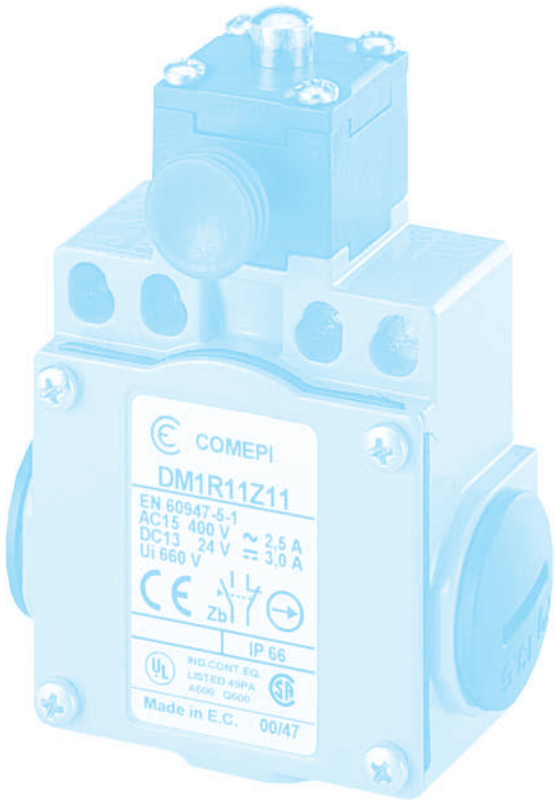
SAFETY LIMIT SWITCHES



Quality certifications

As ever watchful for quality, since 1998, Comepi is qualified ISO 9002 thus offering its domestic and foreign interlocutors a deeper warranty of its ability to adequately answer the ever increasing need of effective and fruitful relationship.

The update to ISO 9001:2008, made in 2009, confirms the Comepi quality politics. The control of full application of ISO 9000 norms and its timely updating is guaranteed by well tested procedures ranging from control of the process up to the use of statistic techniques.

Comepi personnel, at any given level, is involved in this process in order to achieve the highest end-user satisfaction besides growth of image, competitiveness and profits for the firm.

Limit Switches and Foot Switches

Contents

Limit Switches

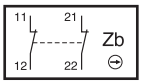
Selection Table

Safety Limit Switches

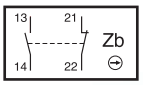
Foot Switches

SUMMARY LIMIT SWITCHES

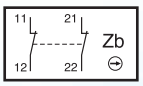
Z02: Snap action 2NC



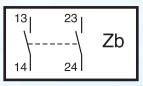
Z11: Snap action 1NO+1NC



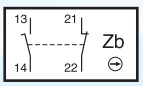
W02: Simultaneous slow action 2NC



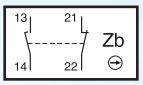
W20: Simultaneous slow action 2NO



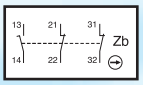
X11: Slow action break before make 1NO+1NC



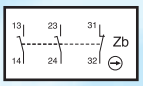
Y11: Slow action make before break 1NO+1NC



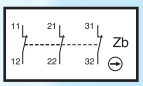
X12P: Slow action break before make 1NO+2NC



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

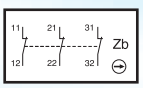


W03P: Simultaneous slow action 3NC

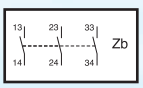


Contact blocks
Zb type: double break, electrically separated
Approvals: UL 508 / CSA C22-2 n. 14

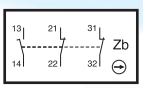
W03: Simultaneous slow action 3NC



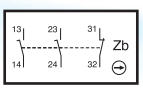
W30: Simultaneous slow action 3NO

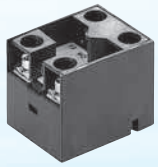


X12: Slow action break before make 1NO+2NC



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





Adapter G Type

AP series (Plastic)

