

Panasonic

SAFETY COMPONENTS

MAC-I LIMIT SWITCHES





Features

The MAC-I limit switches are developed and manufactured according to the rules set out in IEC international publications and EN European standards.

Easy to use, electromechanical limit switches offer specific qualities:

- Visible operation
- Able to switch strong currents (10A conventional thermal current)
- Precise operating points (consistency)
- Immune to electromagnetic disturbances
- Electrically separated contacts
- N.C. contacts with positive opening operation



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European Standards

- EN 50005 Low-voltage switchgear and controlgear for industrial use - Terminal marking and distinctive number: General rules (CEI 17-17).
- EN 50013 Low-voltage switchgear and controlgear for industrial use - Terminal marking and distinctive number for particular control switches (CEI 17-17).
- EN 50041 Low-voltage switchgear and controlgear for industrial use - Control switches - Position switches 42,5 x 80 - Dimensions and characteristics.
- EN 50047 Low-voltage switchgear and controlgear for industrial use - Control switches - Position switches 30 x 55 - Dimensions and characteristics.
- EN 60947-1 Low-voltage switchgear and controlgear for industrial use - Part 1: General rules (CEI EN 60947-1).
- EN 60947-5-1 Low-voltage switchgear and controlgear for industrial use - Part 5: Control circuit devices and switching elements - Section 1: Electromechanical control circuit devices (CEI EN 60947-5-1) - Chapter 3: Special requirements for control switches with positive opening operation.
- EN 60529 Degrees of protection provided by enclosures (IP code).
- EN 61058-1 Switches for appliances. Part. 1: General requirements.

MA150 series

Electrical connection

Replace the symbol "•" with the required thread:

0: for PG 13.5 cable gland

On request:

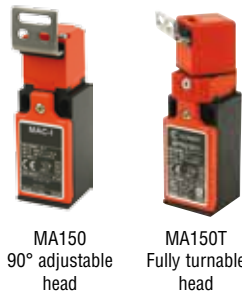
2: for 1/2" NPT cable gland

(with adapter in MA150 and MA160 series)

3: for PG11 cable gland

4: for M16 x 1.5 cable gland

5: for M20 x 1.5 cable gland



MA150
90° adjustable
head

MA150T
Fully turnable
head

Available contact blocks

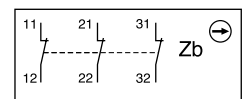
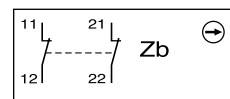
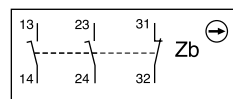
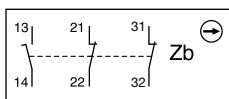
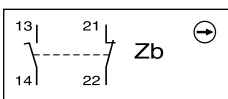
X11: Slow action break before
make 1NO + 1NC

X12P: Slow action break before
make 1NO + 2NC

X21P: Slow action break before
make 2NO + 1NC

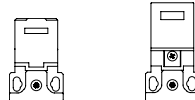
W02: Simultaneous slow action
2NC

W03P: Simultaneous slow action
3NC



MA150 series

30mm polymeric casing.
1 cable inlet. IP65



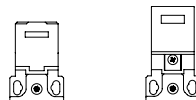
Contact blocks

	↔	↔
X11 (1NO+1NC)	MA15•T•X11	MA15•FT•X11
X12P (1NO+2NC)	MA15•T•X12P	MA15•FT•X12P
X21P (2NO+1NC)	MA15•T•X21P	MA15•FT•X21P
W02 (2NC)	MA15•T•W02	MA15•FT•W02
W03P (3NC)	MA15•T•W03P	MA15•FT•W03P



MA150M series

30mm metal casing.
1 cable inlet. IP66



Contact blocks

	↔	↔
X11 (1NO+1NC)	MA15•MT•X11	MA15•MFT•X11
X12P (1NO+2NC)	MA15•MT•X12P	MA15•MFT•X12P
X21P (2NO+1NC)	MA15•MT•X21P	MA15•MFT•X21P
W02 (2NC)	MA15•MT•W02	MA15•MFT•W02
W03P (3NC)	MA15•MT•W03P	MA15•MFT•W03P

Ordering code MA150 (T) series :

M A 1 5 0 M F T 8 3 X 1 1

Electrical connection
see top of page

Metal casing

Fully turnable head

Operating keys

T83, T84, T85
T86, T87, T88, T90
(see page 10)

Contact blocks

X11: Slow action break before
make 1NO + 1NC
X12P: Slow action break before
make 1NO + 2NC
X21P: Slow action break before
make 2NO + 1NC
W02: Simultaneous slow action
2NC
W03P: Simultaneous slow action
3NC

Electrical connection

Replace the symbol “•” with the required thread:

0: for PG 13.5 cable gland

On request:

2: for 1/2" NPT cable gland

(with adapter in MA150 and MA160 series)

3: for PG11 cable gland

4: for M16 x 1.5 cable gland

5: for M20 x 1.5 cable gland



MA160
90° adjustable
head

MA160T
Fully turnable
head

Available contact blocks

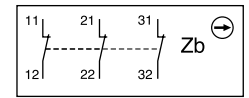
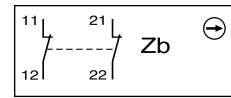
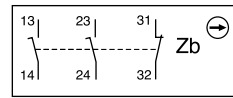
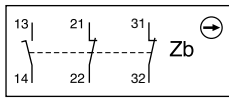
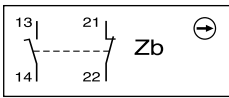
X11: Slow action break before
make 1NO + 1NC

X12P: Slow action break before
make 1NO + 2NC

X21P: Slow action break before
make 2NO + 1NC

W02: Simultaneous slow action
2NC

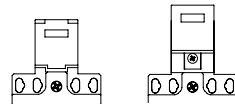
W03P: Simultaneous slow action
3NC



MA160 series

50mm polymeric casing.

2 cable inlets. IP65



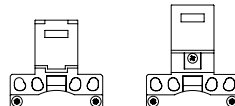
Contact blocks

	↻	↻
X11 (1NO+1NC)	MA16•T↻X11	MA16•FT↻X11
X12P (1NO+2NC)	MA16•T↻X12P	MA16•FT↻X12P
X21P (2NO+1NC)	MA16•T↻X21P	MA16•FT↻X21P
W02 (2NC)	MA16•T↻W02	MA16•FT↻W02
W03P (3NC)	MA16•T↻W03P	MA16•FT↻W03P

MA160M series

50mm metal casing.

3 cable inlets. IP66



Contact blocks

	↻	↻
X11 (1NO+1NC)	MA16•MT↻X11	MA16•MFT↻X11
X12P (1NO+2NC)	MA16•MT↻X12P	MA16•MFT↻X12P
X21P (2NO+1NC)	MA16•MT↻X21P	MA16•MFT↻X21P
W02 (2NC)	MA16•MT↻W02	MA16•MFT↻W02
W03P (3NC)	MA16•MT↻W03P	MA16•MFT↻W03P

Ordering code MA160 (T) series :

M A 1 6 0 M F T 8 3 X 1 1

Electrical connection
see top of page

Metal casing

Fully turnable head

Operating keys

T83, T84, T85
T86, T87, T88, T90
(see page 10)

Contact blocks

- X11: Slow action break before make 1NO + 1NC
- X12P: Slow action break before make 1NO + 2NC
- X21P: Slow action break before make 2NO + 1NC
- W02: Simultaneous slow action 2NC
- W03P: Simultaneous slow action 3NC

SLC & SLZ series 30mm

Electrical connection

Replace the symbol "•" with the required thread:

1: for PG 13.5 cable gland

On request:

2: for 1/2" NPT cable gland

(with adapter in MA150 and MA160 series)

