

# LBS

## LOAD BREAK DISCONNECT SWITCHES



Ferraz Shawmut LBS load break disconnect switches have been designed for today's industrial control systems. The LBS switches allow you to safely turn power on and off or to isolate a particular circuit within the panel. These switches are extremely compact and offer a variety of mounting options like DIN rail mounting, base mounting, or door mounting. A wide assortment of handles, shafts and accessories are available to provide you with the ultimate flexibility in the design of your industrial control panels. Wiring terminations are integral to the switch body and recessed to insure a "finger safe" environment according to IEC standards to an IP20 grade of protection.

### HIGHLIGHTS:

- Finger Safe
- Compact footprint
- DIN rail or base mount standard
- Door mounting optional
- Choice of external handles/shafts
- Direct mount handle option
- Toggle handle option



### APPLICATIONS:

- On/Off switching and disconnect applications in circuits up to 600 volts, 125 amperes on the load side of branch circuit protection fusing.
- LBS M range: Motor Controller
- LBS R & T range: Motor Controller suitable as Motor Disconnect
- Motor Isolator
- General Purpose

### Ratings

- 600 VAC
- 16, 20, 25, 30, 40, 60, 80, 100, and 125 amperes

### Approvals

- Meets the requirements of UL 508
- UL Listed Guide NLRV File E196672 
- cUL Listed Guide NLRV7 File E196672
- CSA C22.2 No 14 CEC rule 28 602 (3) (b)
- IEC 947-3 as load break disconnect 

# LBS M

## LOAD BREAK DISCONNECT SWITCHES

### LBS RANGE: Load Break Disconnect Switches from 16 to 125 Amperes



SELECT A SWITCH

AMPERE RATING		16	20	25	30
CATALOG NUMBER: 3 POLE		LBSM16	LBSM20	LBSM25	LBSM30



SELECT A HANDLE

NEMA TYPE	IEC TYPE	DEFEATABLE	COLOR	CATALOG NUMBER			
1,3R, 12, 4, 4X	IP65	NO	Black	HMSB	HMSB	HMSB	HMSB
1, 3R, 12, 4, 4X	IP65	NO	Red/Yellow	HMSR	HMSR	HMSR	HMSR



SELECT A SHAFT

SHAFT LENGTH (inches/mm)	CATALOG NUMBER			
2.75 / 70	SM70-5L	SM70-5L	SM70-5L	SM70-5L
4.72 / 120	SM120-5L	SM120-5L	SM120-5L	SM120-5L
7.9 / 200	SM200-5L	SM200-5L	SM200-5L	SM200-5L
12.0 / 305	SM300-5L	SM300-5L	SM300-5L	SM300-5L



SELECT A HANDLE

NEMA TYPE	IEC TYPE	DEFEATABLE	COLOR	CATALOG NUMBER			
1,3R, 12	IP54	YES	Black	HDPB	HDPB	HDPB	HDPB
1, 3R, 12	IP54	YES	Red/Yellow	H DPR	H DPR	H DPR	H DPR
1, 3R, 12	IP54	NO	Black	HDPBND	HDPBND	HDPBND	HDPBND
1, 3R, 12	IP54	NO	Red/Yellow	H DPRND	H DPRND	H DPRND	H DPRND



SELECT A SHAFT

SHAFT LENGTH (inches/mm)	CATALOG NUMBER			
4.72/120	SD120-5L	SD120-5L	SD120-5L	SD120-5L
7.9/200	SD200-5L	SD200-5L	SD200-5L	SD200-5L
12.6/320	SD320-5L	SD320-5L	SD320-5L	SD320-5L
15.75/400	SD400-5L	SD400-5L	SD400-5L	SD400-5L



SELECT A HANDLE

NEMA TYPE	IEC TYPE	DEFEATABLE	COLOR	CATALOG NUMBER			
1,3R, 12	IP54	YES	Black	HGPB	HGPB	HGPB	HGPB
1, 3R, 12	IP54	YES	Red/Yellow	HGPR	HGPR	HGPR	HGPR
1, 3R, 12, 4, 4X	IP65	YES	Black	HGPB4	HGPB4	HGPB4	HGPB4
1, 3R, 12, 4, 4X	IP65	YES	Red/Yellow	HGPR4	HGPR4	HGPR4	HGPR4