T head type (Plastic)

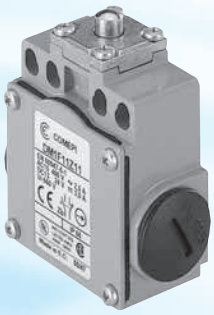
DP series (Plastic)

T head type (Plastic)

AM series (Metal)

F head type (Metal)
T head type (Plastic)

DM series (Metal)



F head type (Metal)
T head type (Plastic)

BP series (Plastic)

H head type (Plastic)

BM series (Aluminium)

E head type (Aluminium)

Serie CM (alluminio)

E head type (Aluminium)

Application

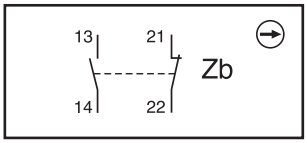
The Comepi limit switches are developed and manufactured according to the rules set out in IEC international publications and EN european standards.

Easy to use, electromechanical limit switches offer specific qualities:

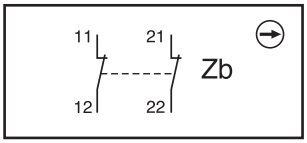
- Visible operation.
- Able to switch strong currents (10 A conventional thermal current).
- Precise operating points (consistency).
- Immune to electromagnetic disturbances.
- Electrically separated contacts.
- N.C. contacts with positive opening operation (⊖).

Contact Blocks

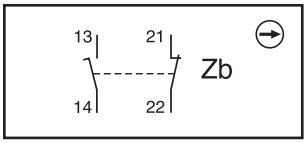
Z11 Snap action
1NO+1NC



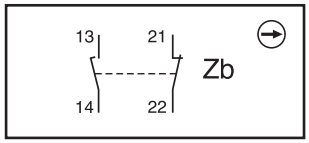
Z02 Snap action
2NC



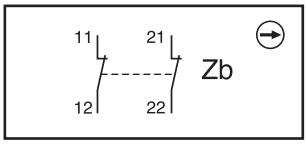
X11 Slow action break before make 1NO+1NC



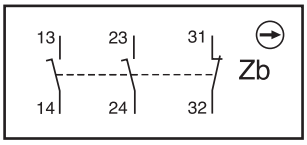
Y11 Slow action make before break 1NO+1NC



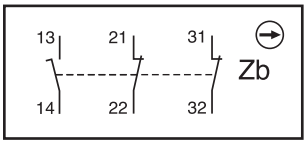
W02 Simultaneous slow action
2NC



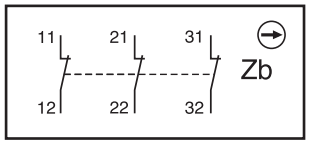
X21/X21P Slow action break before make 2NO+1NC



X12/X12P Slow action break before make 1NO+2NC



W03/W03P Simultaneous slow action 3NC



Main Technical Data

	SP, SBP, SDP series	SM, SBM, SCM, SDM series
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 shocks (acc. to IEC 536)	Class II	Class I
Protection degree (acc. to IEC 529)	IP65	IP 66
Rated insulation voltage (acc. to IEC 947-1)	U_i = 690V (SM, SDM series and contacts type X12P, X21P, W03P series: U_i = 400V)	
Rated impulsed withstand voltage (acc. to IEC 947-1)	U_{imp} = 6kV	
Short-circuit protection	Fuse 10A type gG (gI)	
Power category	A600 - Q600 (SM, SDM series and contacts type X12P, X21P, W03P: A300 - Q300)	
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	

Electrical connection

Replace the symbol • with the number of the required thread

1: PG 13.5

2: 1/2" NPT (Through adapter on SP and SDP series)

3: PG 11 (Available on SP, SM, SDP and SDM series)

4: M16x1,5 (Available on SP, SM, SDP and SDM series)

