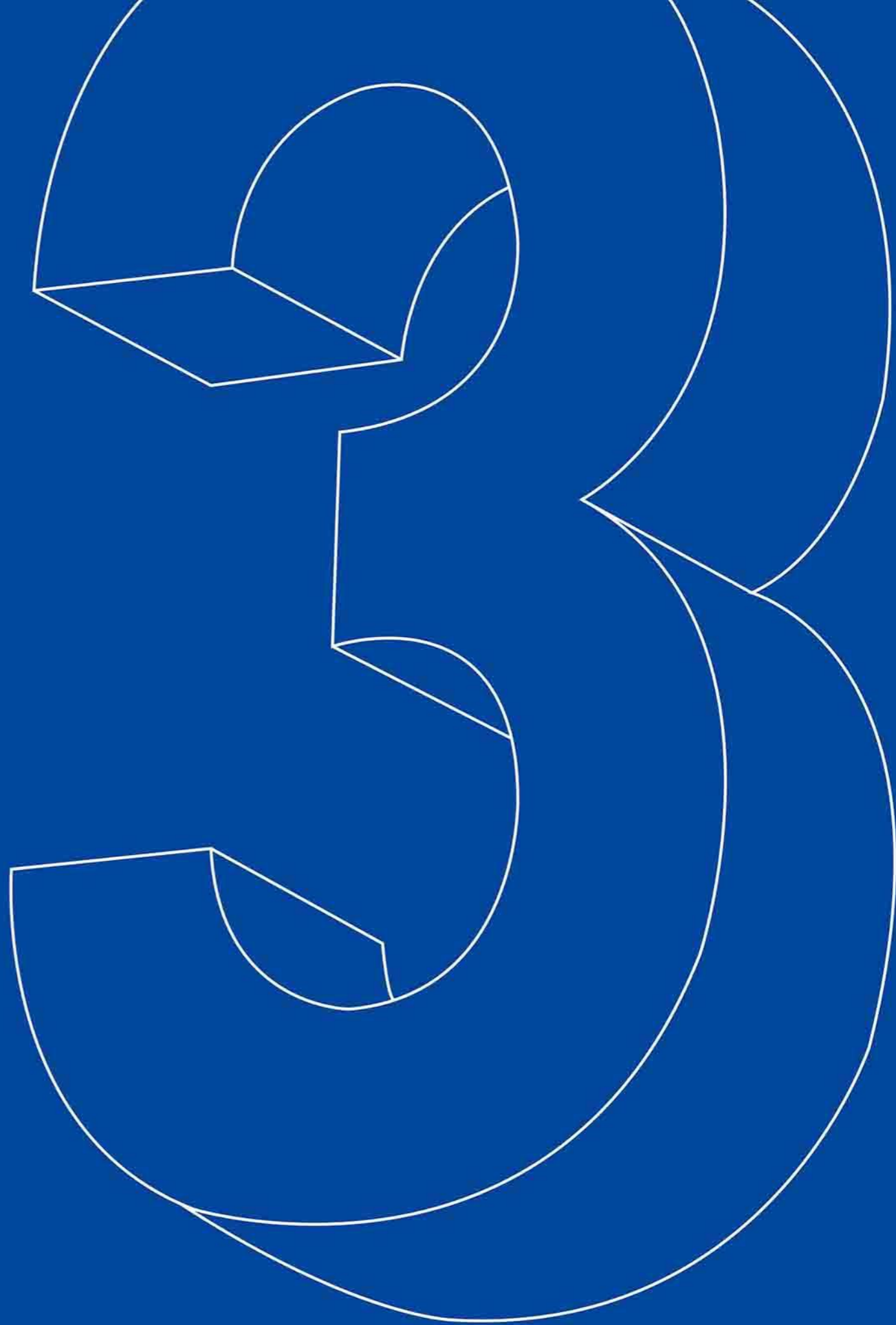


TUOXIN PRODUCTS



- HV converter series
- Flameproof and intrinsically safe combined variable frequency starter for mining
- Flameproof and intrinsically safe dual-power and dual-frequency converter for fan
- Control system for continuous mining machine and miner bolter
- Roadheader belt remote control solution
- Electric control series of shearer