SELECT A SHAFT

SHAFT LENGTH (inches/mm)	CATALOG NUMBER			
4.72/120	SG120-5L	SG120-5L	SG120-5L	SG120-5L
7.9/200	SG200-5L	SG200-5L	SG200-5L	SG200-5L
12.6/320	SG320-5L	SG320-5L	SG320-5L	SG320-5L
15.75/400	SG400-5L	SG400-5L	SG400-5L	SG400-5L

**OPTIONS**

Modular 4th power pole (rating same as switch)  
 Neutral pole (feed through, not switched, rated 30A, 480VAC)  
 Ground pole (feed through, not switched, rated 30A, 480VAC)  
 (1) NO+NC, side mount, pre-break auxiliary contact, A300, rated 15A @ 120 VAC  
 Terminal shroud (for 3 pole switch)  
 Terminal shroud for modular 4th pole or NMM or GMM  
 Direct mounted handle (requires removing collar from switch)

CATALOG NUMBER			
PPM16	PPM20	PPM25	PPM30
NMM	NMM	NMM	NMM
GMM	GMM	GMM	GMM
ACMM	ACMM	ACMM	ACMM
TSLBSM	TSLBSM	TSLBSM	TSLBSM
TSLBSM4	TSLBSM4	TSLBSM4	TSLBSM4
HAD60M	HAD60M	HAD60M	HAD60M

**OTHER VERSIONS AVAILABLE:** Switch with Direct Mounted Handles **CATALOG NUMBER: 3 POLE**

16	20	25	30
LBSM16DH	LBSM20DH	LBSM25DH	LBSM30DH

Please consult factory for availability of switches with direct mounted handles. Options same as above.



Door mounted switches **CATALOG NUMBER: 3 POLE**

16	20	25	30
LBSDM16	LBSDM20	LBSDM25	LBSDM30



SELECT A HANDLE

NEMA TYPE	IEC TYPE	DEFEATABLE	COLOR	CATALOG NUMBER			
1,3R, 12, 4, 4X	IP65	NO	Black	HMSB	HMSB	HMSB	HMSB
1, 3R, 12, 4,	IP65	NO	Red/Yellow	HMSR	HMSR	HMSR	HMSR

**OPTIONS**

Modular 4th power pole (rating same as switch)  
 Neutral pole (feed through, not switched, rated 30A, 480VAC)  
 Ground pole (feed through, not switched, rated 30A, 480VAC)  
 (1) NO+NC, side mount, pre-break auxiliary contact, A300, rated 15A @ 120 VAC

CATALOG NUMBER			
PPDM16	PPDM20	PPDM25	PPDM30
NDMM	NDMM	NDMM	NDMM
GDMM	GDMM	GDMM	GDMM
ACDMM	ACDMM	ACDMM	ACDMM

Note: All "-5L" shafts have door interlock pinned at factory (no assembly required)

# LBS R & T

## LOAD BREAK DISCONNECT SWITCHES



SELECT A SWITCH

AMPERE RATING	30	40	60	80	100	125
<b>CATALOG NUMBER: 3 POLE</b>	LBSR30	LBSR40	LBSR60	LBSR80	LBSR100	LBSR125
<b>CATALOG NUMBER: 4 POLE</b>	LBSR304	LBSR404	—	—	—	—



SELECT A HANDLE

NEMA TYPE	IEC TYPE	DEFEATABLE	COLOR	CATALOG NUMBER					
1,3R, 12, 4, 4X	IP65	NO	Black	HMSB	HMSB	HMSB	HMSB	HMSB	HMSB
1, 3R, 12, 4, 4X	IP65	NO	Red/Yellow	HMSR	HMSR	HMSR	HMSR	HMSR	HMSR



SELECT A SHAFT

SHAFT LENGTH (inches/mm)	CATALOG NUMBER					
2.75 / 70	SM70-5L	SM70-5L	SM70-5L	SM70-5L	SM70-5L	SM70-5L
4.72 / 120	SM120-5L	SM120-5L	SM120-5L	SM120-5L	SM120-5L	SM120-5L
7.9 / 200	SM200-5L	SM200-5L	SM200-5L	SM200-5L	SM200-5L	SM200-5L
12.0 / 305	SM300-5L	SM300-5L	SM300-5L	SM300-5L	SM300-5L	SM300-5L



