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More products are under development. Please contact us or visit our website for the latest development. We reserve the right to make alteration to the technical data, weight, dimensions, designs and products available without notice.

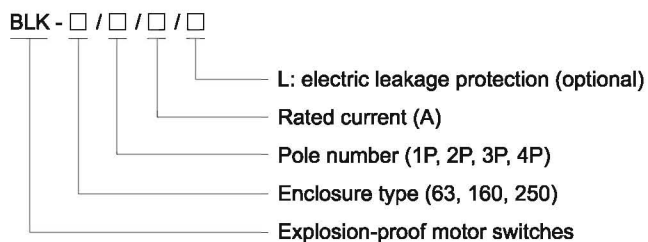


Motor Switches

BLK Series Explosion-proof Motor Switches

- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 1, Groups C, D
 - Class I, Division 1, Groups A, B, C, D
- ◆ Classified as IIB or IIC according to different gas atmospheres.
- ◆ Copper-free aluminium enclosure; powder-coated surface.
- ◆ Built-in MCB (mini circuit breaker), MCCB (moulded case circuit breaker).
- ◆ Electric leakage protection device is optional.

Catalogue number logic



Note

1. Please select the model by catalogue number logic above, and specify all technical data;
2. Please specify explosion-proof mark when ordering;
3. Entry size and direction on request.

Zones 1&2; 21&22

Technical data

Explosion-proof motor switches

BLK-63/□/□/□

Explosion protection

Gas explosion protection

Ex II 2 G Ex d IIB T6

Dust explosion protection

Ex tD A21 T80°C IP65

Certificates

For gas explosion protection

LCIE 06 ATEX 6091; IECEx LCI 08. 0009

For dust explosion protection

PCEC (China)

Conformity to standards

EN 60079-0:2004, EN 60079-1:2004

IEC 60079-0:2004, IEC 60079-1:2003, IEC 61241-0:2004, IEC 61241-1:2004

Enclosure material

Copper-free aluminium; powder coated surface

Enclosure colour

Window grey (RAL7040)

Exposed fastener

Stainless steel

Circuit breaker

MCB (mini circuit breaker)

Max. working voltage

440V AC 50/60Hz

Rated voltage

1P/230V AC, 2P/3P/4P/400V AC 50/60Hz

Rated current

1A, 2A, 4A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A

Pole number

1P, 2P, 3P, 4P

Breaking capacity

6kA, 10kA, 15kA

Tripping characteristic

Instantaneous tripping range (5~10) In, (7~10) In or (10~14) In

Impulse withstand voltage

6kV

Degree of protection

IP65

Ambient temperature

-20°C~+55°C

Cable entries

Standard 1~16A: 2 x M25 x 1.5 plug

20~32A: 2 x M32 x 1.5 plug

40~63A: 2 x M40 x 1.5 plug

Cable gland (optional)

DQM-II (Ex d) or DQM-III (Ex d) is recommended. Please see P7/20~25

Entry direction

Bottom

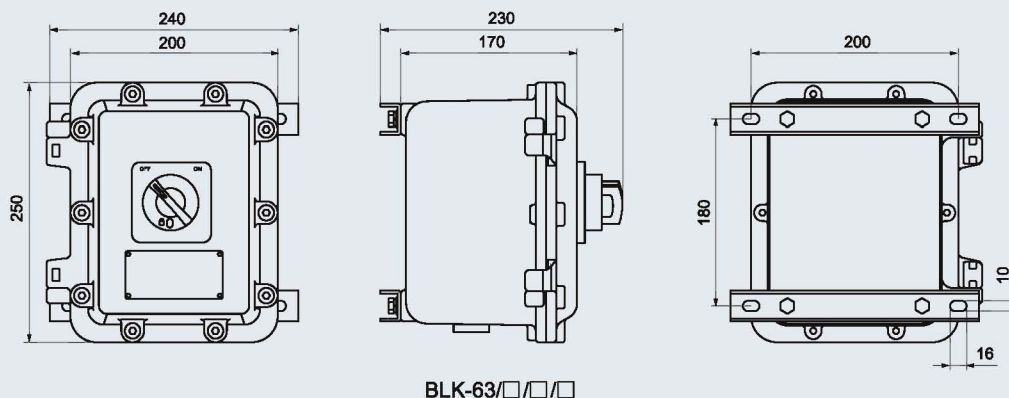
Enclosure weight

8.00 kg

Electric leakage protection

On request

Dimension drawings (all dimensions in mm) - subject to alteration



Technical data

Explosion-proof motor switches

BLK-160/□/□/□

Explosion protection

Gas explosion protection

II 2 G Ex d IIB T6

Dust explosion protection

Ex tD A21 T80°C IP65

Certificates

For gas explosion protection

LCIE 06 ATEX 6091; IECEx LCI 08. 0009

For dust explosion protection

PCEC (China)

Conformity to standards

EN 60079-0:2004, EN 60079-1:2004

IEC 60079-0:2004, IEC 60079-1:2003, IEC 61241-0:2004, IEC 61241-1:2004

Enclosure material

Copper-free aluminium; powder coated surface

Enclosure colour

Window grey (RAL7040)

