) | D-M9PW(V) | D-M9BW(V) |
| :---: | :---: | :---: | :---: | :---: |
| Lead wire length <br> $(\mathrm{m})$ | 0.5 | 8 | 8 | 7 |
|  | 1 | 14 | 14 | 13 |
|  | 3 | 41 | 41 | 38 |
|  | 5 | 68 | 68 | 63 |

Dimensions
Unit: mm
D-M9■W



D-M9■WV


Mounting screw M2.5 x 4 I Indicator light


Solid State Switch
With Pre－wired Connector

## With Pre－wired Connector

－Eliminates the harnessing work by cable with connector specifications
－Adopts global standardized connector（IEC947－5－2）
－IP67 construction

## How to Order



Connector Pin Arrangement

| Sensor type | Colour distinction of lead wire |  |  |  | Meaning of contact number |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 pin | 2 pin | 3 pin | 4 pin | 1 pin | 2 pin | 3 pin | 4 pin |
| DC 2－wire type | Brown | - | - | Blue | OUT $(+)$ | - | - | OUT（－） |
| DC 3－wire type | Brown | - | Blue | Black | DC $(+)$ | - | DC $(-)$ | OUT |

## Weight

Unit：g
M8 connector type：

| Auto switch part no． |  | D－M9NロAPC | D－M9B $\square$ APC | D－M9N $\square$ BPC | D－M9B $\square$ BPC |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | D－M9P口APC |  | D－M9P口BPC |  |
| Lead wire length （m） | 0.5 | 11 | 11 | 11 | 11 |
|  | 1 | 18 | 18 | 18 | 18 |
|  | 3 | 46 | 46 | － | － |

M12 connector type：

| Auto switch part no． |  | D－M9N $\square$ DPC | D－M9B $\square$ DPC |
| :---: | :---: | :---: | :---: |
|  |  | D－M9P $\square$ DPC |  |
| Lead wire length <br> $(\mathrm{m})$ | 0.5 | 19 | 18 |
|  | 1 | 26 | 25 |

## Dimensions



## Other Available Switches

Since there are other applicable auto switches than those listed, refer to SMC's Best Pneumatics catalogue for details.

## Trimmer Auto Switch

One auto switch allows work pieces to be distinguished easily.

## With timer (with OFF delay timer)

Can detect an intermediate position of a high-speed cylinder.

## Resistant to strong magnetic fields

For use in enviroments where AC current is 16,000A or more.

## Without indicator

For light free enviroments.

Operating range: wide-area detection type

Operating range:
35 to 50 mm

Water, oil resistant

For water, coolant splash enviroments

## With diagnostic output

Displacement of the detecting position is detected at the PLC side.


Heat resistant

For use in enviroments of $150^{\circ} \mathrm{C}, 130^{\circ} \mathrm{C}$, $120^{\circ} \mathrm{C}$.

## Before Operation

Auto Switch Connection and Example

## Basic Wiring

## Solid state 3-wire, NPN


(Power supply for switch and load are separate)


Solid state 3-wire, PNP


Solid state 2-wire


Reed switch 2-wire



## Example of Connection with PLC (Programmable Logic Controller)

- Sink input specifications 3-wire, NPN


2-wire


- Source input specifications 3-wire, PNP


2-wire


These safety instructions are intended to prevent hazardous situations and／or equipment damage．These instructions indicate the level of potential hazard with the labels of＂Caution，＂＂Warning＂or＂Danger．＂They are all important notes for safety and must be followed in addition to International Standards（ISO／IEC）＊1），and other safety regulations．

## $\triangle$ Warning

1．The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications．
Since the product specified here is used under various operating conditions，its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results． The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product．This person should also continuously review all specifications of the product referring to its latest catalogue information，with a view to giving due consideration to any possibility of equipment failure when configuring the equipment．
2．Only personnel with appropriate training should operate machinery and equipment．
The product specified here may become unsafe if handled incorrectly．The assembly， operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced．
3．Do not service or attempt to remove product and machinery／equipment until safety is confirmed．
1．The inspection and maintenance of machinery／equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed．
2．When the product is to be removed，confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut，and read and understand the specific product precautions of all relevant products carefully．
3．Before machinery／equipment is restarted，take measures to prevent unexpected operation and malfunction．
4．Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions．
1．Conditions and environments outside of the given specifications，or use outdoors or in a place exposed to direct sunlight．
2．Installation on equipment in conjunction with atomic energy，railways，air navigation， space，shipping，vehicles，military，medical treatment，combustion and recreation，or equipment in contact with food and beverages，emergency stop circuits，clutch and brake circuits in press applications，safety equipment or other applications unsuitable for the standard specifications described in the product catalogue．
3．An application which could have negative effects on people，property，or animals requiring special safety analysis
4．Use in an interlock circuit，which requires the provision of double interlock for possible failure by using a mechanical protective function，and periodical checks to confirm proper operation．

