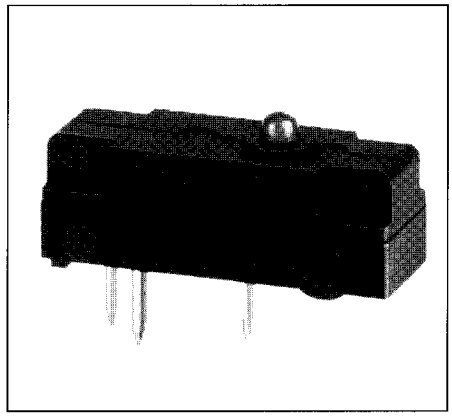
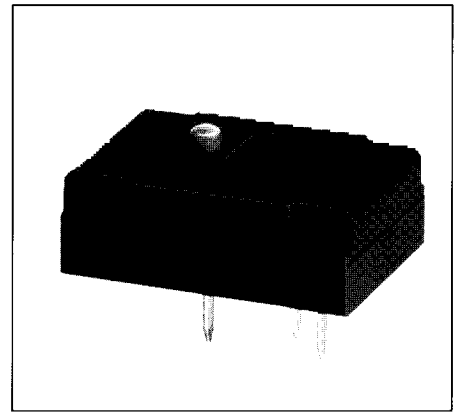
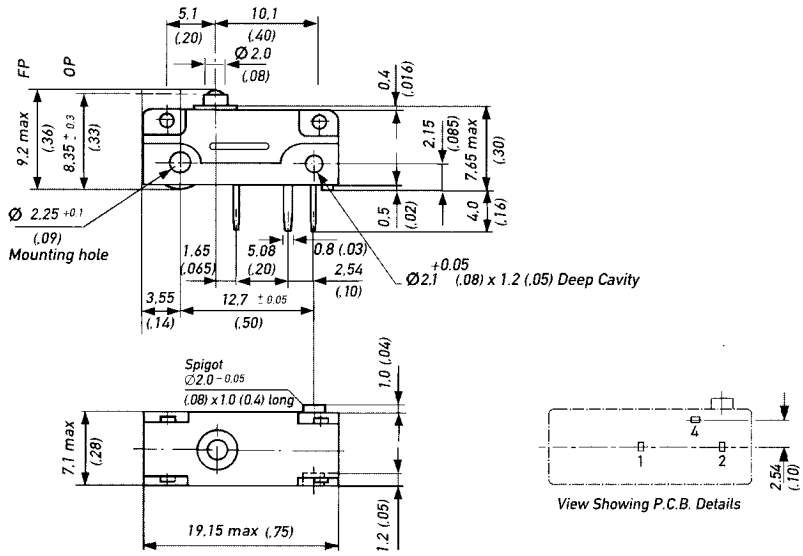
Low Profile-Series (LP)