Exposed fastener

Stainless steel

Circuit breaker

MCCB (moulded case circuit breaker)

Rated working voltage

690V AC 50/60Hz

500V DC

Rated working current

80A, 100A, 125A, 160A

Pole number

3P, 4P

Breaking capacity

380/415V AC 50/60Hz, 36kA/50kA

440V AC 50/60Hz, 30kA/45kA

Impulse withstand voltage

8kV

Tripping device

Thermomagnetic type

Degree of protection

IP65

Ambient temperature

-20°C~+55°C

Cable entries

Standard 80~100A, 2 x M50 x 1.5 plug

125~160A, 2 x M63 x 1.5 plug

Cable gland (optional)

DQM-II (Ex d) or DQM-III (Ex d) is recommended. Please see P7/20~25

Entry direction

Bottom

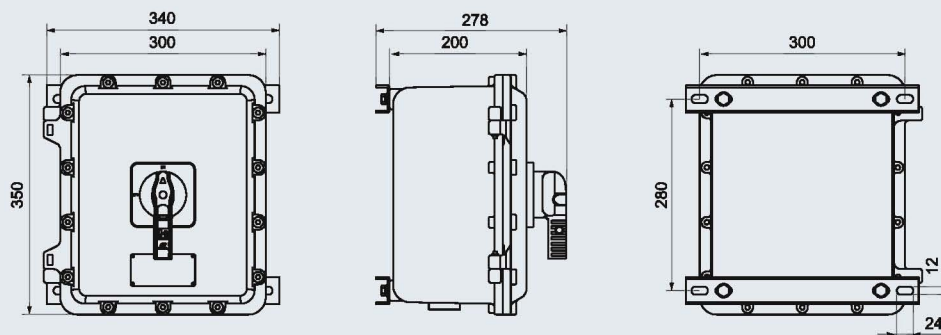
Enclosure weight

18.90kg

Electric leakage protection

On request

Dimension drawings (all dimensions in mm) - subject to alteration



BLK-160/□/□/□

Technical data

Explosion-proof motor switches BLK-250/□/□/□

Explosion protection

Gas explosion protection

Ex II 2 G Ex d IIB T6

Dust explosion protection

Ex tD A21 T80°C IP65

Certificates

For gas explosion protection

LCIE 06 ATEX 6091; IECEx LCI 08. 0009

For dust explosion protection

PCEC (China)

Conformity to standards

EN 60079-0:2004, EN 60079-1:2004

IEC 60079-0:2004, IEC 60079-1:2003, IEC 61241-0:2004, IEC 61241-1:2004

Enclosure material

Copper-free aluminium; powder coated surface

Enclosure colour

Window grey (RAL7040)

Exposed fastener

Stainless steel

Circuit breaker

MCCB (moulded case circuit breaker)

Rated working voltage

690V AC 50/60Hz

500V DC

Rated working current

200A, 250A

Pole number

3P, 4P

Breaking capacity

380/415V AC 50/60Hz, 36kA/50kA

440V AC 50/60Hz, 25kA/40kA

Impulse withstand voltage

8kV

Tripping device

Thermomagnetic type

Degree of protection

IP65

Ambient temperature

-20°C~+55°C

Cable entries

Standard 2 x M63 x 1.5 plug

Cable gland (optional)

DQM-II (Ex d) or DQM-III (Ex d) is recommended. Please see P7/20~25

Entry direction

Bottom

Enclosure weight

28.50kg

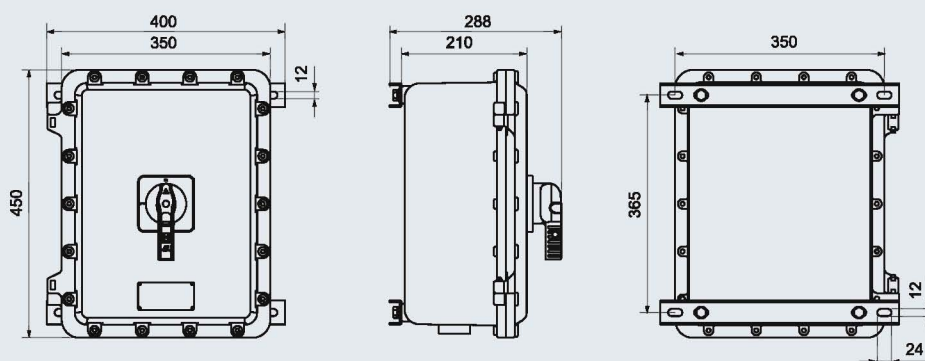
Electric leakage protection

On request

Note

Rated current > 250A on request.

