

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)



Hanging Box



Floor Box



Floor Box

### Overview:

MNS-E series low-voltage dynamic distribution and control boxes shall conform to IEC60439, GB7251, BSEN60439 and AS3439 international standards. Installation and connection of system shall be carried out according to IEC60364 and DINVDE0105 standard.

MNS-E series low-voltage dynamic distribution and control boxes shall adopt standard modularized design, which shall be compact in box structure and strong in commonality. Width, height and depth of box can be arbitrarily extended according to standard module (E=25mm).

MNS-E series low-voltage dynamic distribution and control boxes shall adopt full-metal case and cabinet door shall adopt glazed door or metal door with an opening angle of 180° ; Box's installation method shall be suspending box and floor □type box, of which, suspending box shall adopt 1.5mm high quality cold-roll steel sheets and grounding box shall adopt 2mm high quality cold-roll steel sheets. Box type can be divided into split mounting type or welded type. The whole box shall adopt epoxy resin powder electrostatic spraying and matt treatment. With RAL7035 light gray as the case color, RAL2000 yellow-orange as interior electric mounting plate color, matching with black door lock and hinge and unique label design, which all make the integral color elegant and beautiful.

Protection level of MNS-E series low-voltage dynamic distribution and control boxes is IP30-IP54.

It's ABB's commitment and mission for customers to pursue innovation and perfection. MNS-E series low-voltage dynamic distribution and control boxes are perfection and supplement products on the basis of ABB low-voltage distribution box products (terminal distribution, three-phase distribution box, dynamic distribution box, distribution switch box), which enables ABB to have complete product chain of low-voltage distribution box product and cover the distribution boxes needs of all industries.

## MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)



Floor box(glass door)



Smisline diagram



Outdoor Box

### Structure highlights:

- Standardized design, compact structure and strong commonality
- Arbitrary changes of three-dimensional measurements according to requirements
- 180° opening angle of cabinet door
- Box can be split mounting type or welded type
- Electric mounting plate can be dismantled separately
- Unique characteristics of label design
- Elegant and beautiful color assortment

### Scope of application:

- Electric motor start control
- General water pump control
- General draught fan control
- Other electric motor control
- Dynamic distribution
- Dual power switching distribution

### Application fields:

- Municipal public and commercial buildings
- Telecommunications/ information, electronic industry, consumption goods
- Rail transit, airport, harbor/ ship
- Petroleum, chemical industry, electric power construction
- Manufacturing industry, tobacco industry
- Metal, mining industry, cement, paper industry

### Environmental temperature:

Short-time maximum temperature: +40℃

24-hour maximum average temperature: +35℃

Minimum temperature: -5℃

Capacity of equipment shall be reduced when running in temperature higher than the above environmental temperatures. And working conditions for measuring, metering device and protective relay shall conform to regulations of manufacture.

# COMPLETE SETS OF EQUIPMENT

## MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

### Environmental conditions:

When in normal working, climate environment shall conform to Part 500's regulations of IEC60439, EN60439 and VDE0660. When surrounding temperature is in 40°C, relative humidity shall be 50%. If box is installed in place where the elevation is higher than 2000m, the equipment shall be running with corresponding capacity reduction.

### Box parameter:

Standards to conform to: GB7251.1 and GB7251.3

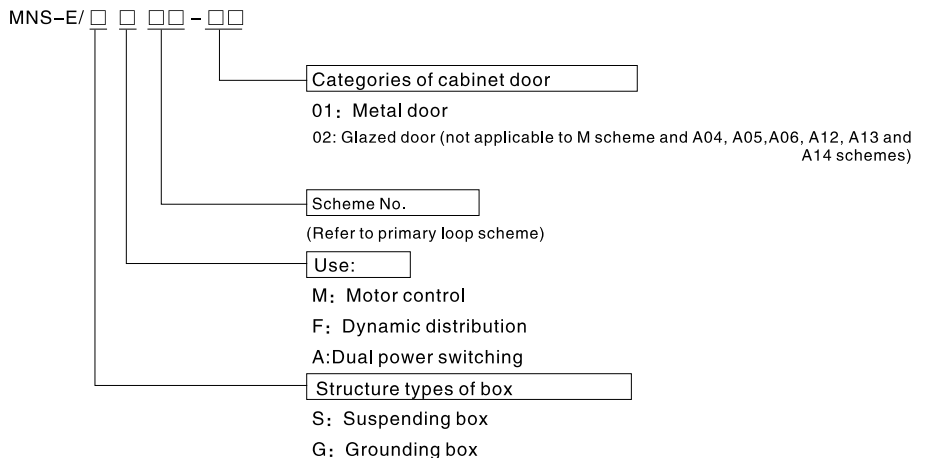
Insulation voltage:  $\leq 1000V$

Working voltage:  $\leq 690V$

Maximum operating current: 400A (suspending box)  
630A (grounding box)

Protection level: IP30/IP40

### Type explanation:



## MNS-E

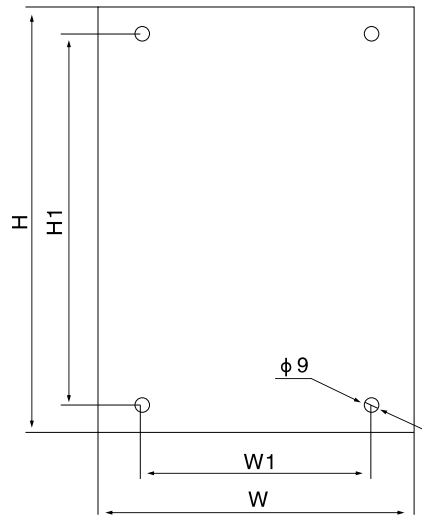
series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Contour dimension:

Contour dimension	Suspending box	Grounding box
Width	400-900	400/600/800
Height	550-1000	1600/1800/2000
Depth	175-300	350/400/450/500

Width, height and depth of suspending box can be arbitrarily extended according to standard module.  
Module E=25mm