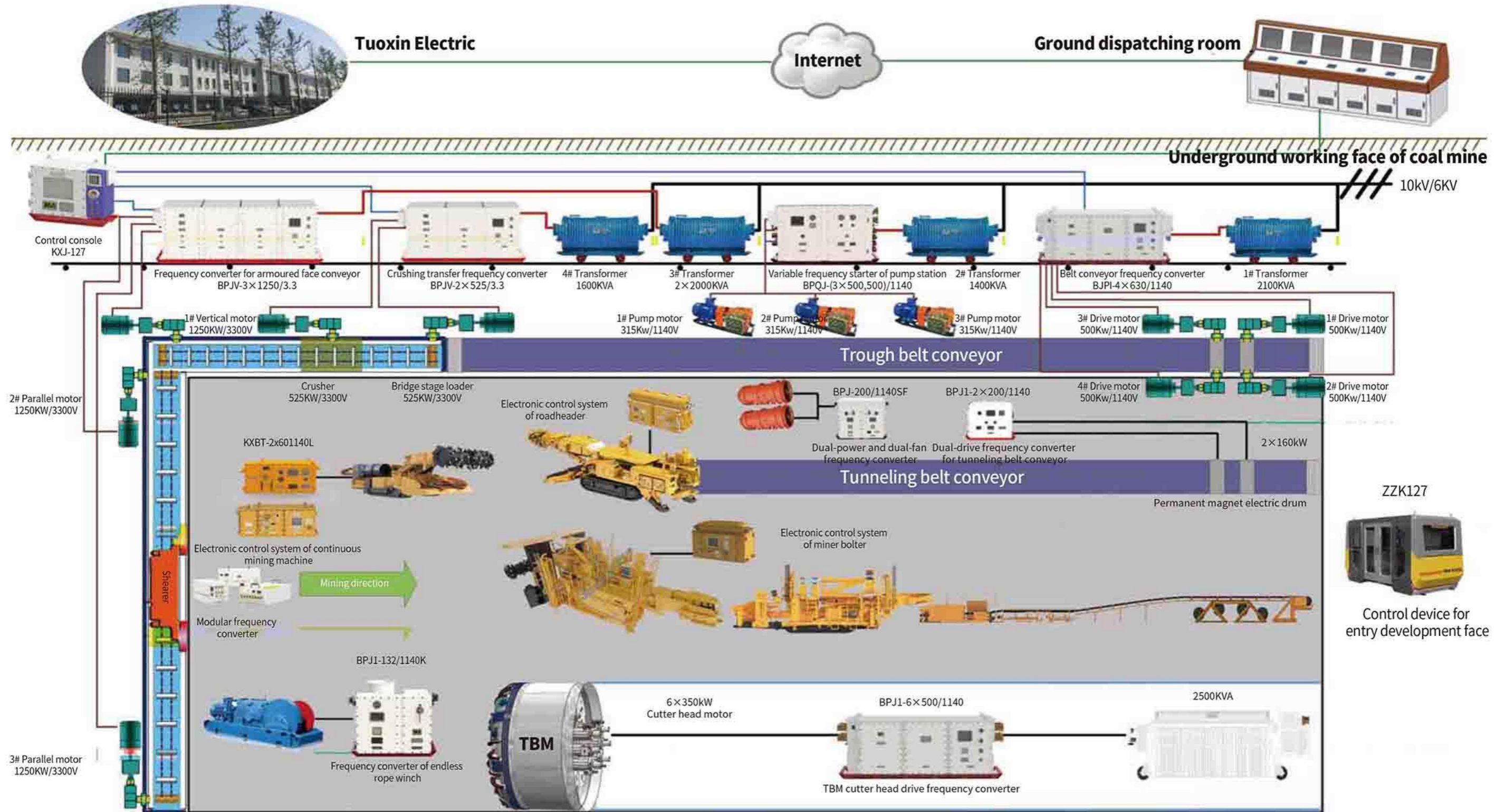


Applications

It is mainly used for heavy-duty startup and whole-process speed regulation of armoured face conveyors, bridge stage loaders, crushers and other equipment with rated voltages of 660V, 1140V and 3300V in coal mines. It may also be used in belt conveyors, emulsion pump stations, permanent magnet synchronous motors, winches, monkey cars and other occasions requiring frequency conversion and speed regulation. It improves the service efficiency of equipment, reduces the maintenance of complete equipment, and ensures production safety through reliable operation. It uses advanced design concepts, has independent intellectual property rights, and reaches the international leading level in terms of functionality and reliability.



Complete VFD set and intelligent control solution for mining face

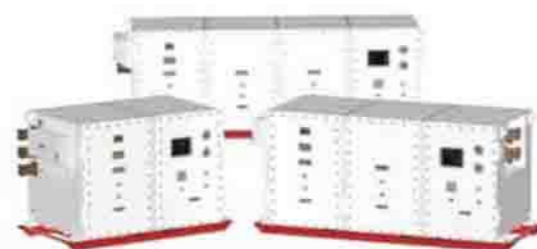


Flameproof and intrinsically safe HV combined frequency converter for mining

Applicable to: armoured face conveyor, bridge stage loader, and belt conveyor

BPJV-□×□/3.3 series HV combined frequency converter

- Input voltage: 2×AC1700V
- Output variable frequency: 3 channels (2 channels, 1 channel)
- Topology: voltage source type three-level
- Control core: imported Siemens vector control
- Maximum power: 4000kW



Model	Input voltage	Output power (kW)	Output current (A)	Output circuit	Overall dimensions L×W×H (mm)	Weight (t)	Quadrant
BPJV-525/3.3	2×1700V	525	120	One circuit	2199×1198×1408	3800	Two quadrants
BPJV-855/3.3	2×1700V	855	190	One circuit	2199×1198×1408	3800	Two quadrants
BPJV-1250/3.3	2×1700V	1250	280	One circuit	2199×1198×1408	3800	Two quadrants
BPJV-1600/3.3	2×1700V	1600	360	One circuit	2199×1198×1408	3800	Two quadrants
BPJV-2000/3.3	2×1700V	2000	410	One circuit	2199×1198×1408	3800	Two quadrants
BPJV-2250/3.3	2×1700V	2250	463	One circuit	2199×1198×1408	3800	Two quadrants
BPJV-2600/3.3	2×1700V	2600	535	One circuit	2199×1198×1408	3800	Two quadrants
BPJV-3000/3.3	2×1700V	3000	617	Two circuits	3120×1198×1408	5800	Two quadrants
BPJV-3600/3.3	2×1700V	3600	741	Two circuits	3120×1198×1408	5800	Two quadrants
BPJV-4000/3.3	2×1700V	4000	823	Two circuits	3120×1198×1408	5800	Two quadrants
BPJV-2X525/3.3	2×1700V	2X525	2×120	Two circuits	3120×1198×1408	5800	Two quadrants
BPJV-2X855/3.3	2×1700V	2X855	2×190	Two circuits	3120×1198×1408	5800	Two quadrants
BPJV-2X1250/3.3	2×1700V	2X1250	2×280	Two circuits	3120×1198×1408	5800	Two quadrants
BPJV-2X1400/3.3	2×1700V	2X1400	2×315	Two circuits	3120×1198×1408	5800	Two quadrants
BPJV-2X1600/3.3	2×1700V	2X1600	2×360	Two circuits	3120×1198×1408	5800	Two quadrants
BPJV-2X2000/3.3	2×1700V	2X2000	2×410	Two circuits	3120×1198×1408	5800	Two quadrants
BPJV-2X2600/3.3	2×1700V	2X2600	2×535	Two circuits	3320×1198×1408	6200	Two quadrants
BPJV-3X525/3.3	2×1700V	3X525	3×120	Three circuits	4040×1198×1408	8000	Two quadrants
BPJV-3X855/3.3	2×1700V	3X855	3×190	Three circuits	4040×1198×1408	8000	Two quadrants
BPJV-3X1250/3.3	2×1700V	3X1250	3×280	Three circuits	4040×1198×1408	8000	Two quadrants
BPJV-3X1600/3.3	2×1700V	3X1600	3×360	Three circuits	4040×1198×1408	8000	Two quadrants
BPJV-3X2000/3.3	2×1700V	3X2000	3×410	Three circuits	4040×1198×1408	8000	Two quadrants
BPJV-3600+2600/3.3	2×1700V	3600+2600	741+535	Two circuits	4240×1198×1408	9000	Two quadrants
BPJV1-1250/3.3	3300V	1250	280	One circuit	2637×1067×601	1500	Two quadrants
BPJV1-1400/3.3	3300V	1400	315	One circuit	2637×1067×601	1500	Two quadrants
BPJV1-1600/3.3	3300V	1600	360	One circuit	2637×1067×601	1500	Two quadrants
BPJV1-2000/3.3	3300V	2000	410	One circuit	2637×1067×601	1500	Two quadrants

Flameproof and intrinsically safe HV combined variable frequency starter for mining