Dimension drawings (all dimensions in mm) - subject to alteration



BLK-250/□/□/□

Technical data

Explosion-proof motor switches BLK-63/□/□/□

Explosion protection

Gas explosion protection

Ex II 2 G Ex d IIC T6 Gb

Dust explosion protection

Ex II 2 D Ex t IIIC T80°C Db IP66

Certificates

DNV 12 ATEX 1179X; IECEX CQM 12.0037X

Conformity to standards

EN 60079-0:2009, EN 60079-1:2007, EN 60079-31:2009

IEC 60079-0:2007, IEC 60079-1:2007, IEC 60079-31:2008

Enclosure material

Copper-free aluminium; powder coated surface

Enclosure colour

Window grey (RAL7040)

Exposed fastener

Stainless steel

Circuit breaker

MCB (mini circuit breaker)

Max. working voltage

440V AC 50/60Hz

Rated voltage

1P/230V AC, 2P/3P/4P/400V AC 50/60Hz

Rated current

1A, 2A, 4A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A

Pole number

1P, 2P, 3P, 4P

Breaking capacity

6kA, 10kA, 15kA

Impulse withstand voltage

6kV

Tripping characteristic

Instantaneous tripping range (5~10) In, (7~10) In or (10~14) In

Degree of protection

IP66

Ambient temperature

-60°C~+55°C

Cable entries

Standard 1~16A: 2 x M25 x 1.5 plug

20~32A: 2 x M32 x 1.5 plug

40~63A: 2 x M40 x 1.5 plug

Cable gland (optional)

DQM-II (Ex d) or DQM-III (Ex d) is recommended. Please see P7/20~25

Entry direction

Bottom

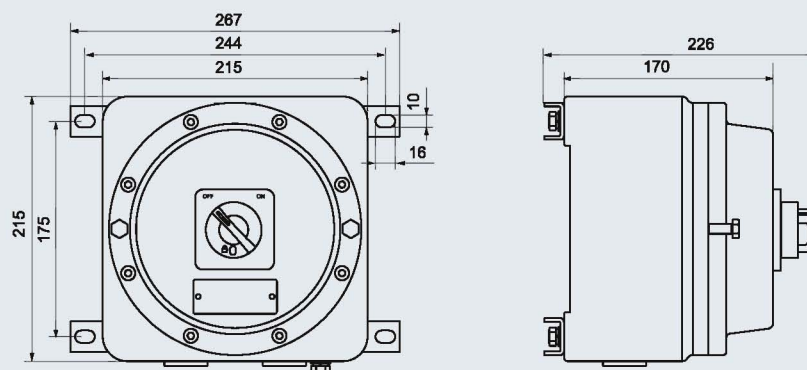
Enclosure weight

6.50kg

Electric leakage protection

On request

Dimension drawings (all dimensions in mm) - subject to alteration



BLK-63/□/□/□

Technical data

Explosion-proof motor switches

BLK-160/□/□/□

Explosion protection

Gas explosion protection

Ex II 2 G Ex d IIC T6 Gb

Dust explosion protection

Ex II 2 D Ex t IIIC T80°C Db IP66

Certificates

DNV 12 ATEX 1179X; IECEX CQM 12.0037X

Conformity to standards

EN 60079-0:2009, EN 60079-1:2007, EN 60079-31:2009

IEC 60079-0:2007, IEC 60079-1:2007, IEC 60079-31:2008

Enclosure material

Copper-free aluminium; powder coated surface

Enclosure colour

Window grey (RAL7040)

Exposed fastener

Stainless steel

Circuit breaker

MCCB (moulded case circuit breaker)

Rated working voltage

690V AC 50/60Hz

500V DC

Rated working current

80A, 100A, 125A, 160A

Pole number

3P, 4P

Breaking capacity

380/415V AC 50/60Hz, 36kA/50kA

440V AC 50/60Hz, 30kA/45kA

Impulse withstand voltage

8kV

Tripping device

Thermomagnetic type

Degree of protection

IP66

Ambient temperature

-60°C~+55°C

Cable entries

Standard 80~100A, 2 x M50 x 1.5 plug

125~160A, 2 x M63 x 1.5 plug

Cable gland (optional)

DQM-II (Ex d) or DQM-III (Ex d) is recommended. Please see P7/20~25

Entry direction

Bottom

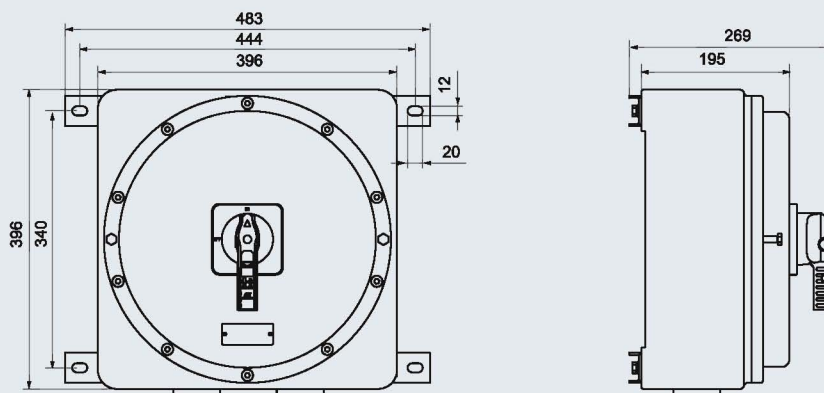
Enclosure weight

21.00kg

Electric leakage protection

On request

Dimension drawings (all dimensions in mm) - subject to alteration



BLK-160/□/□/□

Technical data

Explosion-proof motor switches **BLK-250/□/□/□**

Explosion protection

Gas explosion protection

Ex II 2 G Ex d IIC T6 Gb

Dust explosion protection

Ex II 2 D Ex t IIIC T80°C Db IP66

Certificates

DNV 12 ATEX 1179X; IECEX CQM 12.0037X

Conformity to standards

EN 60079-0:2009, EN 60079-1:2007, EN 60079-31:2009

IEC 60079-0:2007, IEC 60079-1:2007, IEC 60079-31:2008

Enclosure material

Copper-free aluminium; powder coated surface

Enclosure colour

Window grey (RAL7040)