### Installation dimension drawing(mm)



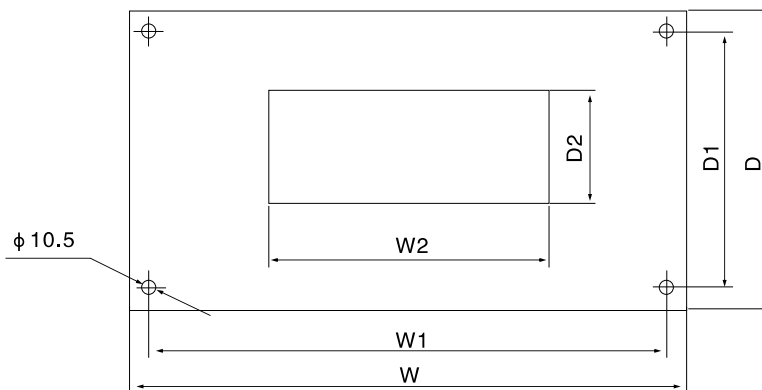
Suspending box (installation on the back)

MNS-E (suspending box)	
Width(W1)	W-75
Height (H1)	H-50

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes (Authorized by ABB)



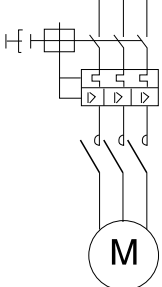
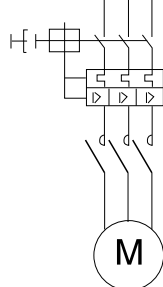
Grounding box (Installed base at the bottom and cable outgoing line diagram)

	Contour dimension	Installation dimension	Cable hole dimension
Width	W	W1	W2
	400	356	100
	600	556	300
	800	756	500
Height	(Door thickness excluded)	D1	D2
	331	D-52	D-161
	381		
	431		
	481		

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Low-voltage dynamic distribution and control box primary loop scheme (water pump control scheme):

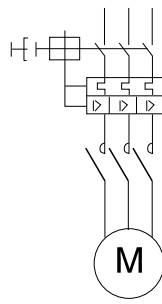
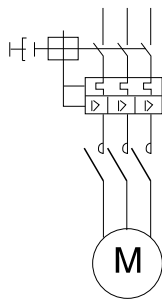
Scheme No.	M01	M02
Main circuit scheme		
Use code	M	M
Scheme name	Water supply/drainage pump star	Water supply/drainage pump start
Rated power	0.75kW	2.2kW
Component type	Quantity	Quantity
MS116-2.5	1	
MS116-6.3		1
A9-30-10	1	
A16-30-10		1
Height(mm)	550	550
Width(mm)	450	450
Depth (mm)	200	200
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM01	MNS-E/SM02

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

## COMPLETE SETS OF EQUIPMENT

### MNS-E

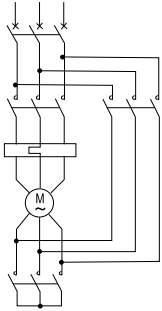
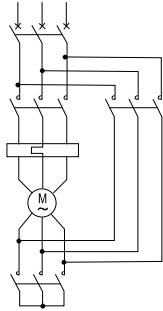
series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	M03	M04
Main circuit scheme		
Use code	M	M
Scheme name	Water supply/drainage pump star	Water supply/drainage pump start
Rated power	5.5kW	11kW
Component type	Quantity	Quantity
MS132-12.5	1	
MS132-25		1
A26-30-10	1	
A30-30-10		1
Height(mm)	550	550
Width(mm)	450	450
Depth (mm)	200	200
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM03	MNS-E/SM04

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	M05	M06
Main circuit scheme		
Use code	M	M
Scheme name	To / drainage pump star delta starter	Star-delta starter to pump
Rated power	18.5kW	45kW
Component type	Quantity	Quantity
M2S160 MA52	1	
M2S160 MA100		1
A16-30-10	1	
A26-30-10	2	
A30-30-10		1
A50-30-11		2
TA25DU25	1	
TA75DU52		1
Height(mm)	700	700
Width(mm)	550	500
Depth (mm)	250	250
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM05	MNS-E/SM06

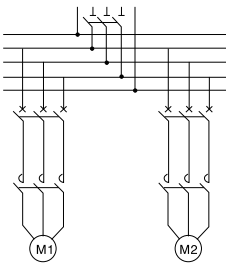
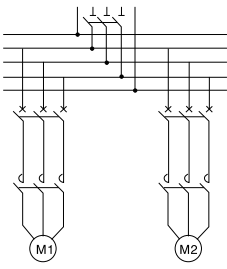
Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.



## COMPLETE SETS OF EQUIPMENT

### MNS-E

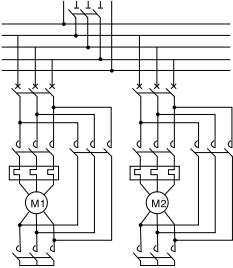
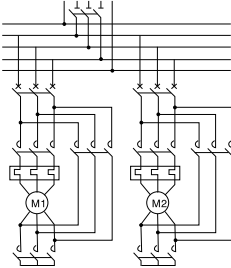
series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	M07	M08
Main circuit scheme		
Use code	M	M
Scheme name	To / drainage pump direct start (with a prepared one)	To / drainage pump direct start (with a prepared one)
Rated power	5.5kW	11kW
Component type	Quantity	Quantity
OT16F3	1	
OT25F3		1
MS132-12.5	2	
MS132-25		2
A26-30-10	2	
A30-30-10		2
Height(mm)	650	650
Width(mm)	525	525
Depth (mm)	250	250
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM07	MNS-E/SM08

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

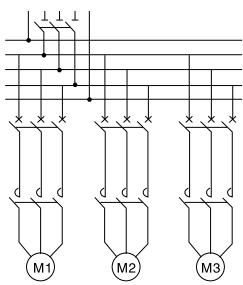
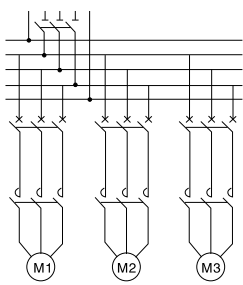
Scheme No.	M09	M10
Main circuit scheme		
Use code	M	M
Scheme name	To / drainage pump star delta starter (with a prepared one)	Star delta connection to the pump start (with a prepared one)
Rated power	18.5kW	45kW
Component type	Quantity	Quantity
OT16F3	1	
OT100F3		1
T2S160 MA52	2	
T2S160 MA100		2
A16-30-10	2	
A26-30-10	4	
A30-30-10		2
A50-30-10		4
TA25DU25	2	
TA75DU52		2
Height(mm)	900	900
Width(mm)	750	750
Depth (mm)	250	250
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM09	MNS-E/SM10