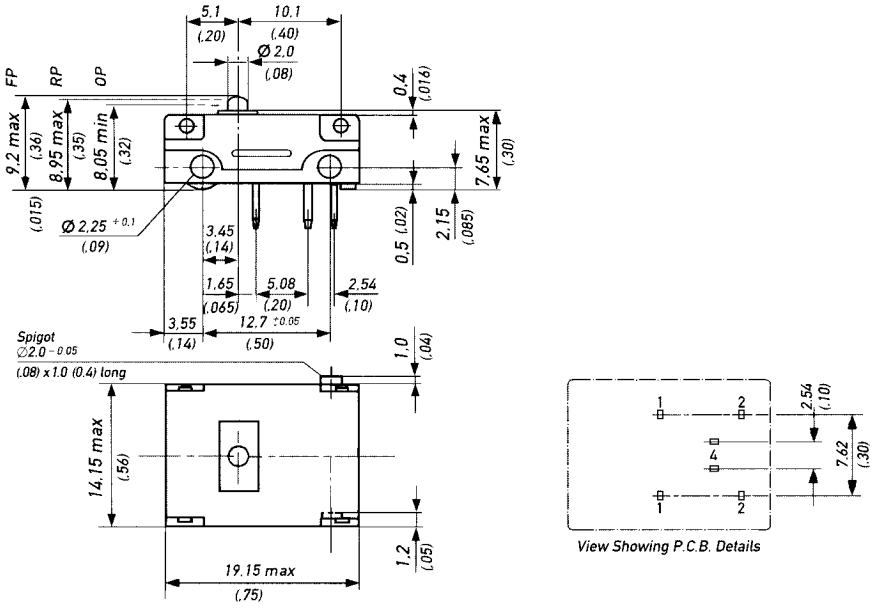




LPSP



LPDP



The Low Profile series is an innovative approach to the increasing use of printed circuit boards as carriers of electrical-electronic switching units.

Special features

- Low overall height
- Stable, PCB mounting
- Precise cylindrical plunger guarantees a high degree of repeat accuracy
- Enclosure provides protection to IP40
- Solder pin terminals with 2.54 mm (0.1 inch) spacing
- Lever attachment possible at both ends of switch
- Location pegs for multi-pole use
- Single and double-pole systems available as standard
- Double-pole version available with defined sequence
- Extensive range of operating levers

Standard switches in the LPDP series do not have a deliberate switching sequence. However, defined switching sequences can be supplied if required.

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Specifications

LP

Housing:
Glass fibre reinforced Polyamide (PA 6.6)

Plunger:
Polyacetal (POM) (Double pole)
Polyamide (P.A. 6.6) (Single pole)

Mechanism:
Snap-action, coil spring mechanism with stainless steel spring. Single or double pole changeover. Normally-closed and Normally-open versions are available.

Contacts:
Fine silver
Gold plate on silver
Gold plate on nickel underlay

Terminals:
PCB silver or gold flashed

Temperature Range:
–10°C to +85°C (higher temperatures possible consult Burgess)

Mechanical Life:
10^7 cycles minimum (impact-free actuation)

Type of Protection:
Enclosure IP40
Flux-proof terminal entries

Mounting:
PCB or side-mounting

Actuators:

Single pole	Double pole
Plain lever	Plain lever
Cam follower	

Special features:
Double-pole versions consist of two mechanically and electrically isolated mechanisms actuated by a common plunger. Versions with a defined sequence are available.

Approvals:
Single pole – UL; CSA

Recom. Max. Electrical Ratings LPHSP

Voltage	Resistive load	Inductive load
VAC	A	A
125	3	1.5
250	3	1.5

Recom. Max. Electrical Ratings LPHSP

Voltage	Resistive load	Inductive load
VDC	A	A
up to		
30	2	2
50	0.5	0.5
75	0.25	0.25

Recom. Max. El. Ratings LPDP/LPSP

Voltage	Resistive load	Inductive load
VAC	A	A
125	2	1
250	2	1

Recom. Max. El. Ratings LPDP/LPSP

Voltage	Resistive load	Inductive load
VDC	A	A
up to		
30	1.5	1.5
50	0.3	0.3
75	0.15	0.15

Recom. Max. El. Ratings LP1DP/LP1SP

Voltage	Resistive load	Inductive load
VAC	A	A
125	1.5	0.75
250	1.5	0.75

Recom. Max. El. Ratings LP1DP/LP1SP

Voltage	Resistive load	Inductive load
VDC	A	A
up to		
30	1	1
50	0.2	0.2
75	0.1	0.1

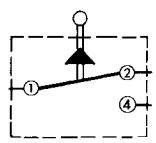
Recom. Max. El. Ratings LP2DP/LP2SP

Voltage	Resistive load	Inductive load
VAC	A	A
125	1	0.5
250	1	0.5

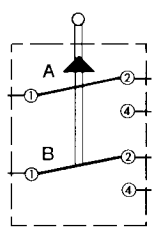
Recom. Max. El. Ratings LP2DP/LP2SP

Voltage	Resistive load	Inductive load
VDC	A	A
up to		
30	0.7	0.7
50	0.15	0.15

Circuit diagram LP.SP



Circuit diagram LP.DP



The breaking capacities in the tables refer to silver contacts.