Exposed fastener

Stainless steel

Circuit breaker

MCCB (moulded case circuit breaker)

Rated working voltage

690V AC 50/60Hz

500V DC

Rated working current

200A, 250A

Pole number

3P, 4P

Breaking capacity

380/415V AC 50/60Hz, 36kA/50kA

440V AC 50/60Hz, 25kA/40kA

Impulse withstand voltage

8kV

Tripping device

Thermomagnetic type

Degree of protection

IP66

Ambient temperature

-60°C~+55°C

Cable entries

Standard 2 x M63 x 1.5 plug

Cable gland (optional)

DQM-II (Ex d) or DQM-III (Ex d) is recommended. Please see P7/20~25

Entry direction

Bottom

Enclosure weight

24.00kg

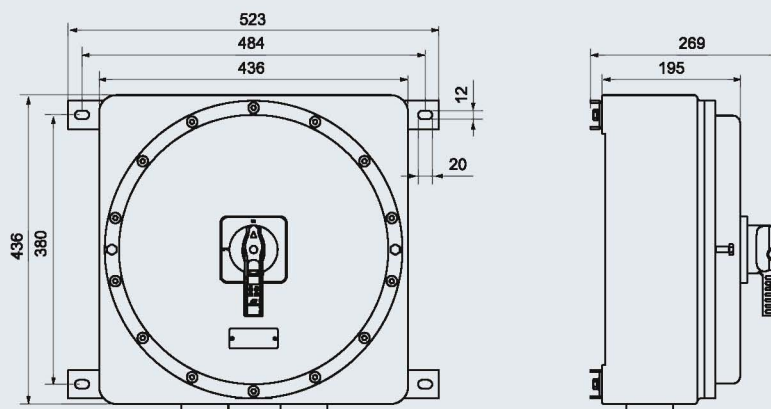
Electric leakage protection

On request

Note

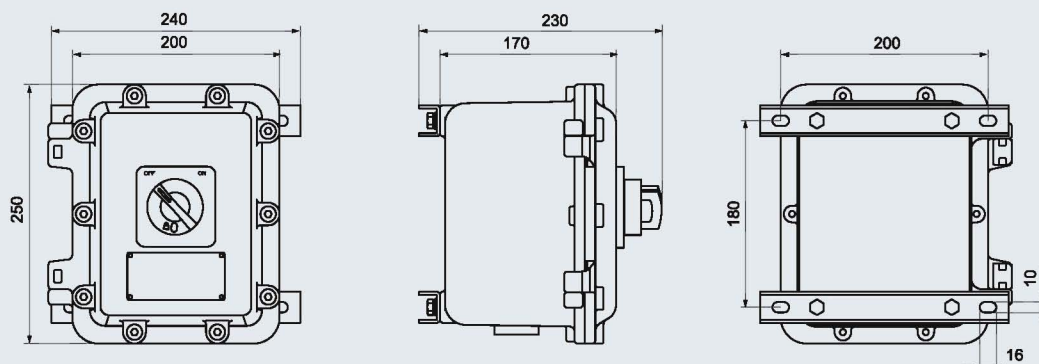
Rated current > 250A on request.

Dimension drawings (all dimensions in mm) - subject to alteration

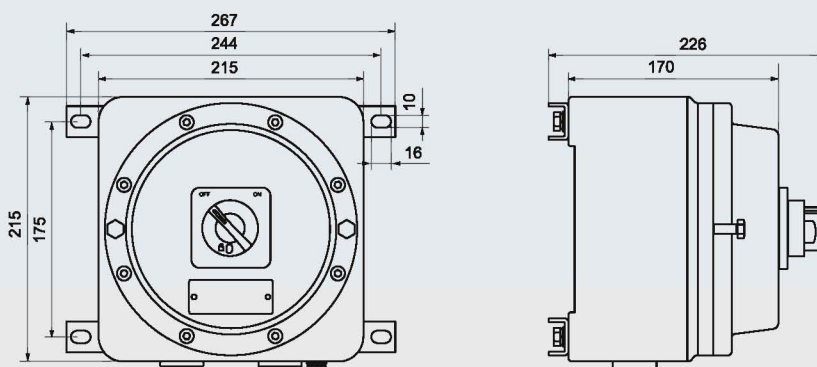


BLK-250/□/□/□

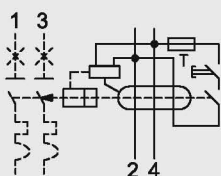
Outline dimension drawings of some products with electric leakage protection (all dimensions in mm-subject to alteration)