SELECT A HANDLE

NEMA TYPE	IEC TYPE	DEFEATABLE	COLOR	CATALOG NUMBER					
1,3R, 12	IP54	YES	Black	HDPB	HDPB	HDPB	HDPB	HDPB	HDPB
1, 3R, 12	IP54	YES	Red/Yellow	H DPR	H DPR	H DPR	H DPR	H DPR	H DPR
1, 3R, 12	IP54	NO	Black	HDPBND	HDPBND	HDPBND	HDPBND	HDPBND	HDPBND
1, 3R, 12	IP54	NO	Red/Yellow	H DPRND	H DPRND	H DPRND	H DPRND	H DPRND	H DPRND



SELECT A SHAFT

SHAFT LENGTH (inches/mm)	CATALOG NUMBER					
4.72/120	SD120-5L	SD120-5L	SD120-5L	SD120-5L	SD120-5L	SD120-5L
7.9/200	SD200-5L	SD200-5L	SD200-5L	SD200-5L	SD200-5L	SD200-5L
12.6/320	SD320-5L	SD320-5L	SD320-5L	SD320-5L	SD320-5L	SD320-5L
15.75/400	SD400-5L	SD400-5L	SD400-5L	SD400-5L	SD400-5L	SD400-5L



SELECT A HANDLE

NEMA TYPE	IEC TYPE	DEFEATABLE	COLOR	CATALOG NUMBER					
1,3R, 12	IP54	YES	Black	HGPB	HGPB	HGPB	HGPB	HGPB	HGPB
1, 3R, 12	IP54	YES	Red/Yellow	HGPR	HGPR	HGPR	HGPR	HGPR	HGPR
1, 3R, 12, 4, 4X	IP65	YES	Black	HGPB4	HGPB4	HGPB4	HGPB4	HGPB4	HGPB4
1, 3R, 12, 4, 4X	IP65	YES	Red/Yellow	HGPR4	HGPR4	HGPR4	HGPR4	HGPR4	HGPR4



SELECT A SHAFT

SHAFT LENGTH (inches/mm)	CATALOG NUMBER					
4.72/120	SG120-5L	SG120-5L	SG120-5L	SG120-5L	SG120-5L	SG120-5L
7.9/200	SG200-5L	SG200-5L	SG200-5L	SG200-5L	SG200-5L	SG200-5L
12.6/320	SG320-5L	SG320-5L	SG320-5L	SG320-5L	SG320-5L	SG320-5L
15.75/400	SG400-5L	SG400-5L	SG400-5L	SG400-5L	SG400-5L	SG400-5L

OPTIONS	CATALOG NUMBER					
(1) NO Auxiliary contact rated 10A, 600VAC, A600-Q600	AC11	AC11	AC11	AC11	AC11	AC11
(1) NC Auxiliary contact rated 10A, 600VAC, A600-Q600	AC12	AC12	AC12	AC12	AC12	AC12
Auxiliary contact holder: 3 pole (accommodates up to 6 auxiliary contacts)	ACHLBS1	ACHLBS1	ACHLBS2	ACHLBS2	ACHLBS2	ACHLBS2
4 pole (accommodates up to 6 auxiliary contacts)	ACHLBS14	ACHLBS14	—	—	—	—
Door mounting kit for LBSR switches (order switch and HMSB or HMSR separately)	DMKLBSR	DMKLBSR	DMKLBSR	DMKLBSR	DMKLBSR	DMKLBSR
Direct mounted handle (requires removing collar from switch)	HAD40R	HAD40R	HAD80R	HAD80R	HAD80R	HAD80R

**OTHER VERSIONS AVAILABLE:**



Switch with Direct Mounted Handles (includes escutcheon plate for lockout capabilities)

AMPERE RATING	30	40	60	80	100	125
<b>CATALOG NUMBER: 3 POLE</b>	LBSR30DH	LBSR40DH	LBSR60DH	LBSR80DH	LBSR100DH	LBSR125DH
<b>CATALOG NUMBER: 4 POLE</b>	LBSR304DH	LBSR404DH	—	—	—	—

Please consult factory for availability of switches with direct mounted handles.



Toggle style

AMPERE RATING	30	40	60	80	100	125
<b>CATALOG NUMBER: 3 POLE</b>	LBST30	LBST40	LBST60	LBST80	LBST100	LBST125
<b>CATALOG NUMBER: 4 POLE</b>	LBST304	LBST404	—	—	—	—

Optional DIN escutcheon plate for lockout capabilities.