Applicable to: armoured face conveyor, pump station, and belt conveyor

BPQJV-L-□×□, □/3.3 series variable frequency starter

- Input voltage: 2 circuits, AC3300V
- Output power frequency: 2 circuits (2×1000kW)
- Output variable frequency: 2 circuits (2×1400kW)
- Auxiliary power frequency 1: 3×45kW++2×22kW+4×7.5kW
- Auxiliary power frequency 2: 3×5kW
- Control power supply: 3 circuits (127V, 6kVA)



Model	Frequency converter output power (kW)	Power frequency output current (A)	Auxiliary power frequency circuits (12 circuits)	127V Power Supply	Overall dimensions L×W×H (mm)	Weight (t)
BPQJV-(525,630)/3.3	525	630	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10
BPQJV-(855,630)/3.3	855	630	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10
BPQJV-(1250,630)/3.3	1250	630	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10
BPQJV-(1400,630)/3.3	1400	630	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10
BPQJV-(2X525,420)/3.3	2X525	420	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10
BPQJV-(2X630,210)/3.3	2X630	210	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10
BPQJV-(2X855,210)/3.3	2X855	210	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10
BPQJV-(2X855,420)/3.3	2X855	420	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10
BPQJV-(2X1250,210)/3.3	2X1250	210	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10
BPQJV-(2X1250,420)/3.3	2X1250	420	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10
BPQJV-(2X1250,630)/3.3	2X1250	630	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10
BPQJV-(2X1400,420)/3.3	2X1400	420	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10
BPQJV-(2X1400,630)/3.3	2X1400	630	3X25A+6X15A+3X5A	3X10A	4480×1200×1400	≤10

Flameproof and intrinsically safe AC frequency converter for mining

Applicable to: belt conveyor, monkey car, winch, armoured face conveyor, permanent magnet electric drum, etc.

BPJ1-□/1140 series frequency converter

- Input voltage: AC1140V\AC660V
- Output power: 55-132kW
- Output circuit: 1 circuit
- Heat dissipation mode: heat pipe + air cooling



Model	Frequency converter output circuit	Frequency converter output power (kW)	Frequency converter output current (A)	Overall dimensions L×W×H (mm)	Weight (kg)
BPJ1-55/660	One circuit	55	57	1246X1010X995	700Kg
BPJ1-55/660K	One circuit	55	57	1246X1010X995	700Kg
BPJ1-75/660	One circuit	75	77	1246X1010X995	700Kg
BPJ1-75/660K	One circuit	75	77	1246X1010X995	700Kg
BPJ1-90/660	One circuit	90	93	1246X1010X995	700Kg
BPJ1-90/660K	One circuit	90	93	1246X1010X995	700Kg
BPJ1-110/660	One circuit	110	113	1246X1010X995	700Kg
BPJ1-110/660K	One circuit	110	113	1246X1010X995	700Kg
BPJ1-132/660	One circuit	132	135	1246X1010X995	700Kg
BPJ1-132/660K	One circuit	132	135	1246X1010X995	700Kg
BPJ1-55/1140	One circuit	55	33	1246X1010X995	700Kg
BPJ1-55/1140K	One circuit	55	33	1246X1010X995	700Kg
BPJ1-75/1140	One circuit	75	45	1246X1010X995	700Kg
BPJ1-75/1140K	One circuit	75	45	1246X1010X995	700Kg
BPJ1-90/1140	One circuit	90	54	1246X1010X995	700Kg
BPJ1-90/1140K	One circuit	90	54	1246X1010X995	700Kg
BPJ1-110/1140	One circuit	110	66	1246X1010X995	700Kg
BPJ1-110/1140K	One circuit	110	66	1246X1010X995	700Kg
BPJ1-132/1140	One circuit	132	79	1246X1010X995	700Kg
BPJ1-132/1140K	One circuit	132	79	1246X1010X995	700Kg

Flameproof and intrinsically safe combined frequency converter for mining

Applicable to: belt conveyor, monkey car, winch, armoured face conveyor, permanent magnet electric drum, etc.

BPJ1-2×□/1140 series frequency converter

- Input voltage: AC1140V\AC660V
- Output power: 55-200kW
- Output circuit: 1-2 circuits



Model	Frequency converter output circuit	Frequency converter output power (kW)	Frequency converter output current (A)	Overall dimensions L×W×H (mm)	Weight (kg)
BPJ1-160/660K	One circuit	160	165	1160X690X948	850Kg
BPJ1-200/660K	One circuit	200	206	1160X690X948	850Kg
BPJ1-160/1140K	One circuit	160	95	1160X690X948	830Kg
BPJ1-200/1140K	One circuit	200	115	1160X690X948	830Kg
BPJ1-2X55/660	Two circuits	2X55	2X57	1160X690X948	750Kg
BPJ1-2X75/660	Two circuits	2X75	2X77	1160X690X948	750Kg
BPJ1-2X90/660	Two circuits	2X90	2X93	1160X690X948	750Kg
BPJ1-2X110/660	Two circuits	2X110	2X113	1160X690X948	780Kg
BPJ1-2X132/660	Two circuits	2X132	2X135	1160X690X948	810Kg
BPJ1-2X160/660	Two circuits	2X160	2X165	1160X690X948	830Kg
BPJ1-2X200/660	Two circuits	2X200	2X206	1160X690X948	850Kg
BPJ1-2X55/1140	Two circuits	2X55	2X33	1160X690X948	750Kg
BPJ1-2X75/1140	Two circuits	2X75	2X45	1160X690X948	750Kg
BPJ1-2X90/1140	Two circuits	2X90	2X54	1160X690X948	750Kg
BPJ1-2X110/1140	Two circuits	2X110	2X66	1160X690X948	780Kg
BPJ1-2X132/1140	Two circuits	2X132	2X79	1160X690X948	810Kg
BPJ1-2X160/1140	Two circuits	2X160	2X95	1160X690X948	830Kg
BPJ1-2X200/1140	Two circuits	2X200	2X115	1160X690X948	850Kg

Flameproof and intrinsically safe combined frequency converter for mining

Applicable to: belt conveyor, monkey car, winch, armoured face conveyor, permanent magnet electric drum, and other types of loads

BPJ1-2×□/1140 series frequency converter

- Input voltage: AC1140V
 - Output power: 55-630kW
 - Output circuit: 1-2 circuits
 - Load type: belt conveyor, permanent magnet electric drum
- Modular design of frequency converter, 7" LCD, 16-key matrix keyboard, and data uploadable to remote control room.



Flameproof and intrinsically safe combined frequency converter for mining

Applicable to: belt conveyor, armoured face conveyor, permanent magnet electric drum, TBM cutter head drive, etc.