5: M20x1,5

Safety Limit Switches

Limit switches with keys, shaft lever or pull wire

SP_K Series

30 mm
polymeric casing.
1 cable inlet. IP 65

K20
90° adjustable head

K120
Fully turnable head

K71
Zinc plated steel shaft
K72
Stainless steel shaft

K61
Zinc plated steel lever

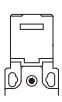
K96
Pull wire without reset for simple stop

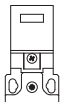
K98
Pull wire with reset for emergency stop

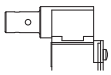
Contact blocks		→ K20	→ K120	→ K71	→ K61
Z11	(1NO+1NC)	SP•K20Z11	SP•K120Z11	SP•K7•Z11	SP•K61Z11
Z02	(2NC)	SP•K20Z02	SP•K120Z02	SP•K7•Z02	SP•K61Z02
X11	(1NO+1NC)	SP•K20X11	SP•K120X11	SP•K7•X11	SP•K61X11
Y11	(1NO+1NC)	SP•K20Y11	SP•K120Y11	SP•K7•Y11	SP•K61Y11
W02	(2NC)	SP•K20W02	SP•K120W02	SP•K7•W02	SP•K61W02
X21P	(2NO+1NC)	SP•K20X21P	SP•K120X21P	SP•K7•X21P	SP•K61X21P
X12P	(1NO+2NC)	SP•K20X12P	SP•K120X12P	SP•K7•X12P	SP•K61X12P
W03P	(3NC)	SP•K20W03P	SP•K120W03P	SP•K7•W03P	SP•K61W03P

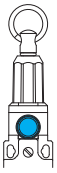
SM_K Series

30 mm metal casing.
1 cable inlet. IP 66





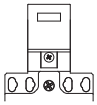


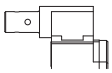


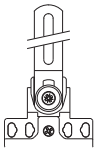
Contact blocks		→ K20	→ K120	→ K71	→ K61	→ K96	→ K98
Z11	(1NO+1NC)	SM•K20Z11	SM•K120Z11	SM•K7•Z11	SM•K61Z11		
Z02	(2NC)	SM•K20Z02	SM•K120Z02	SM•K7•Z02	SM•K61Z02		
X11	(1NO+1NC)	SM•K20X11	SM•K120X11	SM•K7•X11	SM•K61X11	SM•K96X11	SM•K98X11
Y11	(1NO+1NC)	SM•K20Y11	SM•K120Y11	SM•K7•Y11	SM•K61Y11		
W02	(2NC)	SM•K20W02	SM•K120W02	SM•K7•W02	SM•K61W02	SM•K96W02	SM•K98W02
X21P	(2NO+1NC)	SM•K20X21P	SM•K120X21P	SM•K7•X21P	SM•K61X21P	SM•K96X21P	SM•K98X21P
X12P	(1NO+2NC)	SM•K20X12P	SM•K120X12P	SM•K7•X21P	SM•K61X12P	SM•K96X12P	SM•K98X12P
W03P	(3NC)	SM•K20W03P	SM•K120W03P	SM•K7•W03P	SM•K61W03P	SM•K96W03P	SM•K98W03P

SDP_K Series

50 mm polymeric
casing.
2 cable inlets. IP 65



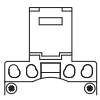


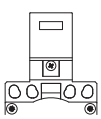


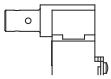
Contact blocks		→ K20	→ K120	→ K71	→ K61
Z11	(1NO+1NC)	SDP•K20Z11	SDP•K120Z11	SDP•K7•Z11	SDP•K61Z11
Z02	(2NC)	SDP•K20Z02	SDP•K120Z02	SDP•K7•Z02	SDP•K61Z02
X11	(1NO+1NC)	SDP•K20X11	SDP•K120X11	SDP•K7•X11	SDP•K61X11
Y11	(1NO+1NC)	SDP•K20Y11	SDP•K120Y11	SDP•K7•Y11	SDP•K61Y11
W02	(2NC)	SDP•K20W02	SDP•K120W02	SDP•K7•W02	SDP•K61W02
X21P	(2NO+1NC)	SDP•K20X21P	SDP•K120X21P	SDP•K7•X21P	SDP•K61X21P
X12P	(1NO+2NC)	SDP•K20X12P	SDP•K120X12P	SDP•K7•X12P	SDP•K61X12P
W03P	(3NC)	SDP•K20W03P	SDP•K120W03P	SDP•K7•W03P	SDP•K61W03P