3: for PG11 cable gland

4: for M16 x 1.5 cable gland

5: for M20 x 1.5 cable gland



C71
Zinc plated steel shaft
C72
Stainless steel shaft



Z61
Zinc plated steel lever



C71
Zinc plated steel shaft
C72
Stainless steel shaft



Z61
Zinc plated steel lever

Available contact blocks

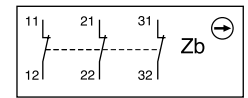
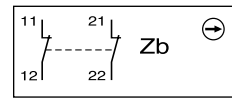
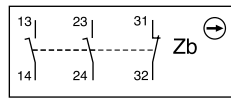
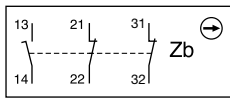
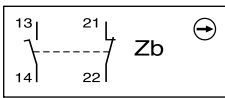
X11: Slow action break before make 1NO + 1NC

X12P: Slow action break before make 1NO + 2NC

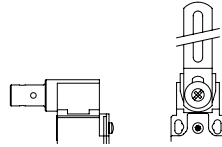
X21P: Slow action break before make 2NO + 1NC

W02: Simultaneous slow action 2NC

W03P: Simultaneous slow action 3NC



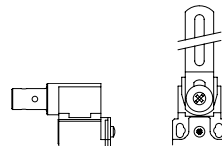
SLC & SLZ series
30mm polymeric casing.
1 cable inlet. IP65



Contact blocks	↻	↻
X11 (1NO+1NC)	SL•C7•X11	SL•Z61X11
X12P (1NO+2NC)	SL•C7•X12P	SL•Z61X12P
X21P (2NO+1NC)	SL•C7•X21P	SL•Z61X21P
W02 (2NC)	SL•C7•W02	SL•Z61W02
W03P (3NC)	SL•C7•W03P	SL•Z61W03P



SLC & SLZ series
30mm metal casing.
1 cable inlet. IP66



Contact blocks	↻	↻
X11 (1NO+1NC)	SL•MC7•X11	SL•MZ61X11
X12P (1NO+2NC)	SL•MC7•X12P	SL•MZ61X12P
X21P (2NO+1NC)	SL•MC7•X21P	SL•MZ61X21P
W02 (2NC)	SL•MC7•W02	SL•MZ61W02
W03P (3NC)	SL•MC7•W03P	SL•MZ61W03P

Ordering code SLC / SLZ (M) series :

S L 1 M C 7 1 X 1 1

Electrical connection
see top of page

Metal casing

Shaft SLC type
C71, C72

Lever SLZ type
Z61

Contact blocks

- X11: Slow action break before make 1NO + 1NC
- X12P: Slow action break before make 1NO + 2NC
- X21P: Slow action break before make 2NO + 1NC
- W02: Simultaneous slow action 2NC
- W03P: Simultaneous slow action 3NC

Electrical connection

Replace the symbol "•" with the required thread:

1: for PG 13.5 cable gland

On request:

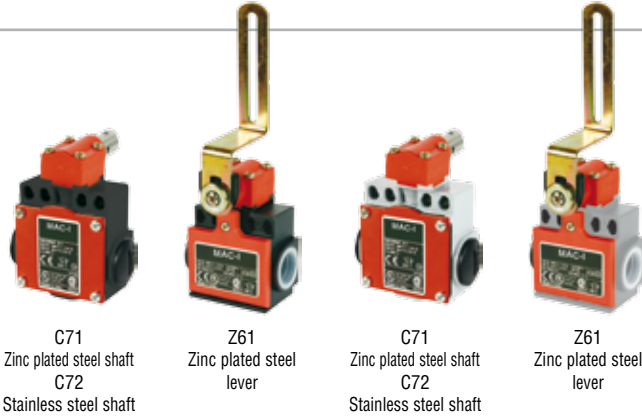
2: for 1/2" NPT cable gland

(with adapter in MA150 and MA160 series)

3: for PG11 cable gland

4: for M16 x 1.5 cable gland

5: for M20 x 1.5 cable gland



Available contact blocks

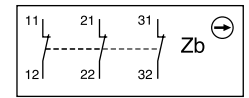
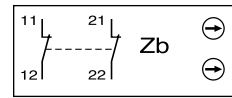
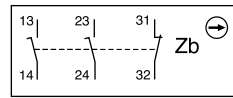
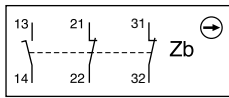
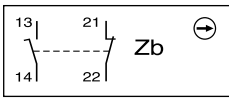
X11: Slow action break before make 1NO + 1NC

X12P: Slow action break before make 1NO + 2NC

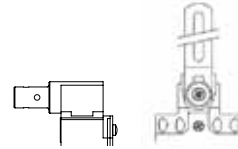
X21P: Slow action break before make 2NO + 1NC

W02: Simultaneous slow action 2NC

W03P: Simultaneous slow action 3NC

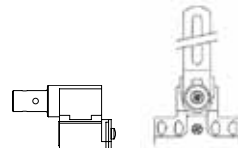


SLC & SLZ series
50mm polymeric casing.
2 cable inlet. IP65



Contact blocks	↔	↔
X11(1NO+1NC)	SL•5C7•X11	SL•5Z61X11
X12P(1NO+2NC)	SL•5C7•X12P	SL•5Z61X12P
X21P(2NO+1NC)	SL•5C7•X21P	SL•5Z61X21P
W02 (2NC)	SL•5C7•W02	SL•5Z61W02
W03P (3NC)	SL•5C7•W03P	SL•5Z61W03P

SLC & SLZ series
50mm metal casing.
3 cable inlet. IP66



Contact blocks	↔	↔
X11(1NO+1NC)	SL•M5C7•X11	SL•M5Z61X11
X12P(1NO+2NC)	SL•M5C7•X12P	SL•M5Z61X12P
X21P(2NO+1NC)	SL•M5C7•X21P	SL•M5Z61X21P
W02 (2NC)	SL•M5C7•W02	SL•M5Z61W02
W03P (3NC)	SL•M5C7•W03P	SL•M5Z61W03P

Ordering code SLC / SLZ (M) series :

S L 1 M C 7 1 X 1 1

Electrical connection
see top of page

Metal casing

Shaft SLC type
C71, C72

Lever SLZ type
Z61

Contact blocks

- X11: Slow action break before make 1NO + 1NC
- X12P: Slow action break before make 1NO + 2NC
- X21P: Slow action break before make 2NO + 1NC
- W02: Simultaneous slow action 2NC
- W03P: Simultaneous slow action 3NC

SLF series

Electrical connection

Replace the symbol "•" with the required thread:

1: for PG 13.5 cable gland

On request

2: for 1/2" NPT cable gland

(with adapter in MA150 and MA160 series)

3: for PG11 cable gland

4: for M16 x 1.5 cable gland

5: for M20 x 1.5 cable gland



F96
Pull wire
without
reset for
simple stop

F98
Pull wire with
reset for
emergency stop

Available contact blocks

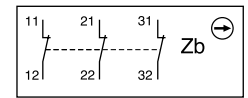
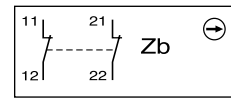
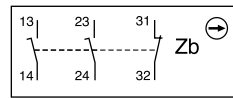
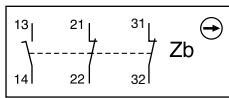
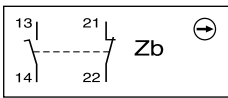
X11: Slow action break before
make 1NO + 1NC

X12P: Slow action break before
make 1NO + 2NC

X21P: Slow action break before
make 2NO + 1NC

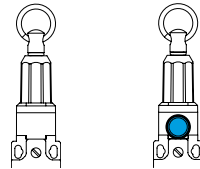
W02: Simultaneous slow action
2NC

W03P: Simultaneous slow action
3NC



SLF series

30mm metal casing
1 cable inlet. IP66



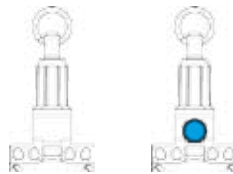
Contact blocks

	⊖	⊖
X11(1NO+1NC)	SL•F96X11	SL•F98X11
X12P (1NO+2NC)	SL•F96X12P	SL•F98X12P
X21P (2NO+1NC)	SL•F96X21P	SL•F98X21P
W02 (2NC)	SL•F96W02	SL•F98W02
W03P (3NC)	SL•F96W03P	SL•F98W03P