BPJ1-□×□/1140 series frequency converter

- Input voltage: AC1140V (6-pulse, 12-pulse)
 - Output voltage: AC1140V
 - Output circuit: 1 circuit, 2 circuits, 3-circuits
 - Rated power: 250kW-1000kW
 - Topology: common DC bus, voltage source type two-level, three-level
- Modular design, redundant operation supported
DTC high performance control
- Small size and high power density
Intelligent speed governing design



Model	Frequency converter output circuit	Frequency converter output power (kW)	Frequency converter output current (A)	Overall dimensions L×W×H (mm)	Weight (kg)
BPJ1-2X55/1140K	Two circuits	2X55	2X33	1420X930X1040	1690Kg
BPJ1-2X75/1140K	Two circuits	2X75	2X45	1420X930X1040	1690Kg
BPJ1-2X90/1140K	Two circuits	2X90	2X54	1420X930X1040	1690Kg
BPJ1-2X110/1140K	Two circuits	2X110	2X66	1420X930X1040	1700Kg
BPJ1-2X132/1140K	Two circuits	2X132	2X79	1420X930X1040	1700Kg
BPJ1-2X160/1140K	Two circuits	2X160	2X95	1420X930X1040	1730Kg
BPJ1-2X200/1140K	Two circuits	2X200	2X115	1420X930X1040	1730Kg
BPJ1-250/1140	One circuit	250	145	1420X930X1040	1690Kg
BPJ1-315/1140	One circuit	315	186	1420X930X1040	1690Kg
BPJ1-400/1140	One circuit	400	240	1420X930X1040	1690Kg
BPJ1-500/1140	One circuit	500	310	1420X930X1040	1750Kg
BPJ1-630/1140	One circuit	630	372	1420X930X1040	1750Kg

Model	Number of circuits	Output power (kW)	Output current (A)	Overall dimensions L×W×H (mm)	Weight (kg)	Quadrant
BPJ1-250/1140K	One circuit	250kW	145A	2411X967X1198	2550Kg	Two quadrants, four quadrants
BPJ1-315/1140K	One circuit	315kW	186A	2411X967X1198	2550Kg	Two quadrants, four quadrants
BPJ1-400/1140K	One circuit	400kW	240A	2411X967X1198	2550Kg	Two quadrants, four quadrants
BPJ1-500/1140K	One circuit	500kW	310A	2411X967X1198	2550Kg	Two quadrants, four quadrants
BPJ1-630/1140K	One circuit	630kW	372A	2411X967X1198	2850Kg	Two quadrants, four quadrants
BPJ1-710/1140 (K)	One circuit	710kW	424A	2411X967X1198	2850Kg	Two quadrants, four quadrants
BPJ1-800/1140 (K)	One circuit	800kW	480A	2411X967X1198	3150Kg	Two quadrants, four quadrants
BPJ1-1000/1140 (K)	One circuit	1000kW	630A	2411X967X1198	3150Kg	Two quadrants, four quadrants
BPJ1-2X315/1140 (K)	Two circuits	2X315kW	2X186A	2411X967X1198	3550Kg	Two quadrants, four quadrants
BPJ1-2X400/1140 (K)	Two circuits	2X400kW	2X240A	2411X967X1198	3550Kg	Two quadrants, four quadrants
BPJ1-2X500/1140 (K)	Two circuits	2X500kW	2X310A	2411X967X1198	3550Kg	Two quadrants, four quadrants
BPJ1-2X630/1140 (K)	Two circuits	2X630kW	2X372A	2411X967X1198	3550Kg	Two quadrants, four quadrants
BPJ1-2X710/1140 (K)	Two circuits	2X710kW	2X424A	2411X967X1198	3550Kg	Two quadrants, four quadrants
BPJ1-2X800/1140 (K)	Two circuits	2X800kW	2X480A	2411X967X1198	3550Kg	Two quadrants, four quadrants
BPJ1-2X1000/1140 (K)	Two circuits	2X1000kW	2X630A	2411X967X1198	3150Kg	Two quadrants, four quadrants
BPJ1-2X315/1140	Two circuits	2X315kW	2X186A	2411X967X1198	3150Kg	Two quadrants
BPJ1-2X400/1140	Two circuits	2X400kW	2X240A	2411X967X1198	3150Kg	Two quadrants
BPJ1-2X500/1140	Two circuits	2X500kW	2X310A	2411X967X1198	3150Kg	Two quadrants
BPJ1-2X630/1140	Two circuits	2X630kW	2X372A	2411X967X1198	3150Kg	Two quadrants
BPJ1-2X710/1140	Two circuits	2X710kW	2X424A	2411X967X1198	3150Kg	Two quadrants
BPJ1-2X800/1140	Two circuits	2X800kW	2X480A	2411X967X1198	3150Kg	Two quadrants
BPJ1-2X1000/1140	Two circuits	2X1000kW	2X630A	2411X967X1198	3150Kg	Two quadrants

Flameproof and intrinsically safe combined frequency converter for mining

Applicable to: belt conveyor, armoured face conveyor, permanent magnet electric drum, TBM cutter head drive, etc.

BPJ1-□×□/1140 series frequency converter

- Input voltage: AC1140V (6-pulse, 12-pulse)
 - Output voltage: AC1140V
 - Output circuit(s): 3 circuits, 4 circuits, 6 circuits
 - Rated power: 315kW-1000kW
 - Topology: common DC bus, voltage source type two-level, three-level
- Modular design, redundant operation supported Small size and high power density
DTC high performance control Intelligent speed governing design