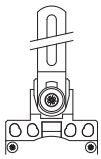
SDM_K Series

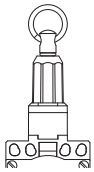
50 mm metal casing.
3 cable inlets. IP 66

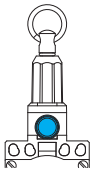












Contact blocks		→ K20	→ K120	→ K71	→ K61	→ K96	→ K98
Z11	(1NO+1NC)	SDM•K20Z11	SDM•K120Z11	SDM•K7•Z11	SDM•K61Z11		
Z02	(2NC)	SDM•K20Z02	SDM•K120Z02	SDM•K7•Z02	SDM•K61Z02		
X11	(1NO+1NC)	SDM•K20X11	SDM•K120X11	SDM•K7•X11	SDM•K61X11	SDM•K96X11	SDM•K98X11
Y11	(1NO+1NC)	SDM•K20Y11	SDM•K120Y11	SDM•K7•Y11	SDM•K61Y11		
W02	(2NC)	SDM•K20W02	SDM•K120W02	SDM•K7•W02	SDM•K61W02	SDM•K96W02	SDM•K98W02
X21P	(2NO+1NC)	SDM•K20X21P	SDM•K120X21P	SDM•K7•X21P	SDM•K61X21P	SDM•K96X21P	SDM•K98X21P
X12P	(1NO+2NC)	SDM•K20X12P	SDM•K120X12P	SDM•K7•X12P	SDM•K61X12P	SDM•K96X12P	SDM•K98X12P
W03P	(3NC)	SDM•K20W03P	SDM•K120W03P	SDM•K7•W03P	SDM•K61W03P	SDM•K96W03P	SDM•K98W03P

Safety Limit Switches

Limit switches with keys, shaft lever or pull wire

SBM_K Series

40 mm aluminium casing.
1 cable inlet. IP 66

K30/K40
Key operated
90° adjustable head

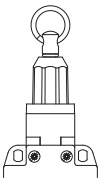
K97
Pull wire without reset
for simple stop

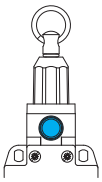
K99
Pull wire with reset
for emergency stop

Contact blocks		K40	K97	K99
Z11	**(1NO+1NC)**	SBM•K40Z11		
Z02	**(2NC)**	SBM•K40Z02		
X11	**(1NO+1NC)**	SBM•K40X11	SBM•K97X11	SBM•K99X11
Y11	**(1NO+1NC)**	SBM•K40Y11		
W02	**(2NC)**	SBM•K40W02	SBM•K97W02	SBM•K99W02
X21	**(2NO+1NC)**	SBM•K40X21	SBM•K97X21	SBM•K99X21
X12	**(1NO+2NC)**	SBM•K40X12	SBM•K97X12	SBM•K99X12
W03	**(3NC)**	SBM•K40W03	SBM•K97W03	SBM•K99W03

SCM_K Series

60 mm aluminium casing.
3 cable inlets. IP 66

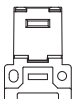




Contact blocks		K40	K97	K99
Z11	**(1NO+1NC)**	SCM•K40Z11		
Z02	**(2NC)**	SCM•K40Z02		
X11	**(1NO+1NC)**	SCM•K40X11	SCM•K97X11	SCM•K99X11
Y11	**(1NO+1NC)**	SCM•K40Y11		
W02	**(2NC)**	SCM•K40W02	SCM•K97W02	SCM•K99W02
X21	**(2NO+1NC)**	SCM•K40X21	SCM•K97X21	SCM•K99X21
X12	**(1NO+2NC)**	SCM•K40X12	SCM•K97X12	SCM•K99X12
W03	**(3NC)**	SCM•K40W03	SCM•K97W03	SCM•K99W03