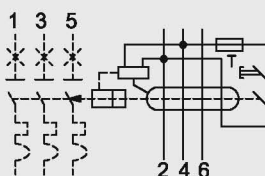
BLK-63/2P/L (Ex d IIB)



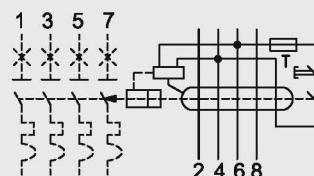
BLK-63/2P/L (Ex d IIC)



2P/L Electrical schematic diagram



3P/L Electrical schematic diagram



4P/L Electrical schematic diagram



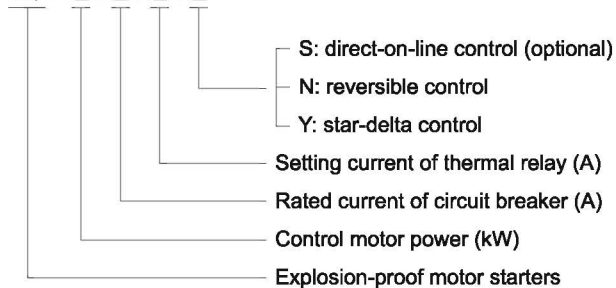
Standard Motor Starters

BQD Series Explosion-proof Motor Starters

- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 1, Groups C, D
 - Class I, Division 2, Groups A, B, C, D
- ◆ Classified as IIB or IIC according to different gas atmospheres.
- ◆ Different motor starters.
- ◆ Copper-free aluminium enclosure; powder urface.

Catalogue number logic

BQD - □ / □ / □ / □



Note

1. Please select the model by catalogue number logic above, and specify all technical data;
2. Please specify explosion-proof mark when ordering;
3. Entry size, entry direction, enclosure material, etc. on request.

Zones 1&2; 21&22

Technical data

Explosion-proof motor starters (direct-on-line control)

BQD-□/□/□

Explosion protection

Gas explosion protection

Ex II 2 G Ex d IIB T6

Dust explosion protection

Ex tD A21 T80°C IP65

Certificates

For gas explosion protection

LCIE 06 ATEX 6090; IECEx LCI 08.0010

For dust explosion protection

PCEC (China)

Conformity to standards

EN 60079-0:2004, EN 60079-1:2004

IEC 60079-0:2004, IEC 60079-1:2003, IEC 61241-0:2004, IEC 61241-1:2004

Enclosure material

Copper-free aluminium; powder coated surface

Enclosure colour

Window grey (RAL7040)

Exposed fastener

Stainless steel

Components

MCB (mini circuit breaker)

AC contactor

Thermal overload relay

Indicator, pushbutton

Rated voltage

380/400V AC 50/60Hz

Degree of protection

IP65

Ambient temperature

-20°C~+55°C

Cable entries

Standard M□ x 1.5 plug; See Selection Table as below

Cable gland (optional)

DQM-II (Ex d) or DQM-III (Ex d) is recommended. Please see P7/20~25

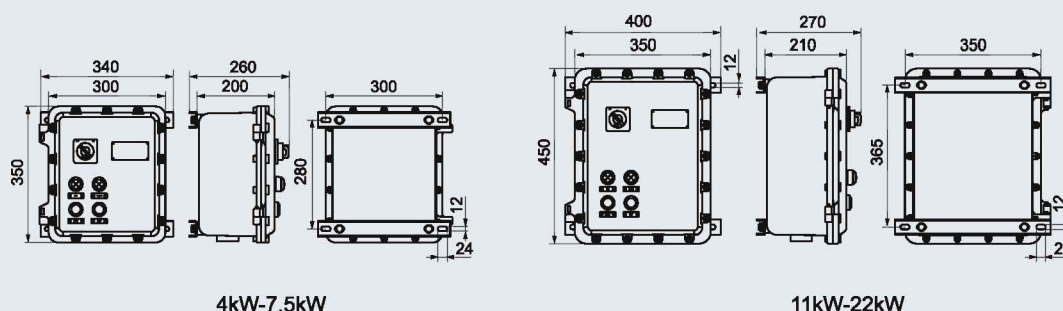
Entry direction

Bottom

Selection table

Type	Control motor power (kW)	Rated current of circuit breaker (A)	Adjustable range of setting current of thermal relay (A)	Rated current of contactor (A)	Cable entry size	Enclosure weight (kg)
BQD-4/16/7~10	4	16	7~10, Ie=8.5	9	2 x M25 x 1.5	20.00
BQD-5.5/20/9~13	5.5	20	9~13, Ie=11	12	2 x M25 x 1.5	20.00
BQD-7.5/25/12~18	7.5	25	12~18, Ie=16	18	2 x M32 x 1.5	20.00
BQD-11/32/16~24	11	32	16~24, Ie=23	25	2 x M32 x 1.5	30.00
BQD-15/40/23~32	15	40	23~32, Ie=30	32	2 x M32 x 1.5	30.00
BQD-18.5/50/30~38	18.5	50	30~38, Ie=36	40	2 x M40 x 1.5	30.00
BQD-22/63/37~50	22	63	37~50, Ie=46	50	2 x M40 x 1.5	30.00