Model	Number of circuits	Output power (kW)	Output current (A)	Overall dimensions L×W×H (mm)	Weight (kg)	Quadrant
BPJ1-3X315/1140K	Three circuits	3X315kW	3X186A	3286X967X1198	4100Kg	Four quadrants
BPJ1-3X400/1140K	Three circuits	3X400kW	3X240A	3286X967X1198	4100Kg	Four quadrants
BPJ1-3X500/1140K	Three circuits	3X500kW	3X310A	3286X967X1198	4100Kg	Four quadrants
BPJ1-3X630/1140K	Three circuits	3X630kW	3X372A	3286X967X1198	4100Kg	Four quadrants
BPJ1-3X710/1140K	Three circuits	3X710kW	3X424A	3286X967X1198	4100Kg	Four quadrants
BPJ1-3X800/1140K	Three circuits	3X800kW	3X480A	3286X967X1198	4100Kg	Four quadrants
BPJ1-3X1000/1140K	Three circuits	3X1000kW	3X630A	3286X967X1198	4100Kg	Four quadrants
BPJ1-4X315/1140	Four circuits	4X315kW	4X186A	3286X967X1198	4300Kg	Two quadrants
BPJ1-4X400/1140	Four circuits	4X400kW	4X240A	3286X967X1198	4300Kg	Two quadrants
BPJ1-4X500/1140	Four circuits	4X500kW	4X310A	3286X967X1198	4300Kg	Two quadrants
BPJ1-4X630/1140	Four circuits	4X630kW	4X372A	3286X967X1198	4300Kg	Two quadrants
BPJ1-4X710/1140	Four circuits	4X710kW	4X424A	3286X967X1198	4300Kg	Two quadrants
BPJ1-4X800/1140	Four circuits	4X800kW	4X480A	3286X967X1198	4300Kg	Two quadrants
BPJ1-4X1000/1140	Four circuits	4X1000kW	4X630A	3286X967X1198	4300Kg	Two quadrants
BPJ1-4X315/1140K	Four circuits	4X315kW	4X186A	3286X967X1198	4500Kg	Four quadrants
BPJ1-4X400/1140K	Four circuits	4X400kW	4X240A	3286X967X1198	4500Kg	Four quadrants
BPJ1-4X500/1140K	Four circuits	4X500kW	4X310A	3286X967X1198	4500Kg	Four quadrants
BPJ1-4X630/1140K	Four circuits	4X630kW	4X372A	3286X967X1198	4500Kg	Four quadrants
BPJ1-4X710/1140K	Four circuits	4X710kW	4X424A	3286X967X1198	4500Kg	Four quadrants
BPJ1-4X800/1140K	Four circuits	4X800kW	4X480A	3286X967X1198	4500Kg	Four quadrants
BPJ1-4X1000/1140K	Four circuits	4X1000kW	4X630A	3286X967X1198	4500Kg	Four quadrants
BPJ1-6X250/1140	Six circuits	6X250kW	6×145A	3286X967X1198	4500Kg	Two quadrants
BPJ1-6X315/1140	Six circuits	6X315kW	6X186A	3286X967X1198	4500Kg	Two quadrants
BPJ1-6X400/1140	Six circuits	6X400kW	6X240A	3286X967X1198	4500Kg	Two quadrants
BPJ1-6X500/1140	Six circuits	6X500kW	6X310A	3286X967X1198	4500Kg	Two quadrants

Flameproof and intrinsically safe combined variable frequency starter for mining

Applicable to: belt conveyor, armoured face conveyor, permanent magnet electric drum, TBM cutter head drive, etc.

BPQJ-□×□, 120/1140 series combined variable frequency starter

- Input voltage: AC1140V
 - Output variable frequency: 2-3 circuits (3×200-630kW)
 - Auxiliary power frequency: 3×50kW
 - Topology: common DC bus, voltage source type two-level, three-level
- Modular design, redundant operation supported Small size and high power density
DTC high performance control Intelligent speed governing design



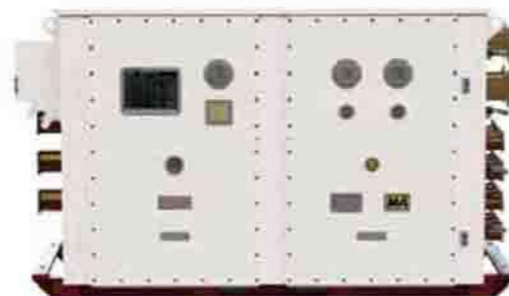
Model	Frequency converter output power (kW)	Power frequency output current (A)	Auxiliary power frequency circuits (3 circuits)	Overall dimensions L×W×H (mm)	Weight (t)
BPQJ-(2X200,120)/1140	2X200	120	3×30A	2411×967×1198	≤4
BPQJ-(2X250,120)/1140	2X250	120	3×30A	2411×967×1198	≤4
BPQJ-(2X315,120)/1140	2X315	120	3×30A	2411×967×1198	≤4
BPQJ-(2X400,120)/1140	2X400	120	3×30A	2411×967×1198	≤4
BPQJ-(2X500,120)/1140	2X500	120	3×30A	2411×967×1198	≤4
BPQJ-(2X630,120)/1140	2X630	120	3×30A	2411×967×1198	≤4
BPQJ-(2X710,120)/1140	2X710	120	3×30A	2411×967×1198	≤4
BPQJ-(3X200,120)/1140	3X200	120	3×30A	2411×967×1198	≤4
BPQJ-(3X250,500)/1140	3X250	120	3×30A	2411×967×1198	≤4
BPQJ-(3X315,120)/1140	3X315	120	3×30A	2411×967×1198	≤4
BPQJ-(3X400,120)/1140	3X400	120	3×30A	2411×967×1198	≤4
BPQJ-(3X500,120)/1140	3X500	120	3×30A	2411×967×1198	≤4
BPQJ-(3X630,120)/1140	3X630	120	3×30A	2411×967×1198	≤4

Flameproof and intrinsically safe combined variable frequency starter for mining

Applicable to: belt conveyor, emulsion pump station, permanent magnet electric drum, TBM cutter head drive, etc.

BPQJ-□×□/1140 series variable frequency starter

- Input voltage: AC1140V
- Output power frequency: 3 circuits (3×630kW)
- Output variable frequency: 3 circuits (3×630kW)
- Auxiliary power frequency: 2×20kW+10×10kW
- Control power supply: 2 circuits (127V, 6kVA)
- Tension variable frequency: 132kW (four quadrants)



Modular frequency converter series

Applicable to: shearer, shuttle car, roadheader, continuous mining machine, and electric locomotive

TX300 series modular frequency converter

- Input voltage: 380-1140V
- Output variable frequency: 1 circuit
- Topology: voltage source type two-level
- Control core: ABB ACS880 DTC control
- Maximum power: 200kW



Model	Frequency converter output power (kW)	Power frequency output current (A)	Auxiliary power frequency circuits (12 circuits)	127V power supply	Tension circuit	Overall dimensions L×W×H (mm)	Weight (t)
BPQJ-(315,1300)/1140	315	1200	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(400,1300)/1140	400	1200	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(500,1300)/1140	500	1200	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(2X315,900)/1140	2X315	800	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(2X400,900)/1140	2X400	800	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(2X500,900)/1140	2X500	800	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(3X315,500)/1140	3X315	400	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(3X400,500)/1140	3X400	400	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(3X500,500)/1140	3X500	400	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(452,100)/1140	2X160	0	2X20A+10X4A	2X10A	132kW	2394X1044X1385	≤4
BPQJ-(632,100)/1140	2X250	0	2X20A+10X4A	2X10A	132kW	2394X1044X1385	≤4
BPQJ-(762,100)/1140	2X315	0	2X20A+10X4A	2X10A	132kW	2394X1044X1385	≤4
BPQJ-(1332,100)/1140	3X400	0	2X20A+10X4A	2X10A	132kW	2394X1044X1385	≤4
BPQJ-(1632,100)/1140	3X500	0	2X20A+10X4A	2X10A	132kW	2394X1044X1385	≤4
BPQJ-(2X315,100)/1140	2X315	0	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(2X400,100)/1140	2X400	0	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(2X500,100)/1140	2X500	0	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(2X630,100)/1140	2X630	0	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(2X710,100)/1140	2X710	0	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(2X800,100)/1140	2X800	0	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(3X315,100)/1140	3X315	0	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(3X400,100)/1140	3X400	0	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(3X500,100)/1140	3X500	0	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4
BPQJ-(3X630,100)/1140	3X630	0	2X20A+10X4A	2X10A	0	2394X1044X1385	≤4