CATALOG NUMBER: 3 POLE	CP40T	CP40T	CP80T	CP80T	CP80T	CP80T
<b>CATALOG NUMBER: 4 POLE</b>	CP40T4P	CP40T4P	—	—	—	—

(No lockout capability for 4 pole)

Note: All "-5L" shafts have door interlock pinned at factory (no assembly required)

# LBS M

## LOAD BREAK DISCONNECT SWITCHES

Rating		LBS M			
		16 A	20 A	25 A	30 A
Approval		UL508/cUL	UL508/cUL	UL508/cUL	UL508/cUL
Short-circuit rating kA at 600 V AC w/fuse		5	5	5	5
Branch circuit fuse type		RK5	RK5	RK5	RK5
Max fuse rating (A)		30	30	30	30
Maximum UL Horsepower ratings (3-ph)	208V AC	3	5	7.5	7.5
	220-240V AC	5	5	7.5	7.5
	440-480V AC	10	10	15	15
	600V AC	10	15	20	20
Maximum UL Horsepower ratings (1-ph)	120 V AC	1	1.5	2	2
	240 V AC	2	3	3	5
DC ratings	125 V DC	16	20	25	30
2 pole in series					
Terminal lugs	wire type	Cu	Cu	Cu	Cu
	wire size (solid)	#10-#14	#10-#14	#10-#14	#10-#14
	wire size (stranded)	#6-#14	#6-#14	#6-#14	#6-#14
Weight (lb)		0.32	0.32	0.32	0.32

### IEC 947-3 TECHNICAL CHARACTERISTICS

THERMAL CURRENT I <sub>th</sub> (40 °C)		LBS M			
		16 A	20 A	25 A	32 A
Rated insulation voltage U <sub>i</sub> (V)		800	800	800	800
Rated impulse withstand U <sub>imp</sub> (kV)		8	8	8	8
OPERATIONAL CURRENT (A)					
400 V AC	AC 22 A	16	20	25	32
	AC 23 A	16	20	25	32
500 V AC	AC 22 A	16	20	25	32
	AC 23 A	16	16	20	25
690 V AC	AC 22 A	16	20	25	32
	AC 23 A	16	16	20	20
MOTOR POWER (KW)					
400 V AC	AC 23	7	9	11	15
500 V AC	AC 23	9	9	11	15
690 V AC	AC 23	11	11	15	15
OVERCURRENT CAPACITY					
Short-circuit current with gG fuses (kA Rms)		50	50	50	50
Maximum rating for associated gG fuses (A)		16	20	25	32
Cut-off current (kA peak)		5.9	5.9	5.9	5.9
Short-time withstand current I <sub>cw</sub> 1s (kA)		1.2	1.2	1.2	1.2
MECHANICAL ENDURANCE (# of operations)		100 000	100 000	100 000	100 000
CONNECTION					
Cu (mm <sup>2</sup> )	3p/4p	1.5 to 16	1.5 to 16	1.5 to 16	1.5 to 16

Note: 4-pole made by using modular 4th pole (see options, page K3, ie PPM16 or PPDM16)



# LBS R & T

## LOAD BREAK DISCONNECT SWITCHES FROM 30 TO 125 A

### UL AND CSA TECHNICAL CHARACTERISTICS FOR LBS R & LBS T RANGE MOTOR CONTROLLER SUITABLE AS MOTOR DISCONNECT

Rating		LBS R & LBS T					
		30 A <sup>(1)</sup>	40 A <sup>(1)</sup>	60 A	80 A	100 A	125 A
Approvals		UL508/CSA MD	UL508/CSA MD	UL508/CSA MD	UL508/CSA MD	UL508 MD	UL508 <sup>(2)</sup>
Short-circuit rating kA at 600 V AC w/fuse		10	10	10	10	10	10
Branch circuit fuse type		RK5	RK5	J or RK5	J or RK5	J or RK5	J or RK5
Max fuse rating (A)		80	80	150	150	150	150
Maximum UL Horsepower ratings (3-ph)	208V AC	7.5	7.5	10	15	20	20
	220-240V AC	7.5	7.5	15	20	20	25
	440-480V AC	15	20	30	40	40	50
Maximum UL Horsepower ratings (1-ph)	600V AC	20	25	40	50	-	60
	120 V AC	1.5	2	2	3	5	5
	240 V AC	3	3	7.5	10	15	15
DC ratings		125 V DC	30	40	60	80	80
2 pole in series							
Terminal lugs	wire type	Cu	Cu	Cu	Cu	Cu	Cu
	wire size (solid)	#10-#14	#10-#14	#10-#14	#10-#14	#10-#14	#10-#14
	wire size (stranded)	#4-#14	#4-#14	#1-#14	#1-#14	#1-#14	#1-#14
Weight (lb)		0.44	0.44	0.66	0.66	0.66	0.66