Dimension drawings (all dimensions in mm) - subject to alteration



Technical data

Explosion-proof motor starters (reversible control)

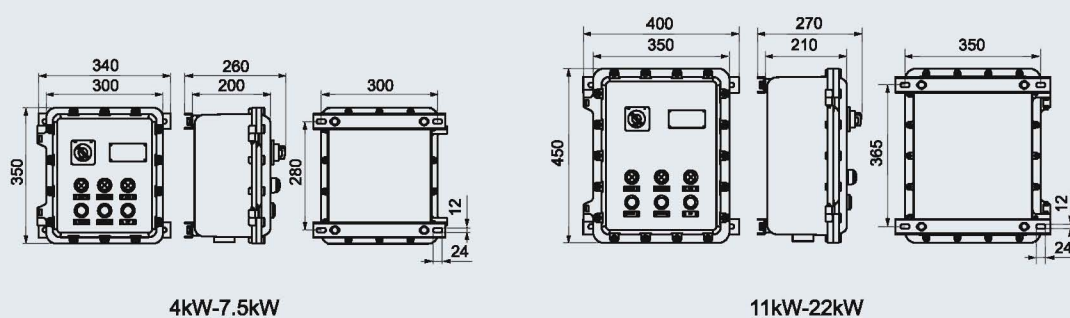
BQD-□/□/□/□

Explosion protection	 II 2 G Ex d IIB T6 Ex tD A21 T80°C IP65
Gas explosion protection	
Dust explosion protection	
Certificates	
For gas explosion protection	LCIE 06 ATEX 6090; IECEx LCI 08.0010
For dust explosion protection	PCEC (China)
Conformity to standards	EN 60079-0:2004, EN 60079-1:2004 IEC 60079-0:2004, IEC 60079-1:2003, IEC 61241-0:2004, IEC 61241-1:2004
Enclosure material	Copper-free aluminium; powder coated surface
Enclosure colour	Window grey (RAL7040)
Exposed fastener	Stainless steel
Components	MCB (mini circuit breaker) AC contactor Thermal overload relay Indicator, pushbutton
Rated voltage	380/400V AC 50/60Hz
Degree of protection	IP65
Ambient temperature	-20°C~+55°C
Cable entries	Standard M□ x 1.5 plug; See Selection Table as below
Cable gland(optional)	DQM-II (Ex d) or DQM-III (Ex d) is recommended. Please see P7/20~25
Entry direction	Bottom

Selection table

Type	Control motor power (kW)	Rated current of circuit breaker (A)	Adjustable range of setting current of thermal relay (A)	Rated current of contactor (A)	Cable entry size	Enclosure weight (kg)
BQD-4/16/7~10/N	4	16	7~10, Ie=8.5	9	2 x M25 x 1.5	20.50
BQD-5.5/20/9~13/N	5.5	20	9~13, Ie=11	12	2 x M25 x 1.5	20.50
BQD-7.5/25/12~18/N	7.5	25	12~18, Ie=16	18	2 x M32 x 1.5	20.50
BQD-11/32/16~24/N	11	32	16~24, Ie=23	25	2 x M32 x 1.5	30.50
BQD-15/40/23~32/N	15	40	23~32, Ie=30	32	2 x M32 x 1.5	30.50
BQD-18.5/50/30~38/N	18.5	50	30~38, Ie=36	40	2 x M40 x 1.5	30.50
BQD-22/63/37~50/N	22	63	37~50, Ie=46	50	2 x M40 x 1.5	30.50

Dimension drawings (all dimensions in mm) - subject to alteration



Technical data

Explosion-proof motor starters (star-delta control)

BQD-□/□/□/ Y

Explosion protection

Gas explosion protection

Ex II 2 G Ex d IIB T6

Dust explosion protection

Ex tD A21 T80°C IP65

Certificates

For gas explosion protection

LCIE 06 ATEX 6090; IECEx LCI 08.0010

For dust explosion protection

PCEC (China)

Conformity to standards

EN 60079-0:2004, EN 60079-1:2004

IEC 60079-0:2004, IEC 60079-1:2003, IEC 61241-0:2004, IEC 61241-1:2004

Enclosure material

Copper-free aluminium; powder coated surface

Enclosure colour

Window grey (RAL7040)

Exposed fastener

Stainless steel

Components

MCB (mini circuit breaker) or MCCB (moulded case circuit breaker)

AC contactor

Thermal overload relay

Indicator, pushbutton

Rated voltage

380/400V AC 50/60Hz

Degree of protection

IP65

Ambient temperature

-20°C~+55°C

Cable entries

Standard M□ x 1.5 plug; See Selection Table as below

Cable gland (optional)