Product series	360V LV frequency converter	460V LV frequency converter	660V LV frequency converter	1140V LV frequency converter
Rated voltage	380V	460V	660V	1140V
Capacity	45KVA-210KVA	45KVA-260KVA	45KVA-180KVA	45KVA-120KVA
Adaptive motor power	150KWand below	200KW以下	150KWand below	150KWand below
Output frequency	0~300Hz	0~300Hz	0~300Hz	0~300Hz
Control mode	Scalar control and direct torque control modes	Scalar control and direct torque control modes	Scalar control and direct torque control modes	Scalar control and direct torque control modes
I/O Interface	With digital and analog I/O interfaces	With digital and analog I/O interfaces	With digital and analog I/O interfaces	With digital and analog I/O interfaces
Communication mode	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN
Master-slave communication mode	Optical fiber or wire serial communication	Optical fiber or wire serial communication	Optical fiber or wire serial communication	Optical fiber or wire serial communication
Overload capacity	1.2 times overload for 3 minutes	1.2 times overload for 3 minutes	1.2 times overload for 3 minutes	1.2 times overload for 3 minutes
Display	LCD	LCD	LCD	LCD
Duty	Continuous working system	Continuous working system	Continuous working system	Continuous working system
Operation mode	Operation in two quadrants and in four quadrants	Operation in two quadrants and in four quadrants	Operation in two quadrants and in four quadrants	Operation in two quadrants and in four quadrants
Control mode	Local control, remote control	Local control, remote control	Local control, remote control	Local control, remote control
Remote control distance	100m	100m	100m	100m
Cooling mode	Water cooling	Water cooling	Water cooling	Water cooling
Overall dimensions (L×W×H)	600mm×335mm×175mm	600mm×335mm×175mm	600mm×335mm×175mm	550mm×420mm×200mm 510mm×230mm×240mm
Weight	≤25kg	≤25kg	≤25kg	≤50kg

Flameproof and intrinsically safe electric cabinet for roadheader



Purposes

- It is mainly used for the intelligent control and protection of the electrical systems of the cantilever roadheader and the miner bolter in the underground coal mine, which respectively controls the start, stop and protection of pump motor, cutter motor, secondary conveyor motor and dust removal motor. Intelligent section cutting can be carried out according to external sensors. The system, being immune from interference, has stable and reliable overall performance, and is suitable for environments with vibration, high temperature, and humidity.

Applications



KXJ□-400/1140 (660) E-□ series

Input voltage: AC1140/660V

Drive circuit: 4\5\6\7\8 circuits

Supporting models: EBZ100~EBZ350

Locking method: bolt door, quick open door

Explosion-proof type: flameproof and intrinsically safe Exd [ib] I Mb

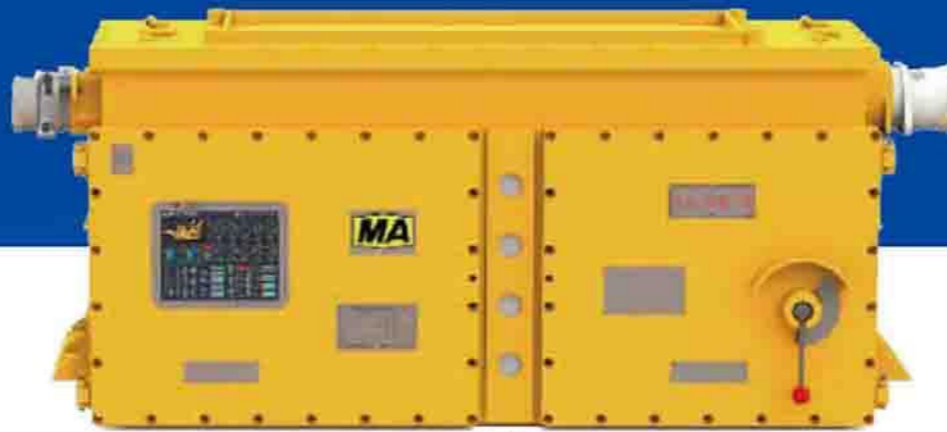
Full protection, dual-voltage power supply supported, optional vehicle locking system

All imported components, maintenance-free and fully remotely controlled

Complete functions, meeting the requirements of various working conditions

Operation in environments with high vibration supported

CUSTOMIZED SERVICE CLASSIFICATION MODEL



KXJ-400/1140(660)E-5



TECHNICAL PARAMETERS

Rated voltage	AC1140/660V
Rated current	≤ 400A
IP rating	IP54
Weight	950 kg (excluding cover plate)
Dimensions	1693*641*736mm (excluding cover plate, including bell mouth)

FEATURES

- Cost-effective supporting parts of conventional roadheader
- Multiple choices between imported and domestic configurations
- Motor control for five circuits or fewer circuits
- Optional disconnectors and circuit breakers
- Time-of-use payment and vehicle locking
- Bolted door, 10.4" display

KXJ1-400/1140(660)E-5



TECHNICAL PARAMETERS

Rated voltage	AC1140/660V
Rated current	≤ 400A
IP rating	IP54
Weight	950 kg (excluding cover plate)
Dimensions	1693*641*736mm (excluding cover plate, including bell mouth)

FEATURES

- Cost-effective supporting parts of conventional roadheader
- Multiple choices between imported and domestic configurations
- Motor control for five circuits or fewer circuits
- Optional disconnectors and circuit breakers
- Time-of-use payment and vehicle locking
- Bolted door, without front door display

KXJ2-400/1140(660)E-5



TECHNICAL PARAMETERS

Rated voltage	AC1140/660V
Rated current	5400A
IP rating	IP54
Weight	950 kg (excluding cover plate)
Dimensions	1738*641*720mm (excluding cover plate, including bell mouth)

FEATURES

- Cost-effective supporting parts of conventional roadheader
- Multiple options between imported and domestic configurations of main circuit contactor
- Motor control for five circuits or fewer circuits
- Optional incoming disconnectors and circuit breakers
- Time-of-use payment and vehicle locking
- Bolted door, narrow body, 7" display