SBP_K Series

40 mm polymeric
casing.
1 cable inlet. IP 65



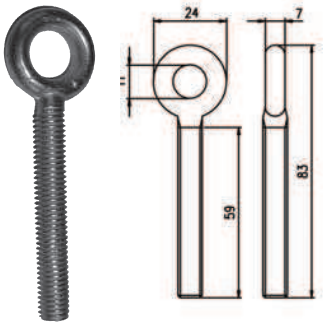
Contact blocks		K30
Z11	**(1NO+1NC)**	SBP•K30Z11
Z02	**(2NC)**	SBP•K30Z02
X11	**(1NO+1NC)**	SBP•K30X11
Y11	**(1NO+1NC)**	SBP•K30Y11
W02	**(2NC)**	SBP•K30W02
X21	**(2NO+1NC)**	SBP•K30X21
X12	**(1NO+2NC)**	SBP•K30X12
W03	**(3NC)**	SBP•K30W03

Operating keys (to be ordered separately)

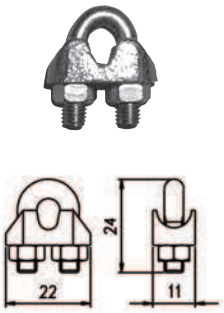
Description	Bent key	Flat key	Bent key	Flat key	Shock absorbing bent key	Shock absorbing flat key	Adjustable joint key
Centre distance fixing holes	22 mm.	22 mm.	13 mm.	13 mm.	15 mm.	15 mm.	40 mm.
	Code	**Code**	**Code**	**Code**	**Code**	**Code**	**Code**
For operating heads K20 and K120	**13**	**14**	**15**	**16**	**17**	**18**	**19**
For operating heads K30 and K40			**35**	**36**			**39**

Accessories

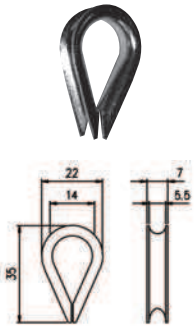
OCC 08
Stay Bolt



MOR 05
Rope Clamp



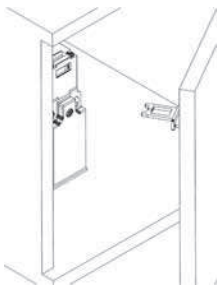
RED 05
Rope eye



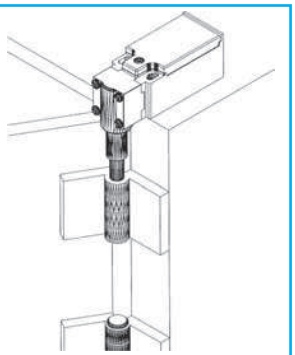
FUN 05
Rope ø 5mm

Code	Meters
FUN05M010	10
FUN05M015	15
FUN05M020	20
FUN05M025	25
FUN05M102	102

Examples of applications



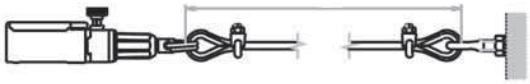
Key safety switch



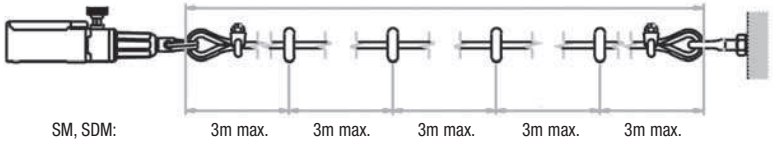
Shaft safety switch

Z lever safety switch

SM, SDM: 6m max.
SBM, SCM: 16m max.