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

## COMPLETE SETS OF EQUIPMENT

### MNS-E

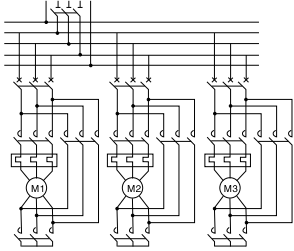
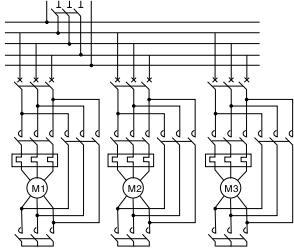
series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	M11	M12
Main circuit scheme		
Use code	M	M
Scheme name	To / drainage pump direct start (with a prepared one)	To / drainage pump direct start (with a prepared one)
Rated power	5.5kW	11kW
Component type	Quantity	Quantity
OT25F3	1	
OT63F3		1
MS132-12.5	3	
MS132-25		3
A26-30-10	3	
A30-30-10		3
Height(mm)	825	825
Width(mm)	650	650
Depth (mm)	250	250
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM11	MNS-E/SM12

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

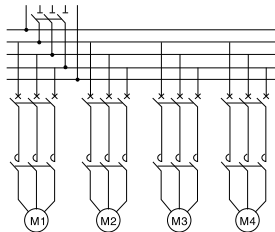
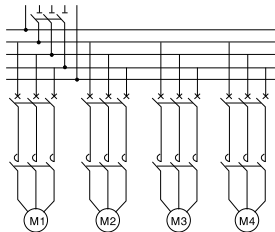
Scheme No.	M13	M14
Main circuit scheme		
Use code	M	M
Scheme name	To / drainage pump star delta starter (with a prepared one)	Star delta connection to the pump start (with a prepared one)
Rated power	18.5kW	45kW
Component type	Quantity	Quantity
OT100F3	1	
OT200F3		1
T2S160 MA52	3	
T2S160 MA100		3
A16-30-10	3	
A26-30-10	6	
A30-30-10		3
A50-30-10		6
TA25DU25	3	
TA75DU52		3
Height(mm)	1600	1600
Width(mm)	800	800
Depth (mm)	350	350
Installation method	Floor Box	Floor Box
MNS-E type	MNS-E/GM13	MNS-E/GM14

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

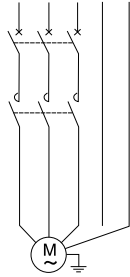
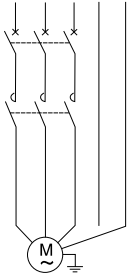
Scheme No.	M15	M16
Main circuit scheme		
Use code	M	M
Scheme name	To / drainage pump direct start (with a prepared one)	To / drainage pump direct start (with a prepared one)
Rated power	5.5kW	11kW
Component type	Quantity	Quantity
OT40F3	1	
OT63F3		1
MS132-12.5	4	
MS132-25		4
A26-30-10	4	
A30-30-10		4
Height(mm)	900	900
Width(mm)	700	700
Depth (mm)	250	250
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM15	MNS-E/SM16

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Low-voltage power distribution and Control Box Primary circuit scheme(hot-water circulating pump control scheme)

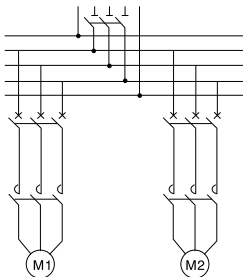
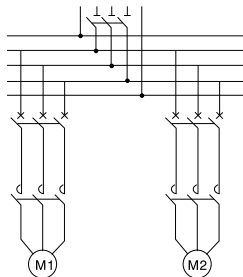
Scheme No.	M20	M21
Main circuit scheme		
Use code	M	M
Scheme name		
Rated power	5.5kW	11kW
Component type	Quantity	Quantity
MS132-12.5	1	
MS132-25		1
A26-30-10	1	
A30-30-10		1
Height(mm)	550	550
Width(mm)	400	400
Depth (mm)	200	200
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM20	MNS-E/SM21

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	M22	M23
Main circuit scheme		
Use code	M	M
Scheme name	hot-water circulating pump direct start (one for using,one for backup)	hot-water circulating pump direct start (one for using,one for backup)
Rated power	5.5kW	5.5kW
Component type	Quantity	Quantity
OT16F3	1	
OT25F3		1
MS132-12.5	2	
MS132-25		2
A26-30-10	2	
A30-30-10		2
Height(mm)	650	650
Width(mm)	525	525
Depth (mm)	250	250
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM22	MNS-E/SM23

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	M24	M25
Main circuit scheme		
Use code	M	M
Scheme name	hot-water circulating pump direct start (two for using,one for backup)	hot-water circulating pump direct start (two for using,one for backup)
Rated power	5.5kW	11kW
Component type	Quantity	Quantity
OT25F3	1	
OT63F3		1
MS132-12.5	3	
MS132-25		3
A26-30-10	3	
A30-30-10		3
Height(mm)	825	825
Width(mm)	650	650
Depth (mm)	250	250
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM24	MNS-E/SM25

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

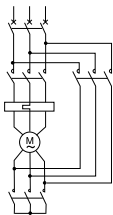
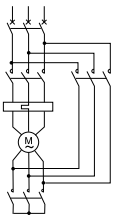


## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

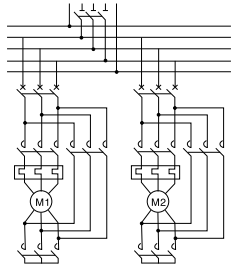
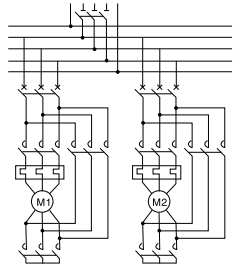
#### Primary loop scheme (Motor star and triangle ((Y- $\Delta$ ) start scheme):