KXJ3-400/1140(660)E



TECHNICAL PARAMETERS

Rated voltage	AC1140/660V
Rated current	5400A
IP rating	IP54
Weight	950 kg (excluding cover plate)
Dimensions	1761*678*806mm (excluding cover plate, including bell mouth)

FEATURES

- Cost-effective supporting parts of intelligent roadheader
- Multiple options between imported and domestic configurations of main circuit contactor
- Motor control for six circuits or fewer circuits
- Optional incoming disconnectors and circuit breakers
- Time-of-use payment and vehicle locking
- Quick-opening door, 7" display, with intelligent interface

KXJ4-400/1140(660)E



TECHNICAL PARAMETERS

Rated voltage	AC1140/660V
Rated current	5400A
IP rating	IP54
Weight	950 kg (excluding cover plate)
Dimensions	1761*678*776mm (excluding cover plate, including bell mouth)

FEATURES

- Cost-effective supporting parts of intelligent roadheader
- Multiple options between imported and domestic configurations of main circuit contactor
- Motor control for five circuits or fewer circuits
- Optional incoming disconnectors and circuit breakers
- Time-of-use payment and vehicle locking
- Bolted door, 7" display

KXJ-630/1140(660)E-5 (6, 7, 8)



TECHNICAL PARAMETERS

Rated voltage	AC1140/660V
Rated current	≤ 630A
IP rating	IP54
Weight	950 kg (excluding cover plate)
Dimensions	1786*664*776mm (excluding cover plate, including bell mouth)

FEATURES

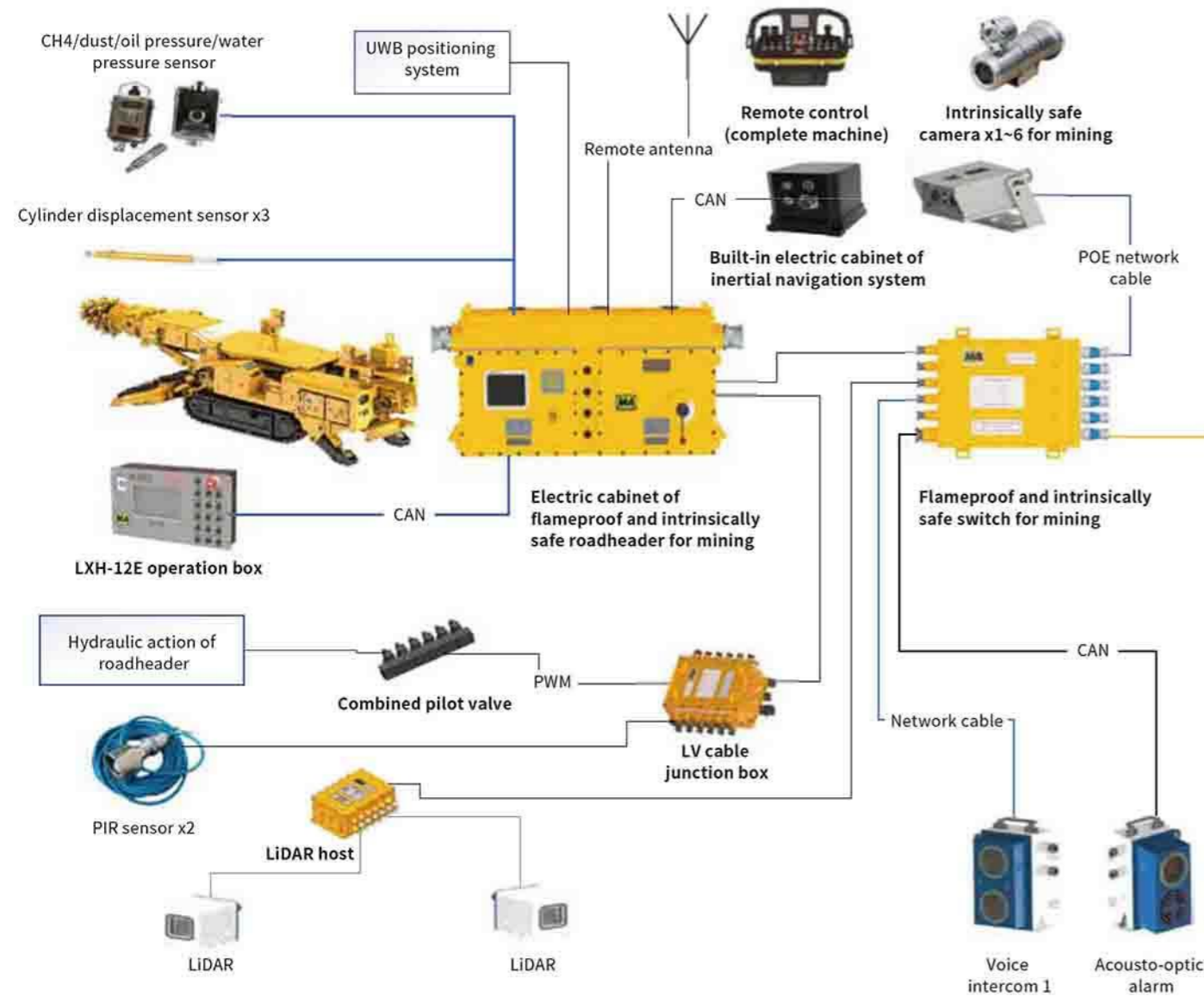
- Cost-effective supporting parts of intelligent roadheader
- Multiple options between imported and domestic configurations of main circuit contactor
- Motor control for eight circuits or fewer circuits
- Optional incoming disconnectors and circuit breakers
- Time-of-use payment and vehicle locking
- Bolted door, 10.4" display