(1) Consult factory for "approvals of" 4 pole ratings

(2) UL508 Motor Controller only

### IEC 947-3 TECHNICAL CHARACTERISTICS

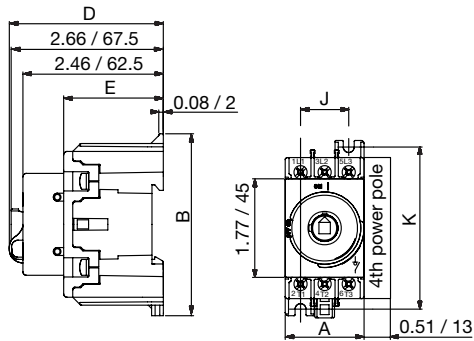
THERMAL CURRENT I <sub>th</sub> (40 °C)		LBS R & LBS T					
		32 A	40 A	63 A	80 A	100 A	125 A
Rated insulation voltage U <sub>i</sub> (V)		690	690	690	690	690	690
Rated impulse withstand U <sub>imp</sub> (kV)		8	8	8	8	8	8
OPERATIONAL CURRENT (A)							
400 V AC	AC 22 A	32	40	63	80	100	-
	AC 23 A	25	25	63	63	63	-
500 V AC	AC 22 A	32	40	63	80	100	-
	AC 23 A	25	25	45	45	45	-
690 V AC	AC 22 A	32	40	63	80	80	-
	AC 23 A	25	25	40	40	40	-
MOTOR POWER (kW)							
400 V AC	AC 23	11	11	30	30	30	-
500 V AC	AC 23	15	15	30	30	30	-
690 V AC	AC 23	22	22	33	33	33	-
OVERCURRENT CAPACITY							
Short-circuit current with gG fuses (kA Rms)		50	50	50	50	50	-
Maximum rating for associated gG fuses (A)		32	40	63	80	100	-
Cut-off current (kA peak)		4.5	5	5	-	-	-
Short-time withstand current I <sub>cw</sub> 1s (kA)		0.9	1	1.5	1.5	1.5	-
MECHANICAL ENDURANCE (# of operations)		20 000	20 000	20 000	20 000	20 000	-
CONNECTION							
Cu (mm <sup>2</sup> )	3p	1.5 to 16	1.5 to 16	1.5 to 35	1.5 to 35	1.5 to 35	-
	4p	1.5 to 25	1.5 to 25	-	-	-	-