SM, SDM: 15m max.
SBM, SCM: 25m max.



SM, SDM:	3m max.	3m max.	3m max.	3m max.	3m max.
SBM, SCM:	3÷5m max.	3÷5m max.	3÷5m max.	3÷5m max.	3÷5m max.

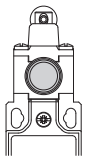
Pull wire safety switch

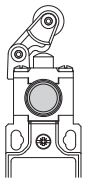
AP_R series 30 mm. polymeric limit switches - IP 65 ⧈
EN 50047 - 1 cables entry

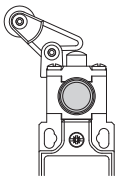
Cable inlets

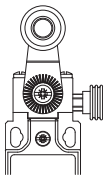
AP1: PG 13.5
AP2: 1/2" NPT (with adapter)
AP3: PG 11
AP4: M 16 x 1,5
AP5: M 20 x 1,5


Steel plunger with reset


Steel plunger with nylon roller with reset


Steel plunger with nylon roller with reset


Steel plunger with nylon roller with reset


Lever with nylon roller with reset

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

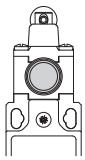
Other versions available on request

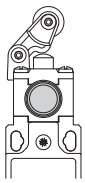
AM_R series 30 mm. metal limit switches - with polymeric working heads - IP 66
1 cables entry

Cable inlets

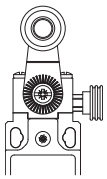
AM1: PG 13.5
AM2: 1/2" NPT
AM3: PG 11
AM4: M 16 x 1,5
AM5: M 20 x 1,5


Steel plunger with reset


Steel plunger with nylon roller with reset


Steel plunger with nylon roller with reset


Steel plunger with nylon roller with reset

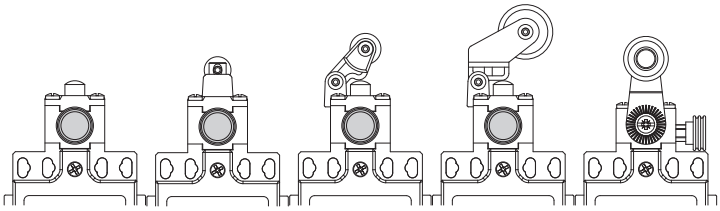

Lever with nylon roller with reset

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

Other versions available on request

DP_R series 50 mm. polymeric limit switches - IP 65
2 cables entries

Cable inlets
DP1: PG 13.5
DP2: 1/2" NPT (with adapter)
DP3: PG 11
DP4: M 16 x 1,5
DP5: M 20 x 1,5



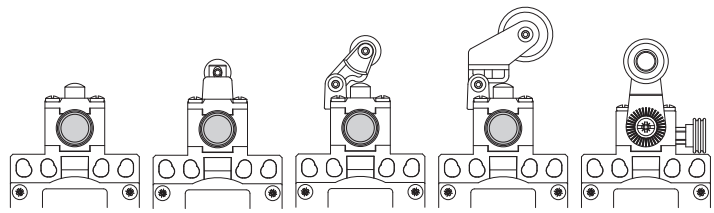
Steel plunger with reset | Steel plunger with nylon roller with reset | Steel plunger with nylon roller with reset | Steel plunger with nylon roller with reset | Lever with nylon roller with reset

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

Other versions available on request

DM_R series 50 mm. metal limit switches - with polymeric working heads - IP 66
3 cables entries

Cable inlets
DM1: PG 13.5
DM2: 1/2" NPT
DM3: PG 11
DM4: M 16 x 1,5
DM5: M 20 x 1,5



Steel plunger with reset | Steel plunger with nylon roller with reset | Steel plunger with nylon roller with reset | Steel plunger with nylon roller with reset | Lever with nylon roller with reset

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

Other versions available on request