Scheme No.	M40	M41
Main circuit scheme		
Use code	M	M
Scheme name	Motor star and triangle start	Motor star and triangle start
Rated power	75kW	110kW
Component type	Quantity	Quantity
T2S160 MA160	1	
T2S250 MA200		1
A75-30-11	1	
A95-30-11	2	
A110-30-11		1
A145-30-11		2
TA110DU90	1	
TA200DU135		1
Height(mm)	1600	1600
Width(mm)	600	600
Depth (mm)	350	350
Installation method	Floor Box	Floor Box
MNS-E type	MNS-E/GM40	MNS-E/GM41

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

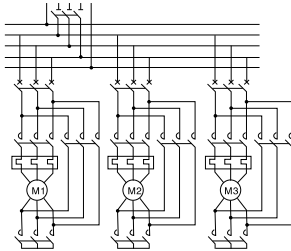
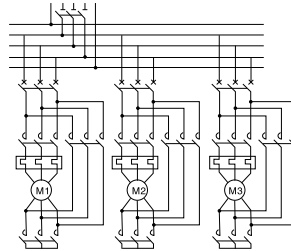
Scheme No.	M42	M43
Main circuit scheme		
Use code	M	M
Scheme name	Motor star and triangle start	Motor star and triangle start
Rated power	75kW	110kW
Component type	Quantity	Quantity
OT160F3	1	
OT250E03P		1
T2S160 MA160	2	
T2S250 MA200		2
A75-30-11	2	
A95-30-11	4	
A110-30-11		2
A145-30-11		4
TA110DU90	2	
TA200DU135		2
Height(mm)	1600	1600
Width(mm)	600	600
Depth (mm)	350	350
Installation method	Floor Box	Floor Box
MNS-E(type)	MNS-E/GM42	MNS-E/GM43

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

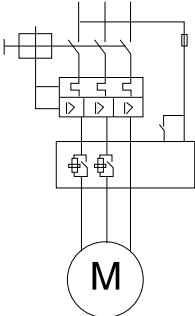
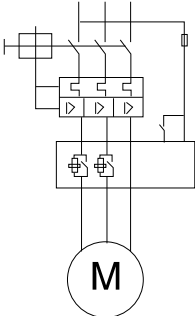
Scheme No.	M44	M45
Main circuit scheme		
Use code	M	M
Scheme name	Motor star and triangle start	Motor star and triangle start
Rated power	75kW	110kW
Component type	Quantity	Quantity
OT400E03P	1	
OT500E03P		1
T2S160 MA160	3	
T2S250 MA200		3
A75-30-11	3	
A95-30-11	6	
A110-30-11		3
A145-30-11		6
TA110DU90	3	
TA200DU135		3
Height(mm)	1800	1600
Width(mm)	1000	1000
Depth (mm)	400	400
Installation method	Floor Box	Floor Box
MNS-E type	MNS-E/GM44	MNS-E/GM45

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Primary circuit scheme(Motor soft-start scheme)

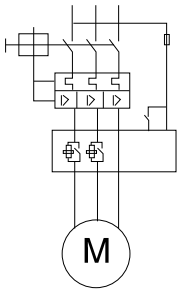
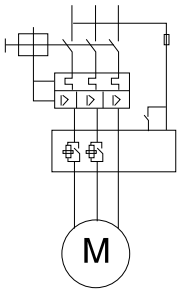
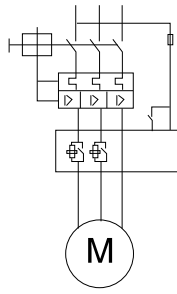
Scheme No.	M46	M47
Main circuit scheme		
Use code	M	M
Scheme name	Motor soft start	Motor soft start
Rated power	11kW	15kW
Component type	Quantity	Quantity
MS132-25	1	
MS450-32		1
PSR25-600-70	1	
PSR30-600-70		1
Height(mm)	400	400
Width(mm)	250	250
Depth (mm)	225	225
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM46	MNS-E/SM47

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

## COMPLETE SETS OF EQUIPMENT

### MNS-E

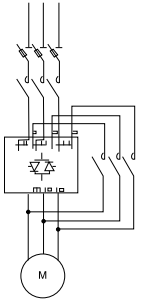
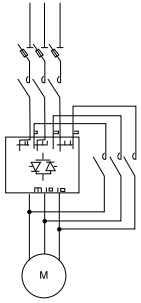
series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	M48	M49	M50
Main circuit scheme			
Use code	M	M	M
Scheme name	Motor soft start	Motor soft start	Motor soft start
Rated power	22kW	30kW	45kW
Component type	Quantity	Quantity	Quantity
MS450-45	1		
MS495-63		1	
MS495-90			1
PSR45-600-70	1		
PSR60-600-70		1	
PSR85-600-70			1
Height(mm)	450	500	500
Width(mm)	300	350	350
Depth (mm)	250	275	275
Installation method	Suspending	Suspending	Suspending
MNS-E type	MNS-E/SM48	MNS-E/SM49	MNS-E/SM50

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

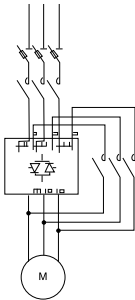
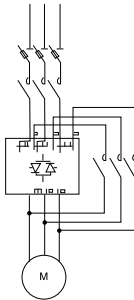
Scheme No.	M51	M52
Main circuit scheme		
Use code	M	M
Scheme name	Motor soft start	Motor soft start
Rated power	55kW	75kW
Component type	Quantity	Quantity
OS250D03P	1	
OS400D03P		1
170M3819	3	
170M5809		3
A110-30-11	2	
A145-30-11		2
PST105-600-70	1	
PST142-600-70		1
Height(mm)	1600	1600
Width(mm)	600	600
Depth (mm)	350	350
Installation method	Floor box	Floor box
MNS-E type	MNS-E/GM51	MNS-E/GM52