# LBS

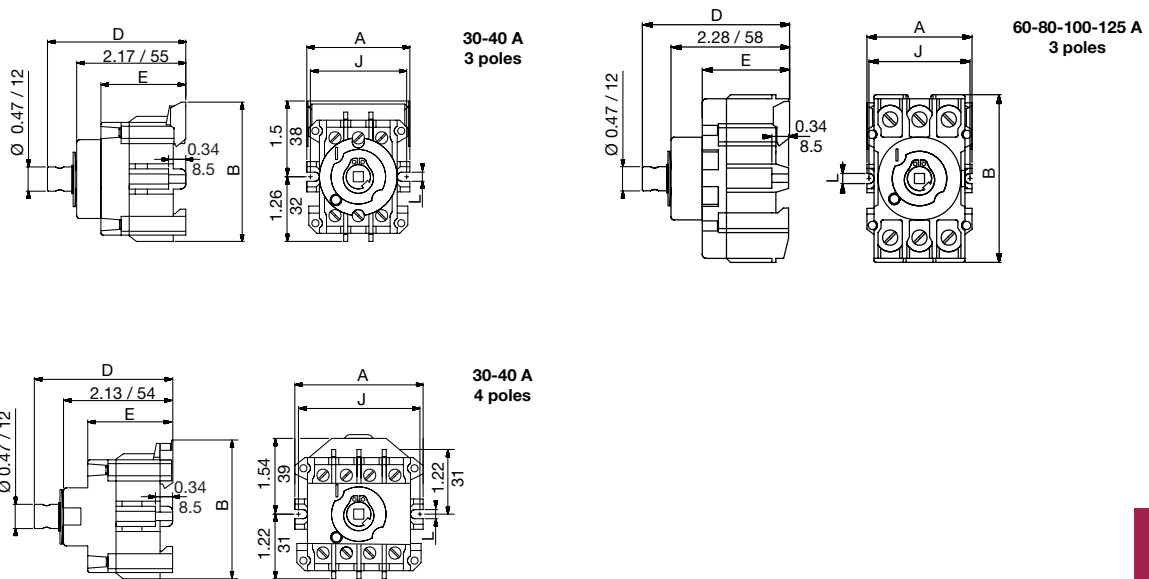
## LOAD BREAK DISCONNECT SWITCHES

### DIMENSIONS (dual dimensions: in/mm)

#### LBS M - BASE MOUNTING



#### LBS R - BASE MOUNTING



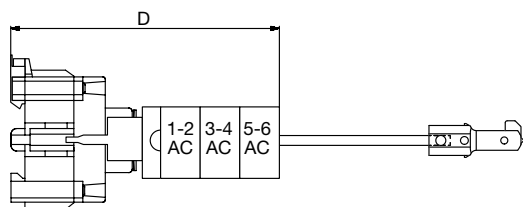
RATING	NUMBER OF POLES	A		B		D		E		J		K		L	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
LBS M 16 A LBS M 20 A LBS M 25 A LBS M 30 A	3 P	1.42	36	3.15	80	2.76	70	1.76	44.5	0.87	22	2.92	74	-	-
LBS R 30 A	3 P	2.01	51	2.76	70	2.71	69	1.66	42	1.89	48	-	-	0.17	4.2
LBS R 40 A	4 P	2.42	61.5	2.76	70	2.71	69	1.66	42	2.38	60.5	-	-	0.17	4.2
LBS R 60 A LBS R 80 A LBS R 100 A LBS R 125 A	3 P	2.09	53	3.35	85	2.87	73	1.69	43	1.99	50.5	-	-	0.17	4.2

# LBS

## LOAD BREAK DISCONNECT SWITCHES

### DIMENSIONS (dual dimensions: in/mm)

#### LBS R DIMENSIONS WITH AUXILIARY CONTACTS

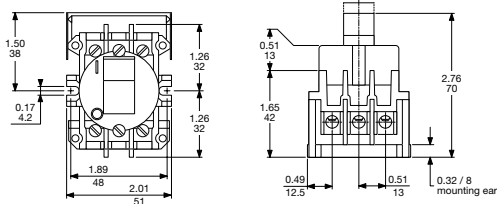


LBS R	D (in/mm)		
	1-2 AC	3-4 AC	5-6 AC
30-40A 3 poles	3.63 / 92	4.53 / 115	5.44 / 138
30-40A 4 poles	3.63 / 92	4.53 / 115	5.44 / 138
60-80 100-125A 3 poles	3.78 / 96	4.69 / 119	5.60 / 142

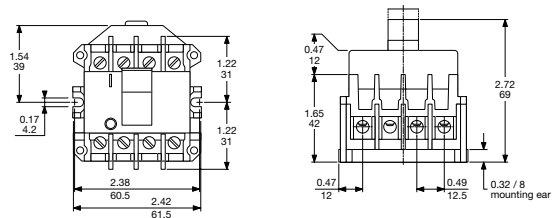
Note: Auxiliary contacts can be used with external operation only.

