

Fulcrum hand Double acting/single acting

HBL Series

● Open and close angle: -5° to 20°



Specifications

Descriptions	HBL			
Size	1C	2CS	3CS	4CS
Cylinder bore size mm	φ15	φ20	φ25	φ40
Actuation	Double acting/single acting			
Working fluid	Compressed air			
Max. working pressure MPa	0.7			
Min. working pressure MPa	0.3			
Ambient temperature °C	5 to 60			
Port size	M5			Rc1/8
Open angle Degree	-5 to 20			
Rod diameter mm	φ8	φ10	φ12	φ14
Capacity of reciprocating cm³	0.5	2.2	4.3	14.2
Repeatability mm	±0.03			
Product weight kg	0.09	0.22	0.39	0.82
Lubrication	Not required (when lubricating, use turbine oil Class 1 ISO VG32)			

Switch specifications

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2H/T2V	T3H/T3V
Applications	Programmable controller	Programmable controller, relay
Output method	-	NPN output
Power voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20 mA (Note 1)	30 VDC or less, 100mA or less
Light	LED (ON lighting)	
Leakage current	1mA or less	10μA or less
Maximum shock resistance	980m/s²	
Lead wire	Standard 1m (oil resistant vinyl cabtire cable 2-conductor 0.2mm²)	Standard 1m (oil resistant vinyl cabtire cable 2-conductor 0.2mm²)

Note 1: Max. load current above: 20 mA at 25°C.

The current will be lower than 20mA if ambient temperature around switch is higher than 25°C. (5 to 10mA with 60°C)

How to order

Without switch

HBL - **2CS** - **O**

With switch

HBL - **2CS** - **O** - **T2H** - **R**

A Size

B Option
Note 1

C Switch model no.

D Switch quantity

Symbol	Descriptions			
A Size				
1C				
2CS				
3CS				
4CS				
B Option				
Blank	Standard (double acting)			
O	Single acting (normally open)			
C	Single acting (normally closed)			
Y1	With small jaw material (S50C)			
Y2	With small jaw material (MC nylon)			
C Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T2H*	T2V*	Proximity	1 color	2-wire
T3H*	T3V*		indicator type	3-wire
*Lead wire length				
Blank	1m (standard)			
3	3m (option)			
5	5m (option)			
D Switch quantity				
R	One on open side			
H	One on closed side			
D	Two			

⚠ Note on model no. selection

Note 1: Refer to pages 412 to 413 for the dimensions and applicable model of the small jaw.
When ordered as an option, two are included on delivery.

<Example of model number>

HBL-2CS-O-T2H-R

Model: Fulcrum hand

- A** Size : 2CS
- B** Option : Single acting, normally open type
- C** Switch model no.: Proximity T2H switch, lead wire 1m
- D** Switch quantity : One on open side

How to order switch

● For switch T*H*

· Switch body + mounting bracket

HBL - **T2H**

Switch model no.
(Item above **C**)

· Switch body

SW - **T2H**

Switch model no.
(Item above **C**)

· Mounting bracket

HBL - **T**

● For switch T*V*

· Switch body + mounting bracket

HBL - **T2V** - *

Switch model no.
(Item above **C**)

· Switch body

SW - **T2V**

Switch model no.
(Item above **C**)

· Mounting bracket

HBL - **TV** - *

(Select either R (open) or H (closed) for sections marked with an asterisk (*).)

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMFB
HMF
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2*-HC
CKH2
CKLB2
NCK/SCK/FCCK
FJ
FK
Ending

Fulcrum hand
Hand