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

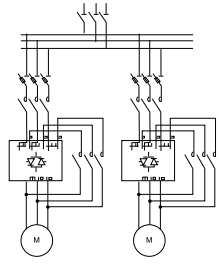
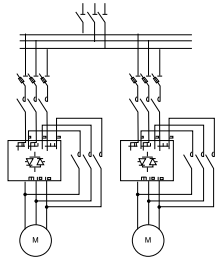
Scheme No.	M53	M54
Main circuit scheme		
Use code	M	M
Scheme name	Motor soft start	Motor soft start
Rated power	90kW	132kW
Component type	Quantity	Quantity
OS400D03P	1	1
170M5810	3	
170M5813		3
A185-30-11	2	
A260-30-11		2
PST175-600-70	1	
PST250-600-70		1
Height(mm)	1800	1800
Width(mm)	800	800
Depth (mm)	400	400
Installation method	Floor box	Floor box
MNS-E type	MNS-E/GM53	MNS-E/GM54

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Primary circuit scheme(Two-motor starting scheme)

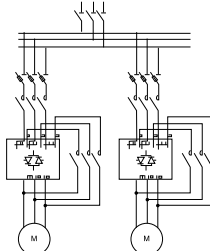
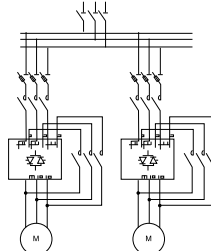
Scheme No.	M55	M56
Main circuit scheme		
Use code	M	M
Scheme name	two motor soft start	two motor soft start
Rated power	45kW	75kW
Component type	Quantity	Quantity
OT250E03K	1	
OT315E03K		1
OS160D03P	2	
OS400D03P		2
A95-30-11	4	
A145-30-11		4
170M1572	6	
170M5809		6
PST85-600-70	2	
PST142-600-70		2
Height(mm)	1800	1800
Width(mm)	800	800
Depth (mm)	400	400
Installation method	Floor box	Floor box
MNS-Etype	MNS-E/GM55	MNS-E/GM56



## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

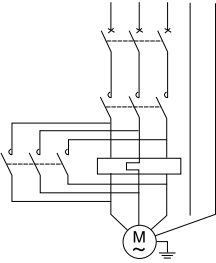
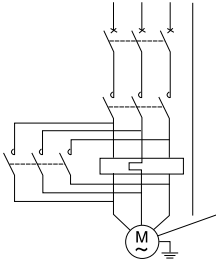
Scheme No.	M57	M58
Main circuit scheme		
Use code	M	M
Scheme name	two motor soft start	two motor soft start
Rated power	90kW	132kW
Component type	Quantity	Quantity
OT400E03K	1	
OT630E03K		1
OS400D03P	2	2
A185-30-11	4	
A260-30-11		4
170M5810	6	
170M5813		6
PST175-600-70	2	
PST250-600-70		2
Height(mm)	2000	2000
Width(mm)	1000	1000
Depth (mm)	450	450
Installation method	Floor box	Floor box
MNS-E type	MNS-E/GM57	MNS-E/GM58

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Primary circuit scheme(Fan start control scheme)

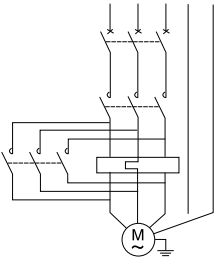
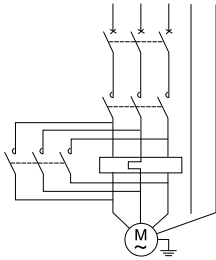
Scheme No.	M70*	M71*
Main circuit scheme		
Use code	M	M
Scheme name	Draught fan starts directly	Draught fan starts directly
Rated power	0.75kW	1.5kW
Component type	Quantity	Quantity
T2S160MF2.5 3P	1	
T2S160MF4 3P		1
A9-30-11	1	1
E16DU2.7A	1	
E16DU6.3A		1
Height(mm)	600	600
Width(mm)	400	400
Depth (mm)	200	200
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM70	MNS-E/SM71

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	M72*	M73*
Main circuit scheme		
Use code	M	M
Scheme name	Draught fan starts directly	Draught fan starts directly
Rated power	2.2kW	5.5kW
Component type	Quantity	Quantity
T2S160MF6.5 3P	1	
T2S160MF12.5 3P		1
A26-30-11	1	
A30-30-11		1
E16DU63A	1	
E45DU30A		1
Height(mm)	600	600
Width(mm)	450	450
Depth (mm)	225	225
Installation method	Hanging Box	Hanging Box
MNS-E type	MNS-E/SM72	MNS-E/SM73

\* When draught fan starts directly, tripping time of thermal overload relay with 30-grade can be followed (no longer than 9s)

Start frequency: when in 80% load factor, it's ≤ 15 times per hour.

when in 50% load factor, it's ≤ 30times per hour. Grounding box

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	M74*	M75*
Main circuit scheme		
Use code	M	M
Scheme name	Draught fan starts directly	Draught fan starts directly
Rated power	7.5kW	7.5kW
Component type	Quantity	Quantity
T2S160MA20 3P	1	
T2S160MA32 3P		1
A30-30-11	1	1
E45DU30A	1	1
Height(mm)	600	600
Width(mm)	450	450
Depth (mm)	225	225
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM74	MNS-E/SM75

\* When draught fan starts directly, tripping time of thermal overload relay with 30-grade can be followed (no longer than 9s)

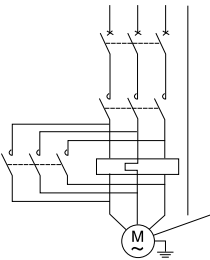
Start frequency: when in 80% load factor, it's ≤15 times per hour.

when in 50% load factor, it's ≤30times per hour. Grounding box

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	M76*
Main circuit scheme	
Use code	M
Scheme name	Draught fan starts directly
Rated power	22kW
Component type	Quantity
T2S160MA52 3P	1
A50-30-11	1
E80DU80A	1
Height(mm)	600
Width(mm)	450
Depth (mm)	225
Installation method	Suspending
MNS-E type	MNS-E/SM76

\* When draught fan starts directly, tripping time of thermal overload relay with 30-grade can be followed (no longer than 9s)

Start frequency: when in 80% load factor, it's  $\leq 15$  times per hour.