#### LBS T (TOGGLE STYLE) - BASE MOUNTING

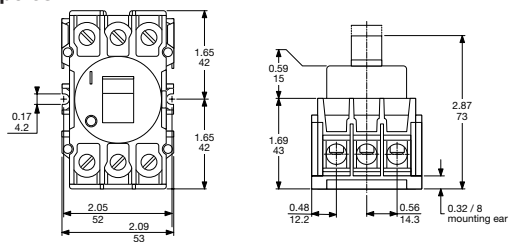
##### 30 - 40 A 3 poles



##### 30 - 40 A 4 poles



##### 60 - 80 - 100 - 125 A 3 poles

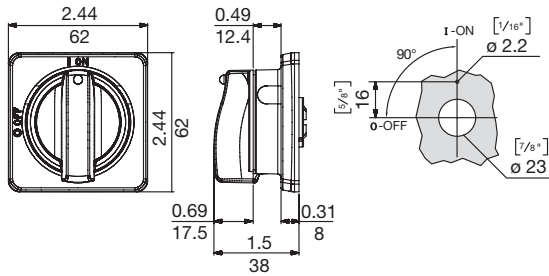


# LBS

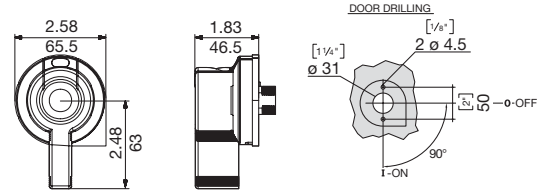
## LOAD BREAK DISCONNECT SWITCHES

### HANDLES FOR EXTERNAL FRONT OPERATION

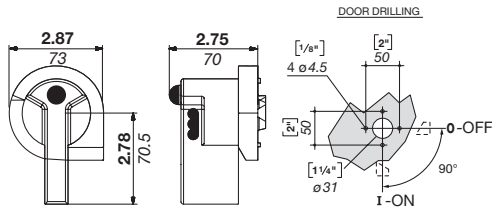
#### SELECTOR HANDLE TYPE M FOR LBS M AND LBS R



#### PISTOL HANDLE TYPE D FOR LBS M AND LBS R



#### PISTOL HANDLE TYPE G FOR LBS M AND LBS R



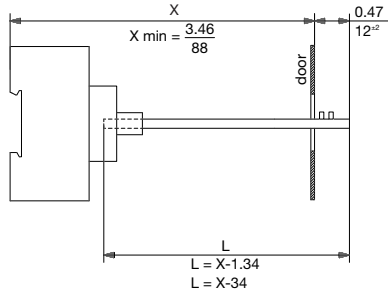
# LBS

# LOAD BREAK DISCONNECT SWITCHES

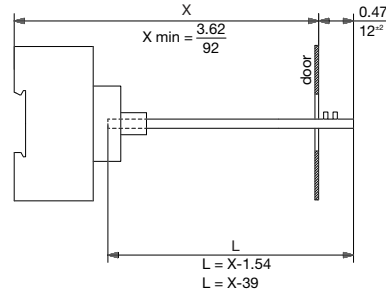
## BACKPLATE TO DOOR DISTANCE WITH SHAFT EXTENSION (in/mm)

### SELECTOR HANDLE TYPE M - SHAFT TRIMMING LENGTH (= DIMENSION L)

LBS M (16 up to 30 A)  
LBS R (30 up to 40 A)

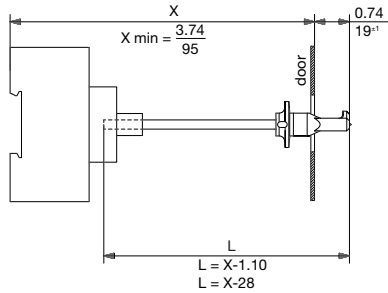


LBS R (60 up to 125 A)

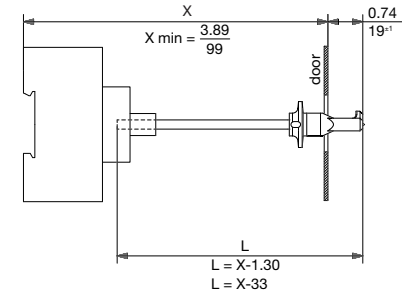


### PISTOL HANDLE TYPE D - SHAFT TRIMMING LENGTH (= DIMENSION L)

LBS M (16 up to 30 A)  
LBS R (30 up to 40 A)

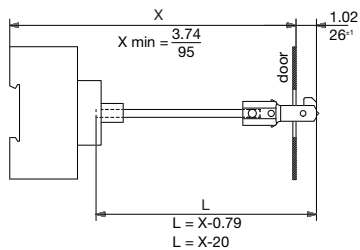


LBS R (60 up to 125 A)



### PISTOL HANDLE TYPE G - SHAFT TRIMMING LENGTH (= DIMENSION L)

LBS M (16 up to 30 A)  
LBS R (30 up to 40 A)



LBS R (60 up to 125 A)