DQM-II (Ex d) or DQM-III (Ex d) is recommended. Please see P7/20~25

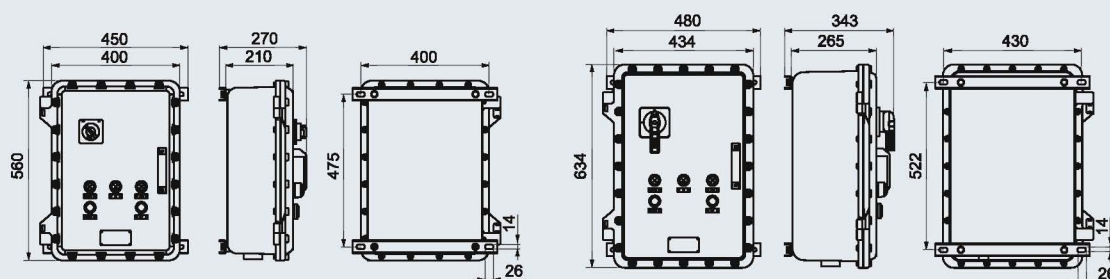
Entry direction

Bottom

Selection table

Type	Control motor power (kW)	Rated current of circuit breaker (A)	Adjustable range of setting current of thermal relay (A)	Setting value of delay time	Cable entry size	Enclosure weight (kg)
BQD-18.5/50/30-40/Y	18.5	50	30~40, Ie=36	13s	3 x M40 x 1.5	40.00
BQD-22/63/37-50/Y	22	63	37~50, Ie=46	15s	3 x M40 x 1.5	40.00
BQD-30/80/48-65/Y	30	80	48~65, Ie=60	17s	3 x M50 x 1.5	54.50
BQD-37/100/63-80/Y	37	100	63~80, Ie=75	18s	3 x M50 x 1.5	54.50
BQD-45/125/80-104Y	45	125	80~104, Ie=90	20s	3 x M63 x 1.5	54.50

Dimension drawings (all dimensions in mm) - subject to alteration



18.5kW-22kW

30kW-45kW

Technical data

Explosion-proof motor starters (direct-on-line control)

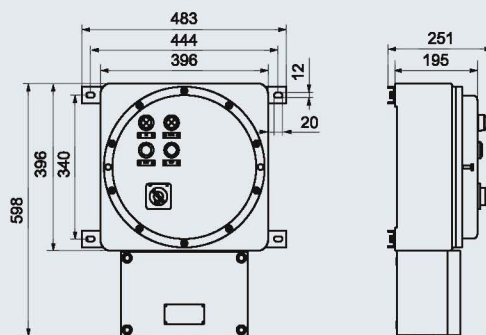
BQD-□/□/□

Explosion protection	Ex II 2 G Ex de IIC T6	Ex de IIC T6 Gb
Certificates	LCIE 10 ATEX 3075; IECEx CQM 11.0017X	
Conformity to standards	EN 60079-0:2006, EN 60079-1:2004, EN 60079-7:2007 IEC 60079-0:2007, IEC 60079-1:2007, IEC 60079-7:2006	
Enclosure material	Copper-free aluminium; powder coated surface	
Enclosure colour	Window grey (RAL7040)	
Exposed fastener	Stainless steel	
Components	MCB (mini circuit breaker) AC contactor Thermal overload relay Indicator, pushbutton	
Rated voltage	380/400V AC 50/60Hz	
Degree of protection	IP65	
Ambient temperature	-20°C~+55°C	
Cable entries	Standard M□ x 1.5 plug; See Selection Table as below	
Cable gland (optional)	DQM-I (Ex e) is recommended. Please see P7/17~19	
Entry direction	Bottom	

Selection table

Type	Control motor power (kW)	Rated current of circuit breaker (A)	Adjustable range of setting current of thermal relay (A)	Rated current of contactor (A)	Cable entry size	Enclosure weight (kg)
BQD-4/16/7~10	4	16	7~10, Ie=8.5	9	2 x M25 x 1.5	28.00
BQD-5.5/20/9~13	5.5	20	9~13, Ie=11	12	2 x M25 x 1.5	28.00
BQD-7.5/25/12~18	7.5	25	12~18, Ie=16	18	2 x M32 x 1.5	28.00
BQD-11/32/16~24	11	32	16~24, Ie=23	25	2 x M32 x 1.5	28.00
BQD-15/40/23~32	15	40	23~32, Ie=30	32	2 x M32 x 1.5	28.00
BQD-18.5/50/30~38	18.5	50	30~38, Ie=36	40	2 x M40 x 1.5	28.00
BQD-22/63/37~50	22	63	37~50, Ie=46	50	2 x M40 x 1.5	28.00