when in 50% load factor, it's  $\leq 30$ times per hour. Grounding box

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Primary circuit scheme(Double-speed Fan start control scheme)

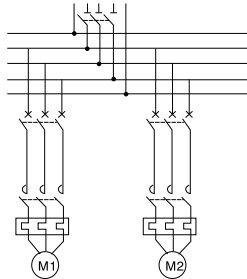
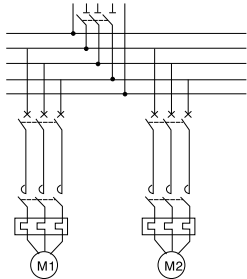
Scheme No.	M77	M78
Main circuit scheme		
Use code	M	M
Scheme name	Two-speed fan start	Two-speed fan start
Rated power	22.5/45kW	22.5/45kW
Component type	Quantity	Quantity
T2S160MA100 3P	1	
T2S160MA160 3P		1
A50-30-11	2	
A95-30-11		2
A110-30-11	1	
A145-30-11		1
E80DU80A	1	1
E140DU140A	1	
E200DU200A		1
Height(mm)	750	750
Width(mm)	600	60
Depth (mm)	250	250
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM77	MNS-E/SM7

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

### Primary circuit scheme(Fire-protection pump control scheme)

Scheme No.	M90	M91
Main circuit scheme		
Use code	M	M
Scheme name	Fire-protect pump direct start (one for using,one for backup)	Fire-protect pump direct start (one for using,one for backup)
Rated power	18.5kW	37kW
Component type	Quantity	Quantity
OT63F3	1	
OT100F3		1
T2S160MA52	2	
T2S160MA80		2
A50-30-11	2	
A75-30-11		2
TA75DU52	2	
TA75DU80		2
Height(mm)	800	1600
Width(mm)	600	600
Depth (mm)	250	250
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SM90	MNS-E/GM91

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	M92
Main circuit scheme	
Use code	M
Scheme name	Fire -protect pump Star-delta start(one for using,one for backup)
Rated power	75kW
Component type	Quantity
OT160F3	1
T2S160MA160	2
A75-30-11	2
A95-30-11	4
TA110DU90	2
Height(mm)	1800
Width(mm)	800
Depth (mm)	400
Installation method	Suspending
MNS-E type	MNS-E/GM92

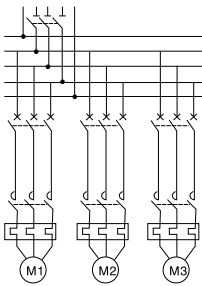
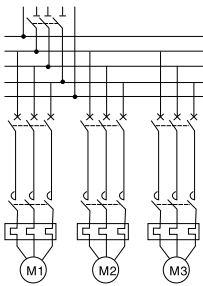
Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.



## COMPLETE SETS OF EQUIPMENT

### MNS-E

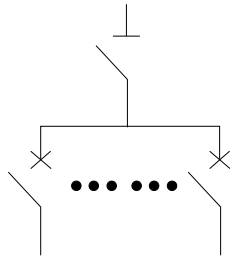
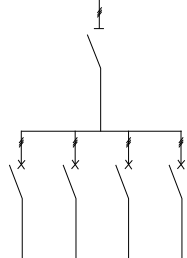
series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	M93	M94
Main circuit scheme		
Use code	M	M
Scheme name	Fire -protect pump Star-delta start (two for using,one for backup)	Fire -protect pump Star-delta start (two for using,one for backup)
Rated power	18.5kW	37kW
Component type	Quantity	Quantity
OT250E03P	1	1
T2S160 MA52	3	
T2S160 MA80		3
A50-30-11	3	
A75-30-11		3
TA75DU52	3	
TA75DU80		3
Height(mm)	1600	1600
Width(mm)	600	600
Depth (mm)	350	350
Installation method	Floor Box	Floor Box
MNS-E type	MNS-E/GM93	MNS-E/GM94

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Primary circuit scheme(Inlet line,outlet line switch scheme)

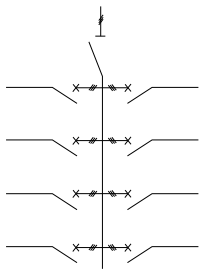
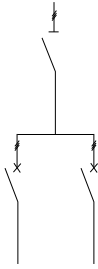
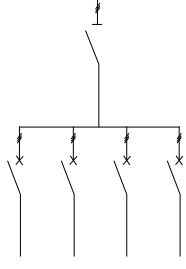
Scheme No.	F01	F02
Main circuit scheme		
Use code	F	F
Scheme name	250A inlet,T2 outlet switch	250A inlet,T1 outlet switch
Rated power	250A	250A
Component type	Quantity	Quantity
OT250_K	1	1
T1-160/3P		4
T2-160/3P	2	
Height(mm)	600	650
Width(mm)	450	500
Depth (mm)	200	200
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SF01	MNS-E/SF02

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

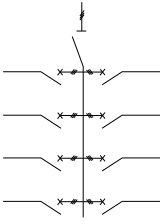
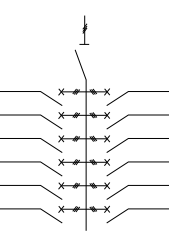
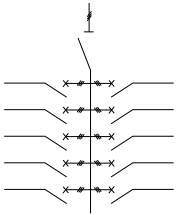
Scheme No.	F03	F04	F05
Main circuit scheme			
Use code	F	F	F
Scheme name	250A inlet,T1 outlet switch	400A inlet,T3 outlet switch	400A inlet,T2 outlet switch
Rated power	250A	400A	400A
Component type	Quantity	Quantity	Quantity
OT250_K	1		
OT400_K		1	1
T1-160/3P	8		
T2-160/3P			4
T3-250/3P		2	
Height(mm)	850	650	750
Width(mm)	650	500	600
Depth (mm)	200	225	225
Installation method	Suspending	Suspending	Suspending
MNS-E type	MNS-E/SF03	MNS-E/SF04	MNS-E/SF05