Gold-plated contacts are intended for use in signal circuits where the energy being switched is at the milliwatt level. Power being switched must be limited in order to avoid overheating and possible dispersal of the gold from the contact area.

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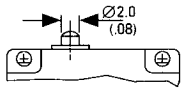
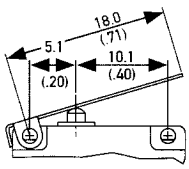
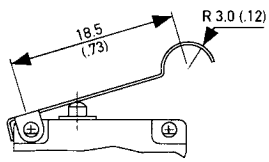
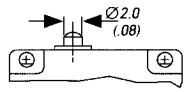
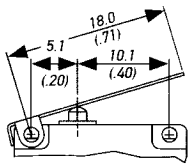
Product Range
Operating Characteristics

LP

Actuator	Reference	Actuating Force Maximum N (ozf)	Release Force Minimum N (ozf)	Free Position Maximum mm (in)	Operating Position mm (in)	Movement Differential Maximum mm (in)	Over Travel
Plunger 	LPHSP LPSP LP1SP LP2SP	1.8 (6.5) 1.4 (5) 0.75 (2.7) 0.5 (1.8)	0.28 (1.0) 0.2 (0.72) 0.12 (0.43) 0.08 (0.29)	9.2 (0.36) 9.2 (0.36) 9.2 (0.36) 9.2 (0.36)	8.35 (0.33) ± 0.3 (± 0.01)	0.18 (0.007)	Flush with case. The case should not be used as an end stop.
Y1-Lever  *Width of lever: 4.0 mm (.16)*	LPHSPY1 LPSPY1 LP1SPY1 LP2SPY1	0.6 (2.2) 0.5 (1.8) 0.3 (1.1) 0.2 (0.72)	0.06 (0.22) 0.04 (0.14) 0.02 (0.07) 0.02 (0.07)	13.5 (0.53) 13.5 (0.53) 13.5 (0.53) 13.5 (0.53)	10.1 (0.4) ± 1.2 (± 0.05)	0.8 (0.03)	
YC-Lever  *Width of lever: 4.0 mm (.16)*	LPHSPYC LPSPYC LP1SPYC LP2SPYC	0.6 (2.2) 0.5 (1.8) 0.3 (1.1) 0.2 (0.72)	0.06 (0.22) 0.04 (0.14) 0.02 (0.07) 0.02 (0.07)	16.0 (0.63) 16.0 (0.63) 16.0 (0.63) 16.0 (0.63)	12.9 (0.51) ± 1.5 (± 0.06)	0.8 (0.03)	
Plunger 	LPDP LP1DP LP2DP	2.8 (10) 1.5 (5.4) 1.0 (3.6)	0.4 (1.44) 0.25 (0.9) 0.15 (0.54)	9.2 (0.36) 9.2 (0.36) 9.2 (0.36)	Minimum 8.05 (0.32)	8.95 (0.35) Maximum Release Position	
Y1-Lever  *Width of lever: 9.0 mm (.35)*	LPDPY1 LP1DPY1 LP2DPY1	1.0 (3.6) 0.5 (1.8) 0.4 (1.44)	0.09 (0.32) 0.06 (0.22) 0.03 (0.1)	13.5 (0.53) 13.5 (0.53) 13.5 (0.53)	Minimum 8.9 (0.35)	12.5 (0.49) Maximum Release Position	

Datum for Free Position and Operating Position stand off's on base.