Dimension drawings (all dimensions in mm) - subject to alteration



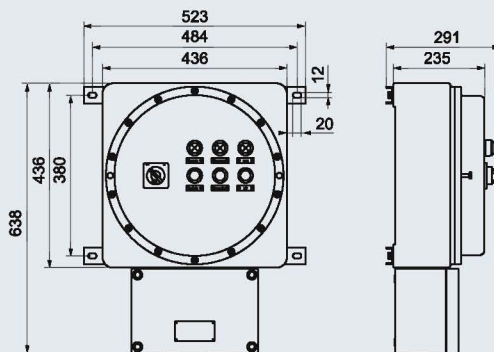
4kW-22kW

Explosion protection	Ex II 2 G Ex de IIC T6	Ex de IIC T6 Gb
Certificates	LCIE 10 ATEX 3075; IECEx CQM 11.0017X	
Conformity to standards	EN 60079-0:2006, EN 60079-1:2004, EN 60079-7:2007 IEC 60079-0:2007, IEC 60079-1:2007, IEC 60079-7:2006	
Enclosure material	Copper-free aluminium; powder coated surface	
Enclosure colour	Window grey (RAL7040)	
Exposed fastener	Stainless steel	
Components	MCB (mini circuit breaker) AC contactor Thermal overload relay Indicator, pushbutton	
Rated voltage	380/400V AC 50/60Hz	
Degree of protection	IP65	
Ambient temperature	-20°C~+55°C	
Cable entries	Standard M□ x 1.5 plug; See Selection Table as below	
Cable gland(optional)	DQM-I (Ex e) is recommended. Please see P7/17~19	
Entry direction	Bottom	

Selection table

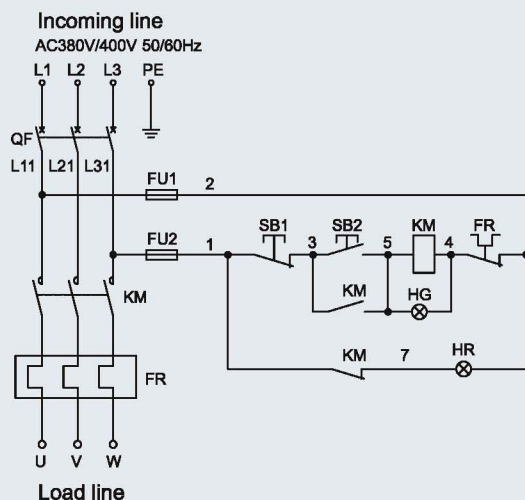
Type	Control motor power (kW)	Rated current of circuit breaker (A)	Adjustable range of setting current of thermal relay (A)	Rated current of contactor (A)	Cable entry size	Enclosure weight (kg)
BQD-4/16/7~10/N	4	16	7~10, Ie=8.5	9	2 x M25 x 1.5	30.00
BQD-5.5/20/9~13/N	5.5	20	9~13, Ie=11	12	2 x M25 x 1.5	30.00
BQD-7.5/25/12~18/N	7.5	25	12~18, Ie=16	18	2 x M32 x 1.5	30.00
BQD-11/32/16~24/N	11	32	16~24, Ie=23	25	2 x M32 x 1.5	30.00
BQD-15/40/23~32/N	15	40	23~32, Ie=30	32	2 x M32 x 1.5	30.00
BQD-18.5/50/30~38/N	18.5	50	30~38, Ie=36	40	2 x M40 x 1.5	30.00
BQD-22/63/37~50/N	22	63	37~50, Ie=46	50	2 x M40 x 1.5	30.00

Dimension drawings (all dimensions in mm) - subject to alteration



4kW-22kW

Electrical schematic diagram



Code of electric components

QF: circuit breaker

KM: AC contactor

FR: thermal relay

FU1, FU2: fuse

SB1: stop button

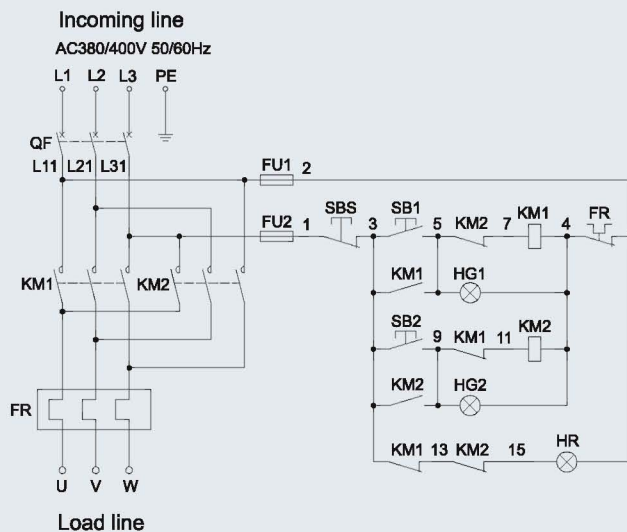
SB2: start button

HR: power indicator

HG: running indicator

Electrical schematic diagram

Direct-on-line motor starter



Code of electric components

QF: circuit breaker

KM1, KM2: AC contactor

FR: thermal relay

FU1, FU2: fuse

SBS: stop button

SB1: non-reversible start button

SB2: reversible start button

HR: power indicator

HG1: non-reversible running indicator

HG2: reversible running indicator

Electrical schematic diagram

Reversibly controlled motor starter

[illegible]

QF: circuit breaker
KM1: main contactor
KM3: star start contactor
KM2: triangle running contactor
FR: thermal relay
FU1, FU2: fuse
SB1: stop button
SB2: start button
HR: power indicator
HY: star start indicator
HG: triangle running indicator

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