注：方案中的功率是以ABB电动机作为标准。如果采用其它型号的电动机，比如屏蔽电动机或实际工作电流大于本方案标称数值的电动机时，应放大一级选择相应的元件。

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	F06	F07	F08
Main circuit scheme			
Use code	F	F	F
Scheme name	400A inlet,T1 outlet switch	400A inlet,T1 outlet switch	630A inlet,T3 outlet switch
Rated power	400A	400A	630A
Component type	Quantity	Quantity	Quantity
OT400_K	1	1	
OT630_K			1
T1-160/3P	8	12	
T2-160/3P			
T3-250/3P			10
Height(mm)	1000	1000	1600
Width(mm)	700	850	600
Depth (mm)	250	250	350
Installation method	Suspending	Suspending	Suspending
MNS-E type	MNS-E/SF06	MNS-E/SF07	MNS-E/GF08

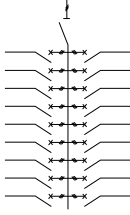
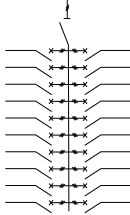
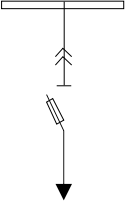
1)Case shall adopt corrosion resistant plate with 2mm thickness for outdoor

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

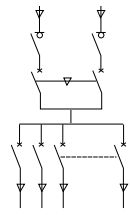
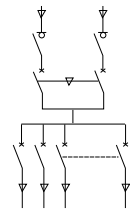
Scheme No.	F09	F10	F11 <sup>1)</sup>	F12 <sup>1)</sup>	F13 <sup>1)</sup>
Main circuit scheme					
Use code	F	F	F		
Scheme name	630A inlet, T1 outline switch	630A inlet, T1 outline switch	FastLine		
Rated power	630A	630A	630A		
Component type	Quantity	Quantity	Quantity		
OT630_K	1	1			
T1-160/3P	18				
T2-160/3P		20			
T3-250/3P					
SLK 160(Outlet module)			4	3	2
SLK 400(Outlet module)			-	1	2
DK 160 (Outlet module)			1	1	1
FS 630A/400 (Floor)			1	1	-
FS 630A/600 (Floor)			-	-	1
Height(mm)	1600	1600	900		
Width(mm)	600	800	550	700	
Depth (mm)	350	350	375		
Installation method	Floor Box	Floor Box	Suspending		
MNS-E type	MNS-E/GF09	MNS-E/GF10	MNS-E/SF11-13		

1)Case shall adopt corrosion resistant plate with 2mm thickness for outdoor

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Primary circuit scheme(auto transfer switch power-distribution scheme)

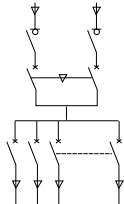
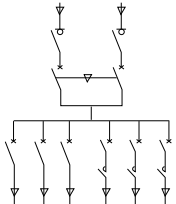
Scheme No.	A01 <sup>1)</sup>	A02 <sup>1)</sup>
Main circuit scheme		
Use code	A	A
Scheme name	ATS power-distribute	ATS power-distribute
Rated power	63A	250A
Component type	Quantity	Quantity
OT63F4N2	2	
DPT63-CB010 C63 4P DPT63-CB010 C63 4P <sup>2)</sup>	1	
OT250E04P		2
DPT250-CB010 R250 4P DPT250-CB011 C250 4P <sup>2)</sup>		1
S200(Series)	25(MCB mould)	25(MCB mould)
Height(mm)	700	9000
Width(mm)	600	750
Depth (mm)	225	250
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SA01	MNS-E/SA02

1) Dual power dynamic distribution scheme's maximum expected short-circuit current in installation point shall not exceed breaking capacity of breaker.  
 2) When both two incoming line power source are AC, DPT-CB010 must be used and when one circuit is diesel generator, DPT-CB011 must be used.

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	A03 <sup>1)</sup>	A04 <sup>1)</sup> (no applied to glass door)
Main circuit scheme		
Use code	A	A
Scheme name	ATS power-distribute	ATS power-distribute Mixed
Rated power	250A	250A
Component type	Quantity	Quantity
OT250E04P	2	2
DPT250-CB010 R250 4P	1	1
DPT250-CB011 R250 4P		
T1C160 R50	6	3
T2N160 MA52		3
A40-30-10		3
Height(mm)	900	900
Width(mm)	750	750
Depth (mm)	225	250
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SA03	MNS-E/SA04

1) Dual power dynamic distribution scheme's maximum expected short-circuit current in installation point shall not exceed breaking capacity of breaker.

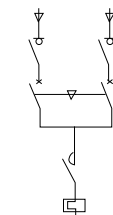
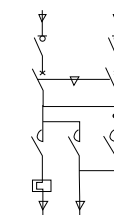
2) When both two incoming line power source are AC, DPT-CB010 must be used and when one circuit is diesel generator, DPT-CB011 must be used.

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

**Primary loop scheme**  
(Dual power motor start/ dynamic distribution scheme)

Scheme No.	A05 <sup>1)</sup> (no applied to glass door)	Scheme No.	A06 <sup>1)</sup> (no applied to glass door)
Main circuit scheme		Main circuit scheme	
Use code	A	Use code	A
Scheme name	ATS motor direct start	Scheme name	ATS motor star-delta direct start
Rated power	15kW	Rated power	55kW
Component type	Quantity	Component type	Quantity
OT63F4N2	2	OT160E4	2
DPT160-CB010 R50 4Por DPT160-CB011 R50 4P <sup>2)</sup>	1	DPT160-CB010 R160 4Por DPT160-CB011 R160 4P <sup>2)</sup>	1
A50-30-11	1	A40-30-11	1
TA75DU42	1	A75-30-11	2
		TA75DU63	1
Height(mm)	850	Height(mm)	850
Width(mm)	700	Width(mm)	700
Depth (mm)	250	Depth (mm)	250
Installation method	Suspending	Installation method	Suspending
MNS-E type	MNS-E/SA05	MNS-E type	MNS-E/SA06

1) Dual power motor start/ dynamic distribution scheme's maximum expected short-circuit current in installation point shall not exceed breaking capacity of breaker.

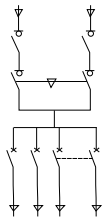
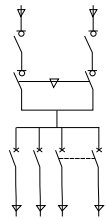
2) When both two incoming line power source are AC, DPT-CB010 or OTM\_10D must be used and when one circuit is diesel generator, DPT-CB011 or OTM\_11D must be used.



## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	A07 <sup>1)</sup> (no applied to glass door)	A08 <sup>1)</sup> (no applied to glass door)
Main circuit scheme		
Use code	A	A
Scheme name	ATS power-distribution	ATS power-distribution
Rated power	250A	250A
Component type	Quantity	Quantity
OT250E04P	2	2
DPT250E4C10D380Cor DPT250E4C11D380C <sup>2)</sup>	1	1
T1C160 R50		6
S200系列	60(MCB mouldulus)	
Height(mm)	900	900
Width(mm)	750	750
Depth (mm)	275	275
Installation method	Suspending	Suspending
MNS-E type	MNS-E/SA07	MNS-E/SA08

1) Dual power motor start/ dynamic distribution scheme's maximum expected short-circuit current in installation point shall not exceed breaking capacity of breaker.

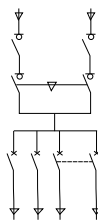
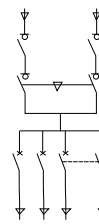
2) When both two incoming line power source are AC, DPT-CB010 or OTM\_10D must be used and when one circuit is diesel generator, DPT-CB011 or OTM\_11D must be used.

Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Primary circuit scheme(ATS power-distribution scheme)

Scheme No.	A09 <sup>1)</sup>	A10 <sup>1)</sup>
Main circuit scheme		
Use code	A	A
Scheme name	ATS power-distribution	ATS power-distribution
Rated power	630A	630A
Component type	quantity	quantity
OT250E04P	2	2
DPT250E4C10D380Cor DPT250E4C11D380C <sup>2)</sup>	1	1
S200Series	90(MCB moudulus)	
T1C160 R100		10
Height(mm)	1600	1600
Width(mm)	800	800
Depth (mm)	400	400
Installation method	Floor Box	Floor Box
MNS-E type	MNS-E/GA09	MNS-E/GA10

1) Dual power motor start/ dynamic distribution scheme's maximum expected short-circuit current in installation point shall not exceed breaking capacity of breaker.

2) When both two incoming line power source are AC, DPT-CB010 or OTM\_10D must be used and when one circuit is diesel generator, DPT-CB011 or OTM\_11D must be used.

## COMPLETE SETS OF EQUIPMENT

### MNS-E

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Scheme No.	A11 <sup>1)</sup>	A12 <sup>1)</sup> (no applied to glass door)
Main circuit scheme		
Use code	A	A12
Scheme name	ATS power-distribution	ATS power-distribution
Rated power	630A	630A
Component type	Quantity	Quantity
OT630E04P	2	
OT250E04P		2
DPT630E4C10D380Cor DPT630E4C11D380C <sup>2)</sup>	1	
DPT250E4C10D380Cor DPT250E4C11D380C <sup>2)</sup>		1
T4N250 R250	4	
T1C160 R50		3
T2N160 MA52		2
A50-30-11		2
TA75DU42		2
Height(mm)	1600	1600
Width(mm)	800	800
Depth (mm)	400	400
Installation method	Floor Box	Floor Box
MNS-E type	MNS-E/GA11	MNS-E/GA12

1) Dual power motor start/ dynamic distribution scheme's maximum expected short-circuit current in installation point shall not exceed breaking capacity of breaker.

2) When both two incoming line power source are AC, DPT-CB010 or OTM\_10D must be used and when one circuit is diesel generator, DPT-CB011 or OTM\_11D must be used.

**MNS-E**

series low-voltage dynamic distribution and control boxes(Authorized by ABB)

Primary circuit scheme(ATS motor start scheme)

Scheme No.	A13 <sup>1)</sup> (no applied to glass door)	A14 <sup>1)</sup> (no applied to glass door)
Main circuit scheme		
Use code	A13	A13
Scheme name	ATS motor direct start three for using,one for backup	ATS motor direct start one for using,one for backup
Rated power	15kW x 4	55kW x 2
Component type	Quantity	Quantity
OT160E4	2	
DPT160E4C10D380C或 DPT160E4C11D380C <sup>2)</sup>	1	
T2N160 MA52	4	
A50-30-11	4	
TA75DU42	4	
OT250E04P		2
DPT250E4C10D380C或 DPT250E4C11D380C <sup>2)</sup>		1
T2N160 MA100		2
A40-30-11		2
A75-30-11		4
TA75DU63		2
Height(mm)	1600	1600
Width(mm)	600	600
Depth (mm)	400	400
Installation method	Floor Box	Floor Box
MNS-E type	MNS-E/GA13	MNS-E/GA14

## COMPLETE SETS OF EQUIPMENT

### MNS-E

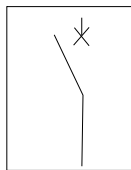
series low-voltage dynamic distribution and control boxes(Authorized by ABB)

- 1) Dual power motor start/ dynamic distribution scheme's maximum expected short-circuit current in installation point shall not exceed breaking capacity of breaker.
- 2) When both two incoming line power source are AC, DPT-CB010 or OTM\_10D must be used and when one circuit is diesel generator, DPT-CB011 or OTM\_11D must be used.

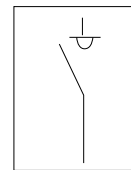
Note: power in the scheme is standardized by ABB electric motor. If motors of other types are adopted, such as shield motor or motors with actual operating current larger than the scheme's nominal value, then corresponding larger-level components shall be selected.

- 1) Case shall adopt corrosion resistant plate with 2mm thickness for outdoor

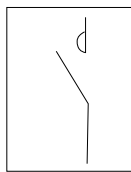
#### Signal



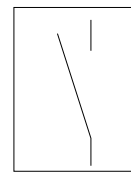
Circuit breaker



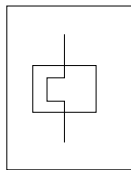
insulation switch



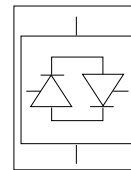
AC contactor



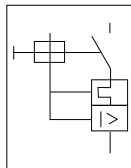
insolation switch fuse group



Thermal Relay



soft-starter



Motor starter