SLF series

50mm metal casing.
3 cable inlet. IP66



Contact blocks

	⊖	⊖
X11(1NO+1NC)	SL•5F596X11	SL•5F598X11
X12P (1NO+2NC)	SL•5F596X12P	SL•5F598X12P
X21P (2NO+1NC)	SL•5F596X21P	SL•5F598X21P
W02 (2NC)	SL•5F596W02	SL•5F598W02
W03P (3NC)	SL•5F596W03P	SL•5F598W03P

Ordering code SLF (M) series :

SL 1 5 F96 X11

Electrical connection
see top of page

50mm Metal casing

Metal casing

F96 = pull wire w.o. reset
F98 = pull wire with reset

Contact blocks

X11: Slow action break before
make 1NO + 1NC

X12P: Slow action break before
make 1NO + 2NC

X21P: Slow action break before
make 2NO + 1NC

W02: Simultaneous slow action 2NC

W03P: Simultaneous slow action 3NC

Electrical connection

Replace the symbol "•" with the required thread:

1: for PG 13.5 cable gland

On request:

2: for 1/2" NPT cable gland

(with adapter in MA150 and MA160 series)

5: for M20 x 1.5 cable gland



F97
Pull wire
without
reset for
simple stop

F99
Pull wire with
reset for
emergency stop

Available contact blocks

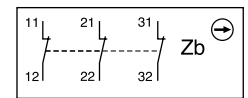
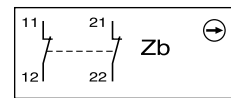
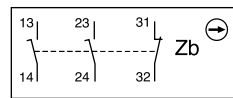
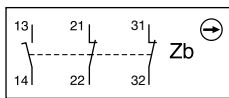
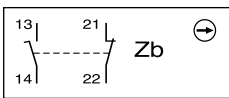
X11: Slow action break before
make 1NO + 1NC

X12: Slow action break before
make 1NO + 2NC

X21: Slow action break before
make 2NO + 1NC

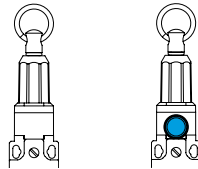
W02: Simultaneous slow action
2NC

W03: Simultaneous slow action
3NC

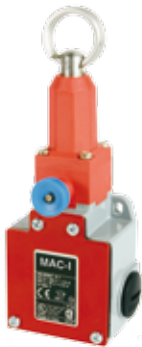


SLF series

40mm aluminium casing.
1 cable inlet. IP66

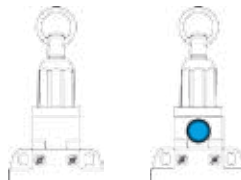


Contact blocks	⊖	⊕
X11 (1NO+1NC)	SL•F97X11	SL•F99X11
X12 (1NO+2NC)	SL•F97Y11	SL•F99X12
X21 (2NO+1NC)	SL•F97X21	SL•F99X21
W02 (2NC)	SL•F97W02	SL•F99W02
W03 (3NC)	SL•F97W03	SL•F99W03



SLF series

60mm aluminium casing.
3 cable inlet. IP66



Contact blocks	⊖	⊕
X11(1NO+1NC)	SL•6F97X11	SL•6F99X11
X12 (1NO+2NC)	SL•6F97X12	SL•6F99X12
X21 (2NO+1NC)	SL•6F97X21	SL•6F99X21
W02 (2NC)	SL•6F97W02	SL•6F99W02
W03 (3NC)	SL•6F97W03	SL•6F99W03

Ordering code SLF (A) series :

SL 1 6 F97 X11

Electrical connection
see top of page

60mm metal casing

Metal casing

F97 = pull wire w.o. reset
F99 = pull wire with reset

Contact blocks

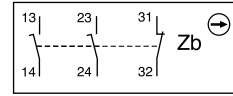
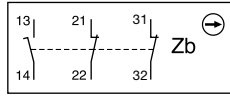
- X11: Slow action break before make 1NO + 1NC
- X12: Slow action break before make 1NO + 2NC
- X21: Slow action break before make 2NO + 1NC
- W02: Simultaneous slow action 2NC
- W03: Simultaneous slow action 3NC

MAP/MAM/MDP/MDM series

Available contact blocks

X12P: Slow action break before make 1NO + 2NC

X21P: Slow action break before make 2NO + 1NC



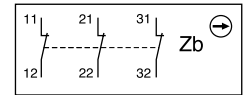
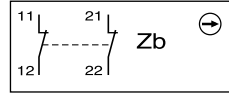
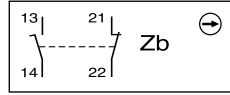
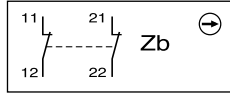
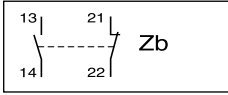
Z11: Snap action 1NO + 1NC

Z02: Snap action 2NC

X11: Slow action break before make 1NO + 1NC

W02: Simultaneous slow action 2NC

W03P: Simultaneous slow action 3NC



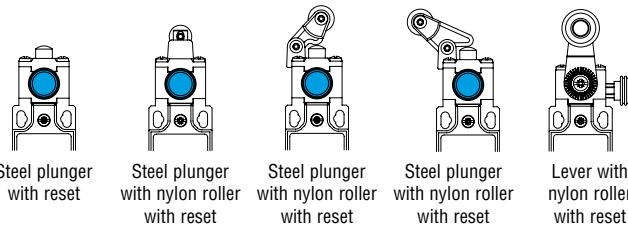
MAP-R series

30mm polymeric limit switches - IP65 - 1 cable inlet



Cable inlets

MAP1: PG 13.5
MAP2: 1/2" NPT (with adapter)
MAP3: PG 11
MAP4: M 16 x 1.5
MAP5: M 20 x 1.5



Contact blocks	R11	R13	R31	R32	R41
X11 Non overlapping Slow action contacts (1NO + 1NC)	MAP•R11X11	MAP•R13X11	MAP•R31X11	MAP•R32X11	MAP•R41X11
X12P Non overlapping Slow action contacts (1NO + 2NC)	MAP•R11X12P	MAP•R13X12P	MAP•R31X12P	MAP•R32X12P	MAP•R41X12P
X21P Non overlapping Slow action contacts (2NO + 1NC)	MAP•R11X21P	MAP•R1321P	MAP•R31X21P	MAP•R32X21P	MAP•R41X21P
Z11 Snap action contacts (1NO + 1NC)	MAP•R11Z11	MAP•R13Z11	MAP•R31Z11	MAP•R32Z11	MAP•R41Z11
Z02 Snap action contacts (2NC)	MAP•R11Z02	MAP•R13Z02	MAP•R31Z02	MAP•R32Z02	MAP•R41Z02
W02 Slow action contacts (2NC)	MAP•R11W02	MAP•R13W02	MAP•R31W02	MAP•R32W02	MAP•R41W02
W03P Slow action contacts (3NC)	MAP•R11W03P	MAP•R13W03P	MAP•R31W03P	MAP•R32W03P	MAP•R41W03P

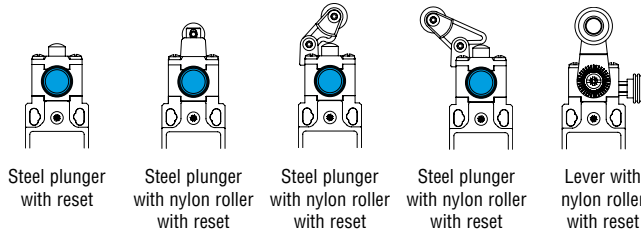
MAM-R series

30mm metal limit switches - with polymeric working heads - IP66 - 1 cable inlet



Cable inlets

MAM1: PG13.5
MAM2: 1/2" NPT
MAM3: PG11
MAM4: M16 x 1.5
MAM5: M20 x 1.5



Contact blocks	R11	R13	R31	R32	R41
X11 Non overlapping Slow action contacts (1NO + 1NC)	MAM•R11X11	MAM•R13X11	MAM•R31X11	MAM•R32X11	MAM•R41X11
X12P Non overlapping Slow action contacts (1NO + 2NC)	MAM•R11X12P	MAM•R13X12P	MAM•R31X12P	MAM•R32X12P	MAM•R41X12P
X21P Non overlapping Slow action contacts (2NO + 1NC)	MAM•R11X21P	MAM•R13X21P	MAM•R31X21P	MAM•R32X21P	MAM•R41X21P
Z11 Snap action contacts (1NO + 1NC)	MAM•R11Z11	MAM•R13Z11	MAM•R31Z11	MAM•R32Z11	MAM•R41Z11
Z02 Snap action contacts (2NC)	MAM•R11Z02	MAM•R13Z02	MAM•R31Z02	MAM•R32Z02	MAM•R41Z02
W02 Slow action contacts (2NC)	MAM•R11W02	MAM•R13W02	MAM•R31W02	MAM•R32W02	MAM•R41W02
W03P Slow action contacts (3NC)	MAM•R11W03P	MAM•R13W03P	MAM•R31W03P	MAM•R32W03P	MAM•R41W03P

Other versions available on request

Ordering code MAP/MAM series :

M **AP1** **R11** **Z11**

Cable inlets

MAP1, MAP2, MAP3, MAP4, MAP5
MAM1, MAM2, MAM3, MAM4, MAM5
See product description.