## Caution

1．The product is provided for use in manufacturing industries．
The product herein described is basically provided for peaceful use in manufacturing industries．
If considering using the product in other industries，consult SMC beforehand and exchange specifications or a contract if necessary．
If anything is unclear，contact your nearest sales branch．
＊1）ISO 4414：Pneumatic fluid power－General rules relating to systems． ISO 4413：Hydraulic fluid power－General rules relating to systems． IEC 60204－1：Safety of machinery－Electrical equipment of machines． （Part 1：General requirements） ISO 10218－1：Manipulating industrial robots－Safety． etc．

## Limited warranty and Disclaimer／ Compliance Requirements

The product used is subject to the following＂Limited warranty and Disclaimer＂and＂Compliance Requirements＂．
Read and accept them before using the product．

## Limited warranty and Disclaimer

1．The warranty period of the product is 1 year in service or 1.5 years after the product is delivered，wichever is first．＊2） Also，the product may have specified durability，running distance or replacement parts．Please consult your nearest sales branch．
2．For any failure or damage reported within the warranty period which is clearly our responsibility，a replacement product or necessary parts will be provided． This limited warranty applies only to our product independently，and not to any other damage incurred due to the failure of the product．

3．Prior to using SMC products，please read and understand the warranty terms and disclaimers noted in the specified catalogue for the particular products．
＊2）Vacuum pads are excluded from this 1 year warranty．
A vacuum pad is a consumable part，so it is warranted for a year atter it is delivered． Also，even within the warranty period，the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty．

## Compliance Requirements

1．The use of SMC products with production equipment for the manufacture of weapons of mass destruction（WMD）or any other weapon is strictly prohibited．

2．The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction．Prior to the shipment of a SMC product to another country，assure that all local rules governing that export are known and followed．

## $\triangle$ Caution

SMC products are not intended for use as instruments for legal metrology．
Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology（measurement）laws of each country． Therefore，SMC products cannot be used for business or certification ordained by the metrology（measurement）laws of each country．

## Safety Instructions <br> Be sure to read＂Handling Precautions for SMC Products＂（M－E03－3）before using．

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| Austria | 盆＋43（0）2262622800 | www．smc．at | office＠smc．at | Lithuania | 를＋37052308118 | www．smcli．lt | info＠smclt．lt |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Belgium | 益＋32（0）33551464 | www．smcpneumatics．be | info＠smcpneumatics．be | Netherlands | 용＋31（0）205318888 | www．smcpneumatics．nl | info＠smcpneumatics．nl |
| Bulgaria | \％ $\mathbf{2}$＋359（0）2807670 | www．smc．bg | office＠smc．bg | Norway | 㿾＋4767129020 | www．smc－norge．no | post＠smc－norge．no |
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| Czech Republic | 莤＋420541424611 | www．smc．cz | office＠smc．cz | Portugal | 稫＋351226166570 | www．smc．eu | postpt＠smc．smces．es |
| Denmark | 을＋4570252900 | www．smcdk．com | smc＠smcdk．com | Romania | 용＋40213205111 | www．smcromania．ro | smcromania＠smcromania．ro |
| Estonia | 응＋3726510370 | www．smcpneumatics．ee | smc＠smcpneumatics．ee | Russia | 를 +78127185445 | www．smc－pneumatik．ru | info＠smc－pneumatik．ru |
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| Germany | 鯂＋49（0）61034020 | www．smc．de | info＠smc．de | Spain | 를 +34902184100 | www．smc．eu | post＠smc．smces．es |
| Greece | 益＋302102717265 | www．smchellas．gr | sales＠smchellas．gr | Sweden | 曾＋46（0）86031200 | www．smc．nu | post＠smc．nu |
| Hungary | 을＋3623513000 | www．smc．hu | office＠smc．hu | Switzerland | 응＋41（0）523963131 | www．smc．ch | info＠smc．ch |
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| Italy | 家＋390292711 | www．smcitalia．it | mailbox＠smcitalia．it | UK | 으․ +44 （0）845 1215122 | www．smcpneumatics．co．uk | sales＠smcpneumatics．co．uk |
| Latvia | 盆＋37167817700 | www．smclv．lv | info＠smclv．lv |  |  |  |  |
| SMC CORPORATION Akihabara UDX 15F，4－14－1，Sotokanda，Chiy |  |  |  | FAX：03－5298－5362 |  |  |  |


[^0]:    *) Also applicable to these models for short strokes.

[^1]:    - Refer to section "Direct mounting style/Round groove" on page 4.

[^2]:    * Stripper for a round cable (ø2.0) can be used for a 2-wire type cable.