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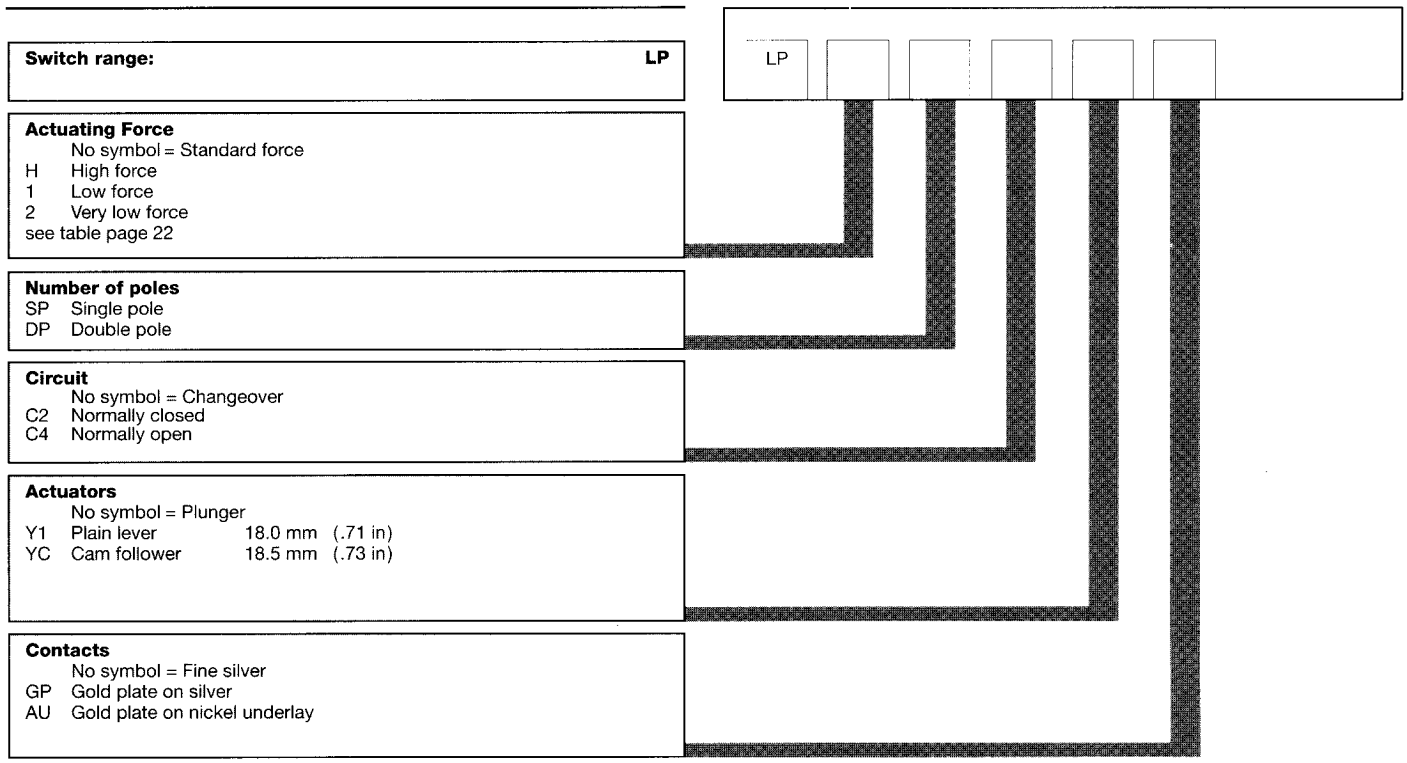
Ordering References

LP



Switch range: **LP**

Actuating Force
No symbol = Standard force
H High force
1 Low force
2 Very low force
see table page 22

Number of poles
SP Single pole
DP Double pole

Circuit
No symbol = Changeover
C2 Normally closed
C4 Normally open

Actuators
No symbol = Plunger
Y1 Plain lever 18.0 mm (.71 in)
YC Cam follower 18.5 mm (.73 in)

Contacts
No symbol = Fine silver
GP Gold plate on silver
AU Gold plate on nickel underlay

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