Head types

R11, R13, R31, R32, R41

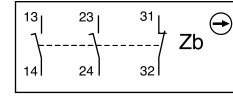
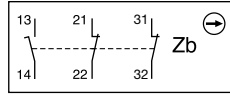
Contact blocks

Z11: Snap action 1NO+1NC
Z02: Snap action 2NC
X11: Slow action break before make 1NO+1NC
X12P: Slow action break before make 1NO+2NC
X21P: Slow action break before make 2NO+1NC
W02: Simultaneous slow action 2NC
W03P: Simultaneous slow action 3NC

Available contact blocks

X12P: Slow action break before make 1NO + 2NC

X21P: Slow action break before make 2NO + 1NC



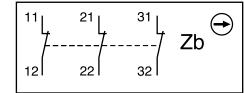
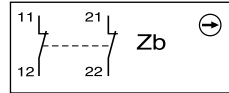
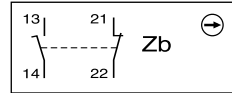
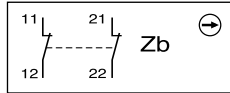
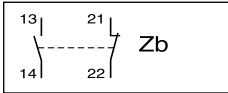
Z11: Snap action 1NO + 1NC

Z02: Snap action 2NC

X11: Slow action break before make 1NO + 1NC

W02: Simultaneous slow action 2NC

W03P: Simultaneous slow action 3NC



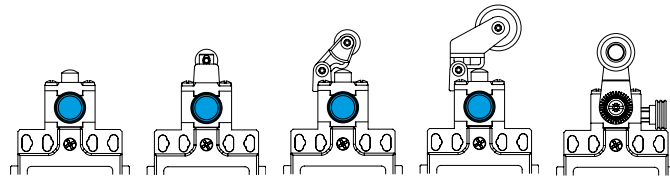
MDP-R series

50mm polymeric limit switches - IP65 - 2 cable inlets



Cable inlets

MDP1: PG 13.5
MDP2: 1/2" NPT (with adapter)
MDP3: PG 11
MDP4: M 16 x 1.5
MDP5: M 20 x 1.5



Contact blocks	R11	R13	R31	R38	R41
X11 Non overlapping Slow action contacts (1NO + 1NC)	MDP•R11X11	MDP•R13X11	MDP•R31X11	MDP•R38X11	MDP•R41X11
X12P Non overlapping Slow action contacts (1NO + 1NC)	MDP•R11X12P	MDP•R13X12P	MDP•R31X12P	MDP•R38X12P	MDP•R41X12P
X21P Non overlapping Slow action contacts (2NO + 1NC)	MDP•R11X21P	MDP•R13X21P	MDP•R31X21P	MDP•R38X21P	MDP•R41X21P
Z11 Snap action contacts (1NO + 1NC)	MDP•R11Z11	MDP•R13Z11	MDP•R31Z11	MDP•R38Z11	MDP•R41Z11
Z02 Snap action contacts (2NC)	MDP•R11Z02	MDP•R13Z02	MDP•R31Z02	MDP•R38Z02	MDP•R41Z02
W02 Slow action contacts (2NC)	MDP•R11W02	MDP•R13W02	MDP•R31W02	MDP•R38W02	MDP•R41W02
W03P Slow action contacts (3NC)	MDP•R11W03P	MDP•R13W03P	MDP•R31W03P	MDP•R38W03P	MDP•R41W03P

Other versions available on request

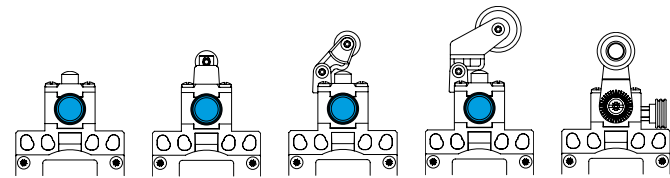
MDM-R series

50mm metal limit switches - with polymeric working heads - IP66 - 3 cable inlets



Cable inlets

MDM1: PG 13.5
MDM2: 1/2" NPT
MDM3: PG 11
MDM4: M 16 x 1.5
MDM5: M 20 x 1.5



Contact blocks	R11	R13	R31	R38	R41
X11 Non overlapping Slow action contacts (1NO + 1NC)	MDM•R11X11	MDM•R13X11	MDM•R31X11	MDM•R38X11	MDM•R41X11
X12P Non overlapping Slow action contacts (1NO + 1NC)	MDM•R11X12P	MDM•R13X12P	MDM•R31X12P	MDM•R38X12P	MDM•R41X12P
X21P Non overlapping Slow action contacts (2NO + 1NC)	MDM•R11X21P	MDM•R13X21P	MDM•R31X21P	MDM•R38X21P	MDM•R41X21P
Z11 Snap action contacts (1NO + 1NC)	MDM•R11Z11	MDM•R13Z11	MDM•R31Z11	MDM•R38Z11	MDM•R41Z11
Z02 Snap action contacts (2NC)	MDM•R11Z02	MDM•R13Z02	MDM•R31Z02	MDM•R38Z02	MDM•R41Z02
W02 Slow action contacts (2NC)	MDM•R11W02	MDM•R13W02	MDM•R31W02	MDM•R38W02	MDM•R41W02
W03P Slow action contacts (3NC)	MDM•R11W03P	MDM•R13W03P	MDM•R31W03P	MDM•R38W03P	MDM•R41W03P

Other versions available on request

Ordering code MDP/MDM series :

M DP1 R11 Z11

Cable inlets

MDP1, MDP2, MDP3, MDP4, MDP5
MDM1, MDM2, MDM3, MDM4, MDM5
See product description.

Head types

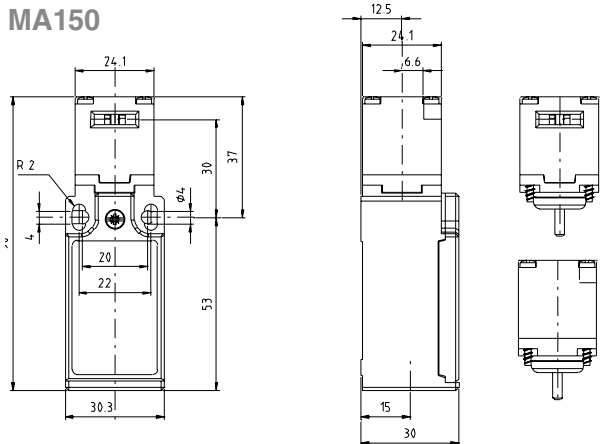
R11, R13, R31, R38, R41

Contact blocks

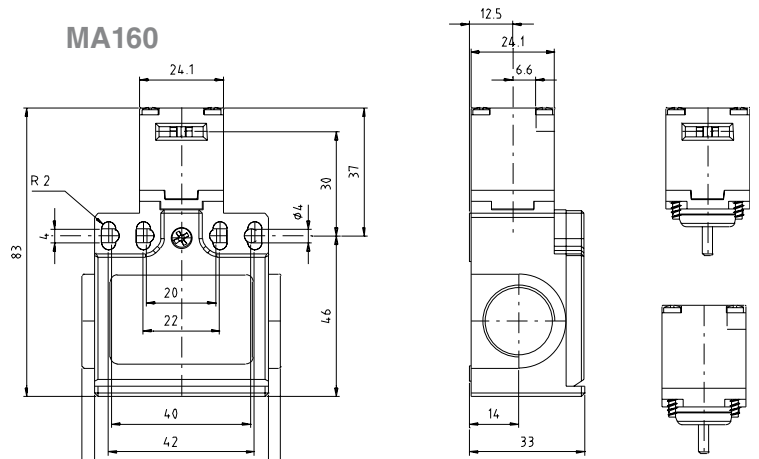
Z11: Snap action 1NO+1NC
Z02: Snap action 2NC
X11: Slow action break before make 1NO+1NC
X12P: Slow action break before make 1NO+2NC
X21P: Slow action break before make 2NO+1NC
W02: Simultaneous slow action 2NC
W03P: Simultaneous slow action 3NC

Dimensions

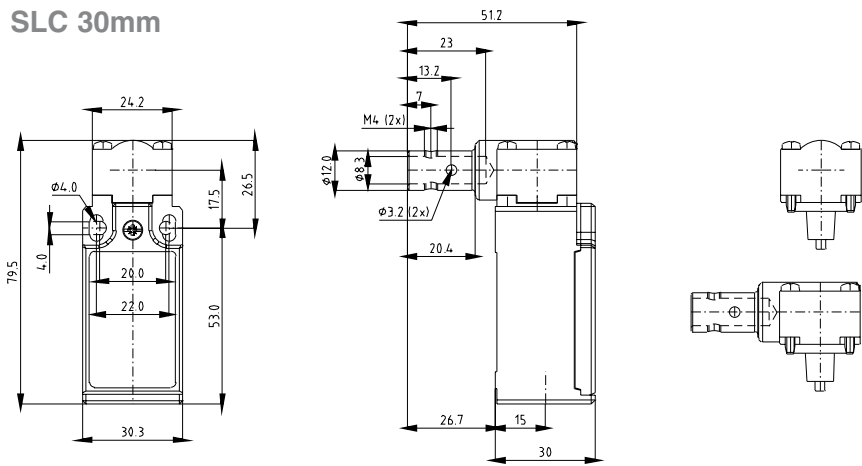
MA150



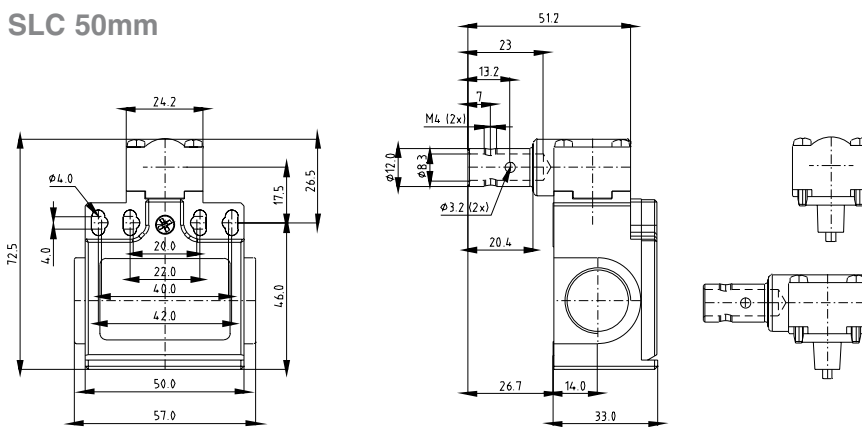
MA160



SLC 30mm

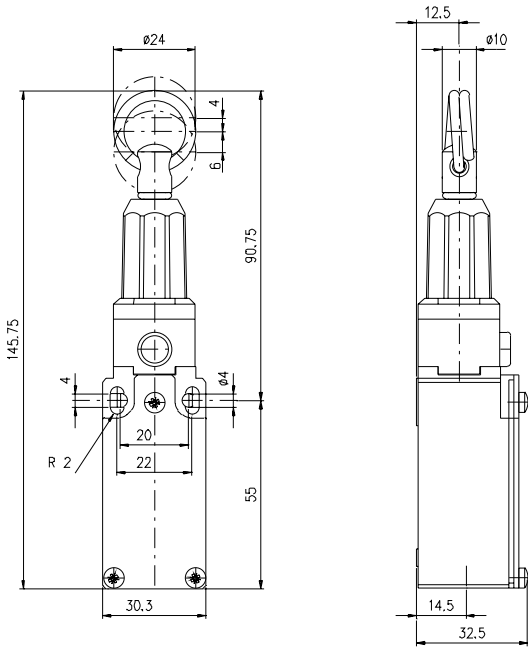


SLC 50mm

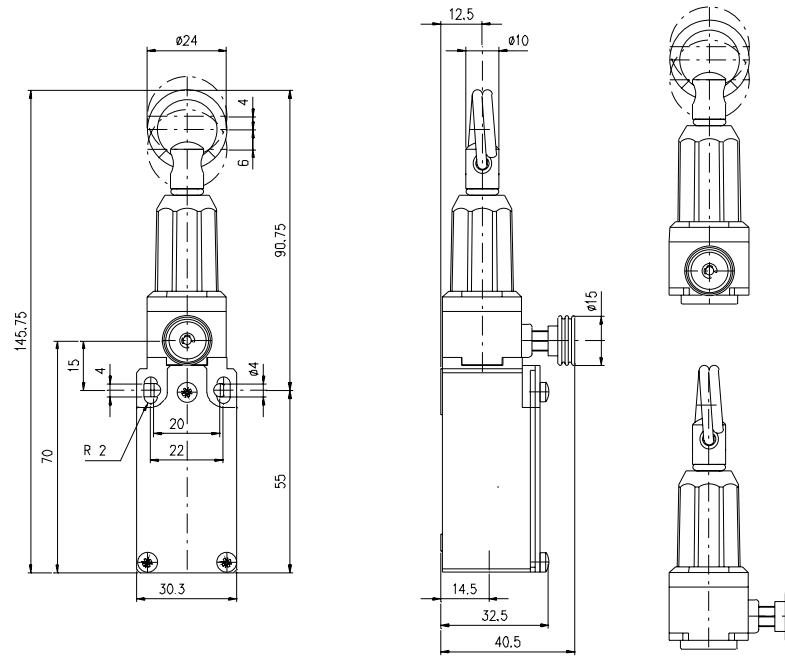


All measurements in mm

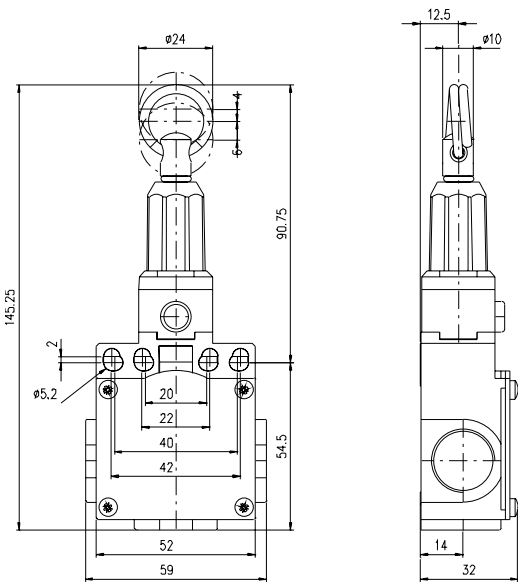
SLF 30mm without reset



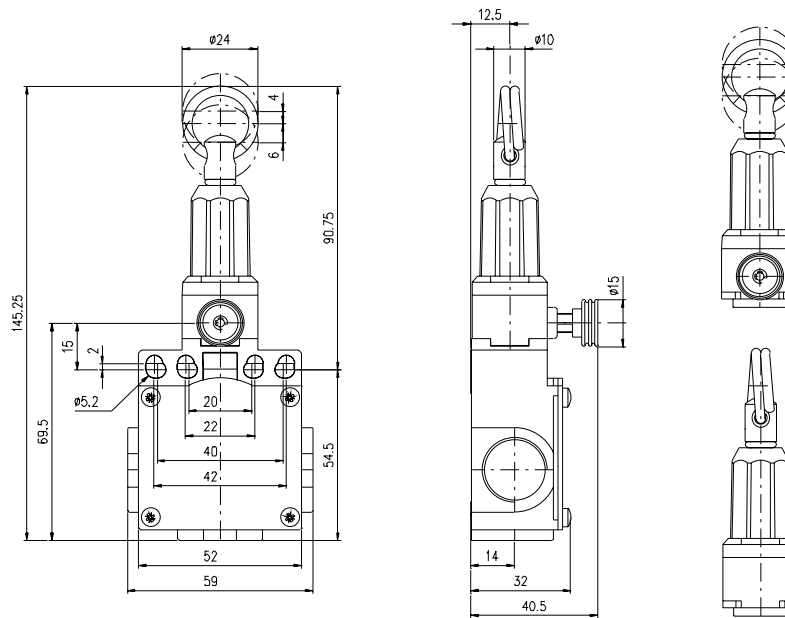
SLF 30mm with reset



SLF 50mm without reset

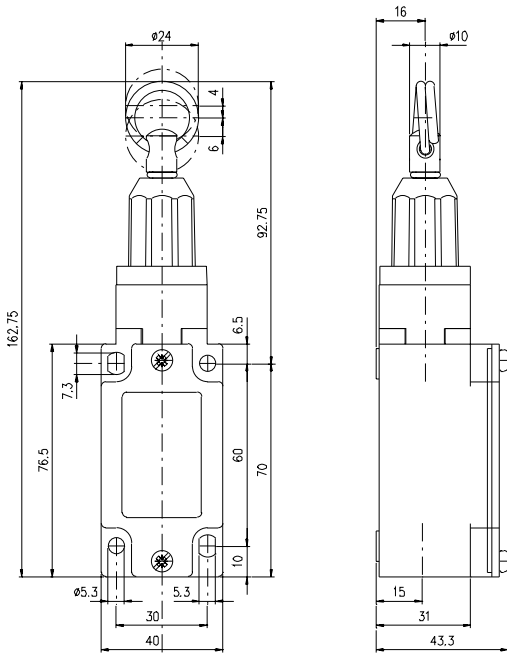


SLF 50mm with reset

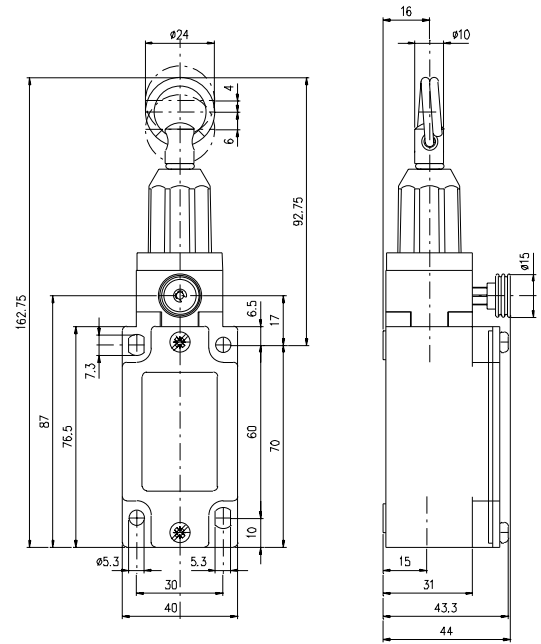


All measurements in mm

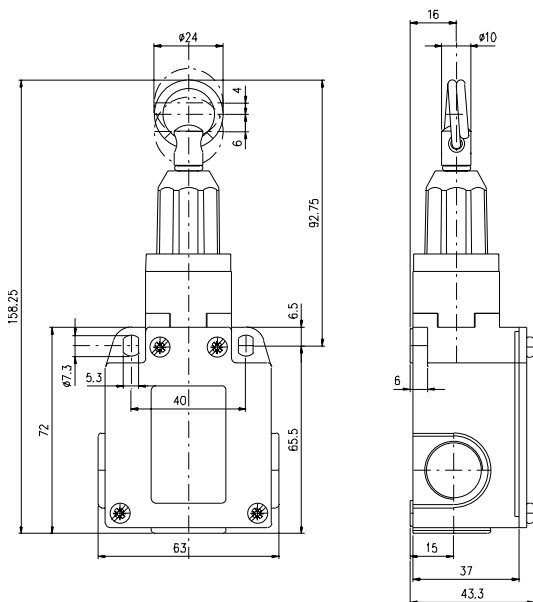
SLF 40mm



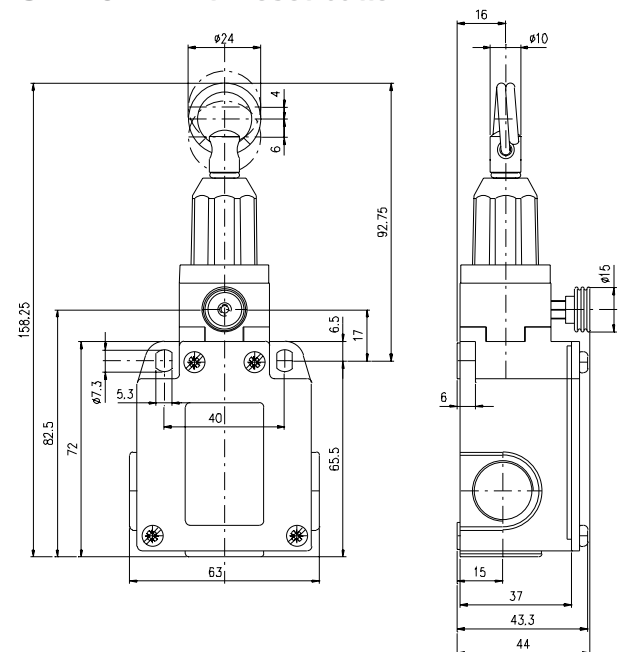
SLF 40mm with reset button



SLF 40mm

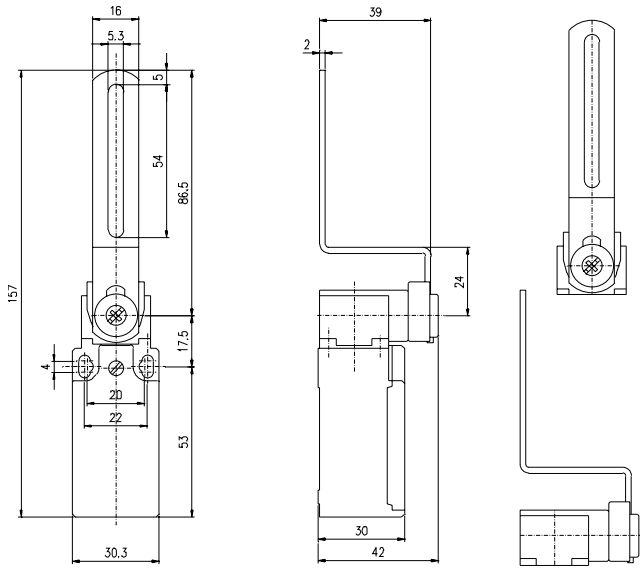


SLF 40mm with reset button

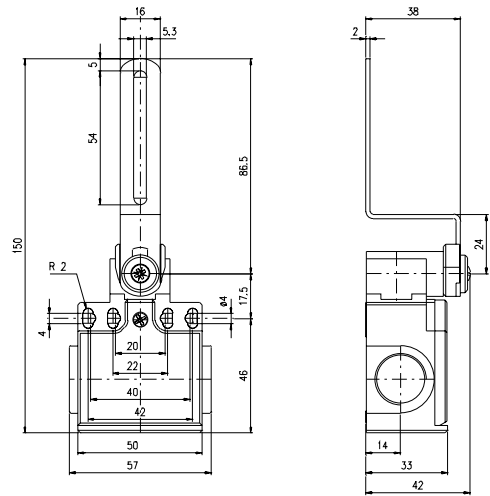


All measurements in mm

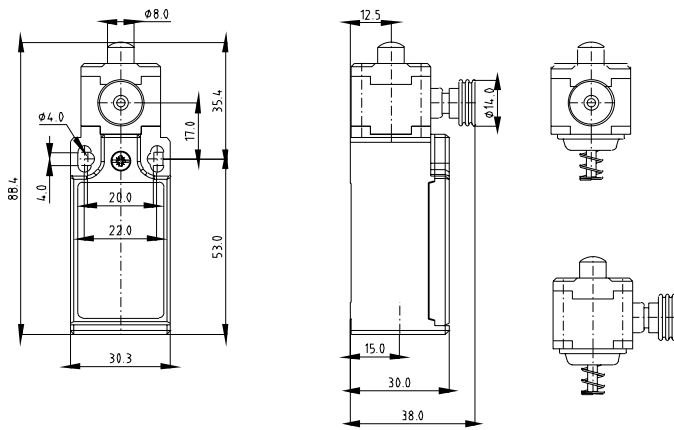
SLZ 30mm



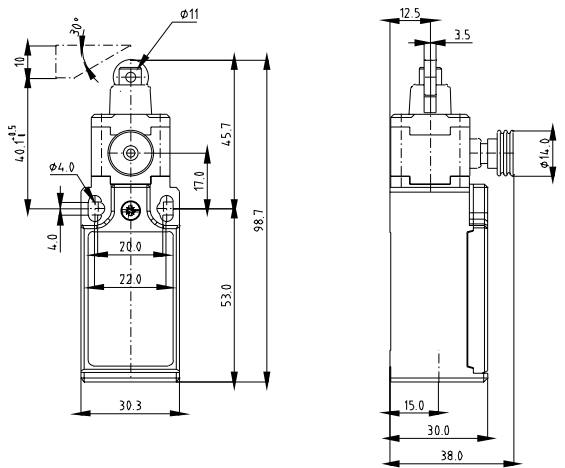
SLZ 50mm



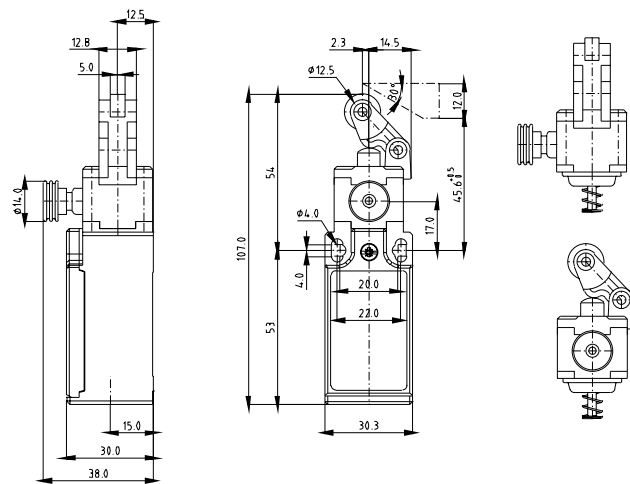
MAPR11



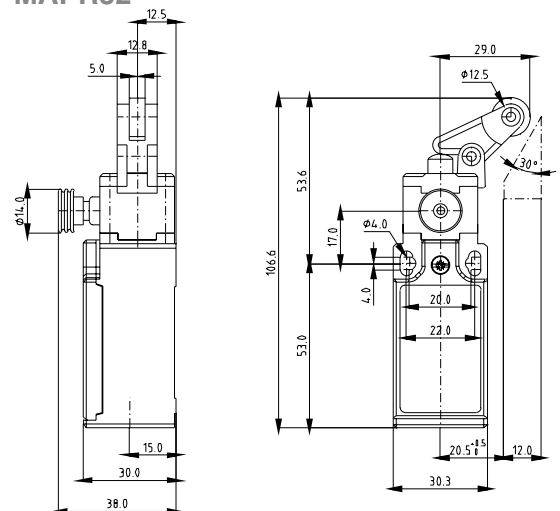
MAPR13



MAPR31

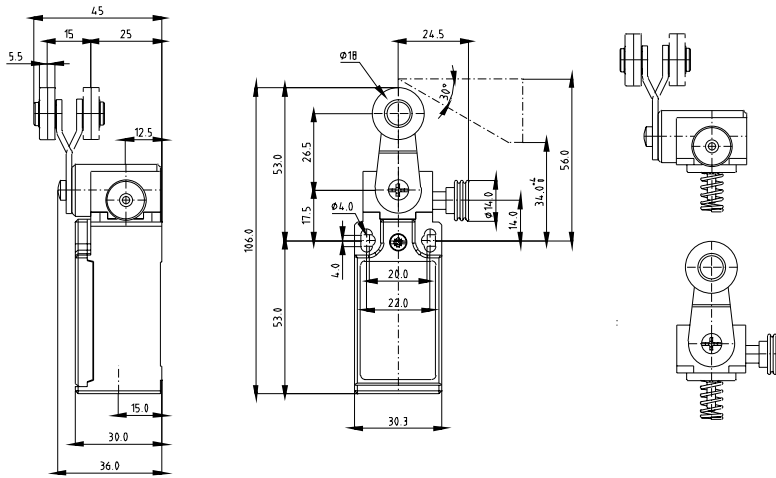


MAPR32

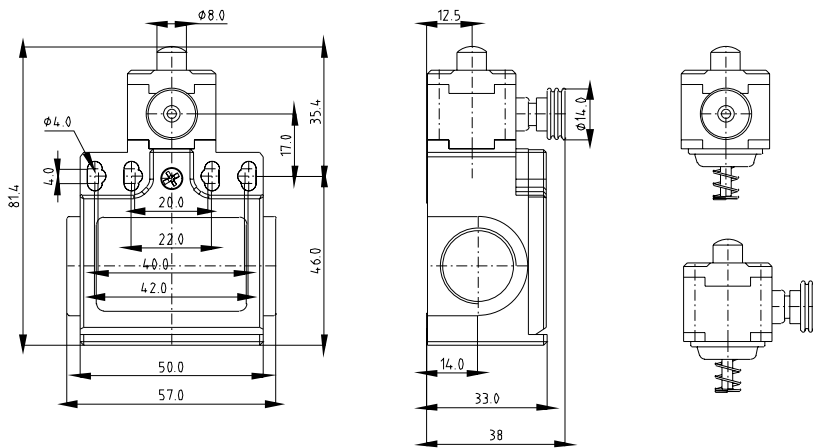


All measurements in mm

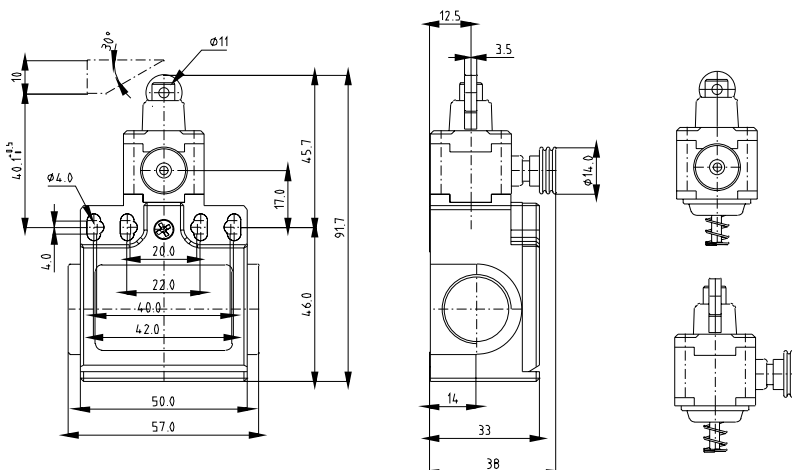
MAPR41



MDPR11

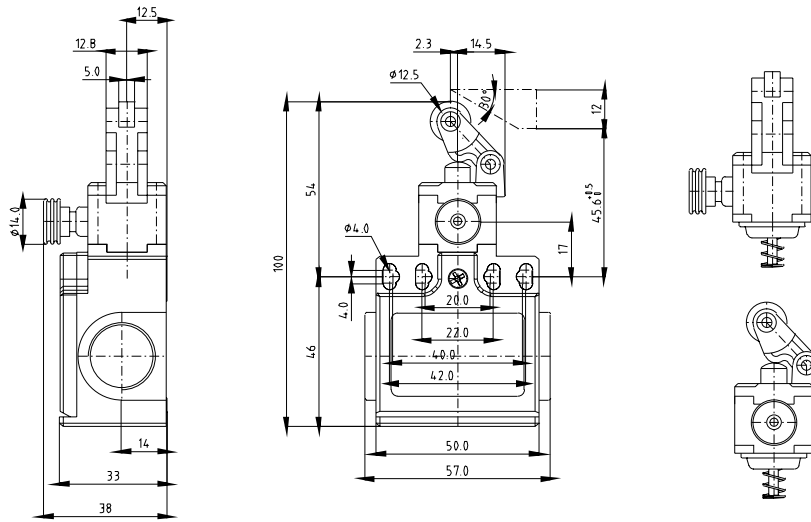


MDPR13

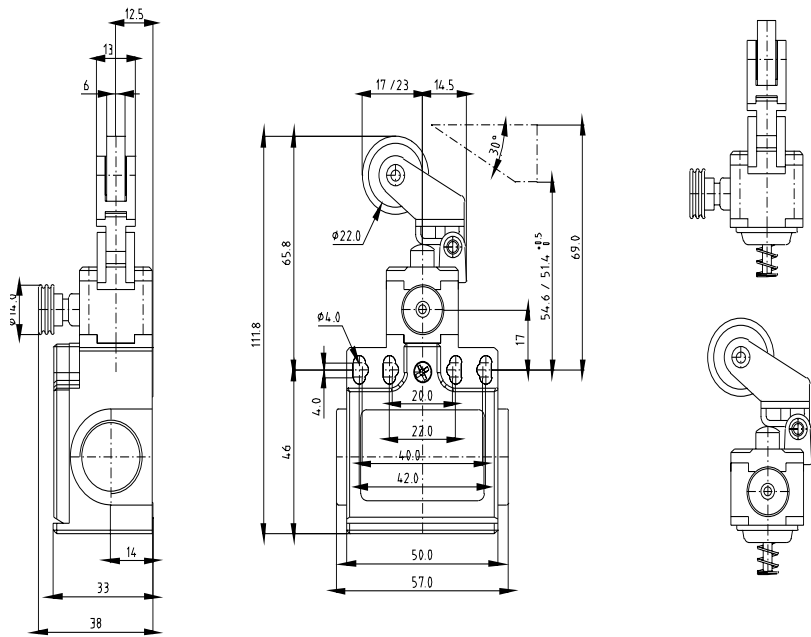


All measurements in mm

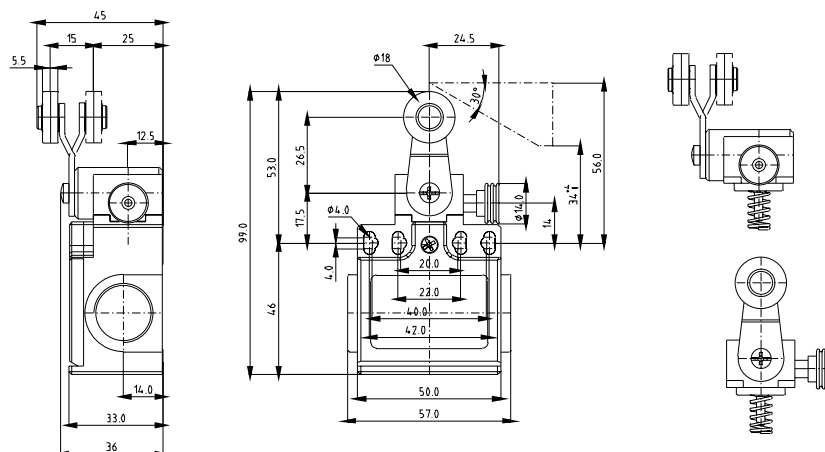
MDPR31



MDPR38









MPR41










All measurements in mm

Specifications & accessoires

Specifications

						
Type	MAC-I MA 150/160	MAC-I SLC	MAC-I SLF	MAC-I SLZ	MAC-I MA-R	MAC-I MD-R
	limit switches with operating keys	limit switches with shaft lever	limit switches with pull wire	limit switches with steel lever	limit switches with pull button reset	limit switches with pull button reset
Casing	Polymeric		Metal	Polymeric/metal		
Standards	IEC 947-5-1, EN 60947-5-1, UL 508, CSA C22-2 No 14					
Operating temperature range	-25°C... + 70°C					
Protection against electrical shock (IEC 536)	class II			class I		
Protection degree	IP65			IP66		
Rated insulation voltage (acc. to IEC 529)	Ui= 690V (MA150M/160M;SLC-M;SLZ-M;SLF-M series Ui=400V,)					
Rated impuled withstand voltage (acc. to IEC 947-1)	Uimp= 4kV					
Short-circuit protection	10A type gG(gl)					
Rated operational current (acc. to IEC 947-5-1)	AC-15: 24V-10A; 230V-3,1A;380V-1,9A DC-13: 24V-2,8A; 250V-0,27A					

Specifications

Operating keys for MA150/160							
Description	Bent key	Flat key	Bent key	Flat Key	Shock absorbing bent key	Shock absorbing flat key	Adjustable joint key
Centre distance fixing holes	22mm	22mm	13mm	13mm	15mm	15mm	40mm
Order code	T83	T84	T85	T86	T87	T88	T90

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Japan

Panasonic Electric Works

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▶ France	Panasonic Electric Works Sales Western Europe B.V.	Succursale française, 10, rue des petits ruisseaux, 91370 Verrières Le Buisson, Tél. +33 (0) 1 6013 5757, Fax +33 (0) 1 6013 5758, www.panasonic-electric-works.fr
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▶ Nordic Countries	Panasonic Electric Works Europe AG Panasonic Eco Solutions Nordic AB	Filial Nordic, Knarrarnäsgatan 15, 164 40 Kista, Sweden, Tel. +46 859476680, Fax +46 859476690, www.panasonic-electric-works.se
▶ Poland	Panasonic Electric Works Polska sp. z o.o.	Jungmansgatan 12, 21119 Malmö, Tel. +46 40 697 7000, Fax +46 40 697 7099, www.panasonic-fire-security.com
▶ Spain	Panasonic Electric Works España S.A.	ul. Wotoska 9A, 02-583 Warszawa, Tel. +48 22 338-11-33, Fax +48 22 338-12-00, www.panasonic-electric-works.pl
▶ Switzerland	Panasonic Electric Works Schweiz AG	Barajas Park, San Severo 20, 28042 Madrid, Tel. +34 913293875, Fax +34 913292976, www.panasonic-electric-works.es
▶ United Kingdom	Panasonic Electric Works UK Ltd.	Grundstrasse 8, 6343 Rotkreuz, Tel. +41 (0) 41 7997050, Fax +41 (0) 41 7997055, www.panasonic-electric-works.ch
		Sunrise Parkway, Linford Wood, Milton Keynes, MK14 6 LF, Tel. +44 (0) 1908 231555, Fax +44 (0) 1908 231599, www.panasonic-electric-works.co.uk

North & South America

▶ USA	Panasonic Industrial Devices Sales Company of America	629 Central Avenue, New Providence, N.J. 07974, Tel. 1-908-464-3550, Fax 1-908-464-8513, www.pewa.panasonic.com
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Asia Pacific/China/Japan

▶ China	Panasonic Electric Works Sales (China) Co. Ltd.	Level 2, Tower W3, The Towers Oriental Plaza, No. 2, East Chang An Ave., Dong Cheng District, Beijing 100738, Tel. +86-10-5925-5988, Fax +86-10-5925-5973
▶ Hong Kong	Panasonic Industrial Devices Automation Controls Sales (Hong Kong) Co., Ltd.	RM1205-9, 12/F, Tower 2, The Gateway, 25 Canton Road, Tsimshatsui, Kowloon, Hong Kong, Tel. +852-2956-3118, Fax +852-2956-0398
▶ Japan	Panasonic Corporation	1048 Kadoma, Kadoma-shi, Osaka 571-8686, Japan, Tel. +81-6-6908-1050, Fax +81-6-6908-5781, www.panasonic.net
▶ Singapore	Panasonic Industrial Devices Automation Controls Sales Asia Pacific	300 Beach Road, #16-01 The Concourse, Singapore 199555, Tel. +65-6390-3811, Fax +65-6390-3810