NETWORK TOPOLOGY OF INTELLIGENT REMOTE CONTROL SYSTEM OF TUNNELING EQUIPMENT

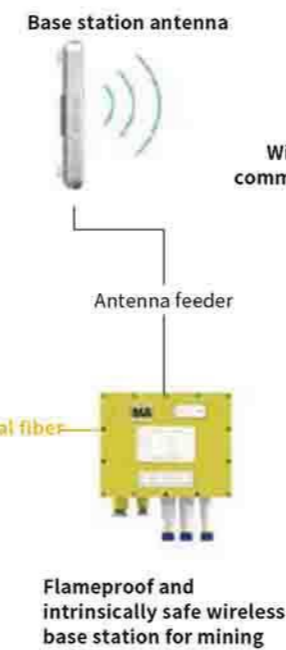
GROUND



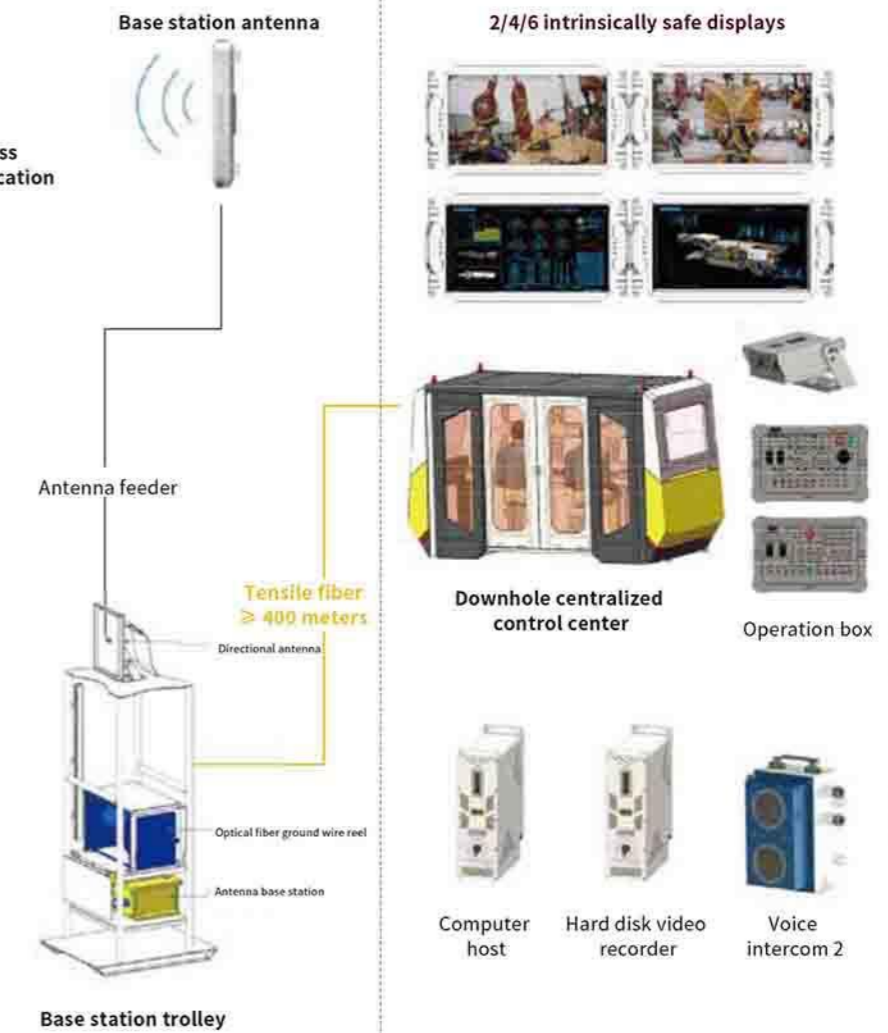
DOWNHOLE



ON-BOARD PART OF ROADHEADER



DOWNHOLE CENTRALIZED CONTROL PART



Optical fiber ring network

Tensile fiber > 400 meters

Flameproof and intrinsically safe electric cabinet for miner bolter



Purpose

• It is mainly used for the intelligent control and protection of the electrical system of the horizontal-shaft miner bolter in the underground coal mine, which respectively controls the start, stop and protection of pump motor, cutter motor, secondary conveyor motor and dust removal motor. Intelligent section cutting can be carried out according to external sensors. The system, being immune from interference, has stable and reliable overall performance, and is suitable for mining environments with vibration, high temperature, humidity, and strong electromagnetic interference.

Applications



KXJ-□/1140E - Miner bolter series

Input voltage: AC1140

Drive circuit: 8\7\6\5 circuits

Supporting models: 100-360 (cutter power, kW)

IP rating: IP65

Full protection, remote control supported, optional vehicle locking system

All imported components, fully remotely controlled (optional)

Operation at high altitudes, in alpine areas with high vibration

Suitable for rapid tunneling in complete sets

CUSTOMIZED SERVICE CLASSIFICATION MODEL



KXJ-400/1140E (EJM280)



TECHNICAL PARAMETERS

Rated voltage	AC1140V
Rated current	≤ 400A
IP rating	IP54
Weight	1050 kg
Dimensions	1737*714*680mm

FEATURES

- Suitable for XCMG intelligent miner bolters
- Multiple choices between imported and domestic configurations
- Motor control for 6 circuits or fewer circuits
- Optional disconnectors and circuit breakers
- Time-of-use payment and vehicle locking
- Bolted door, left wiring chamber, 10.4" display, matrix keyboard, emergency stop button on the front side, power indicator

**KXJ-688/1140E (7-circuit standard type)
KXJ-650/1140E (6-circuit intelligent type)**



TECHNICAL PARAMETERS

Rated voltage	AC1140V
Rated power	≤ 650kW and ≤ 680kW
Protection level	IP rating
Weight	1200 kg
Dimensions	2259*663*703mm

FEATURES

- Suitable for standard and intelligent miner bolters of China Railway Engineering Equipment Group Co., Ltd.
- Fully imported high-end configuration, control core: Siemens/EPEC
- Motor control for 6/7 circuits or fewer circuits
- Optional disconnectors and circuit breakers
- Time-of-use payment and vehicle locking
- Bolted door, wiring chambers on both sides, 10.4" display, matrix keyboard, emergency stop button on the front side, power indicator

KXJ-630/1140E



TECHNICAL PARAMETERS

Rated voltage	AC1140V
Rated current	≤ 630A
IP rating	IP54
Weight	1350kg (KXJ), 750kg (KXJT)
Dimensions	932*777*754mm (KXJT), 1674*765*1035mm (KXJ)

FEATURES

- Suitable for coal electric traction intelligent miner bolters of Xian Coal Mining Machinery Co., Ltd.
- Fully imported configuration
- Motor control for 8 circuits or fewer circuits, variable frequency traveling
- Separate circuit breaker control of cutter circuit and oil pump circuit
- Time-of-use payment and vehicle locking
- Bolted door, top wiring chamber, 10.4" display, matrix keyboard, emergency stop button on the front side, power indicator

KXJT-2×60/1140E-K



TECHNICAL PARAMETERS

Rated voltage	AC1140V
Rated current	≤ 630A
IP rating	IP54
Weight	1350kg (KXJ), 750kg (KXJT)
Dimensions	932*777*754mm (KXJT), 1674*765*1035mm (KXJ)

FEATURES

- Suitable for coal electric traction intelligent miner bolters of Xian Coal Mining Machinery Co., Ltd.
- Fully imported configuration
- Motor control for 8 circuits or fewer circuits, variable frequency traveling
- Separate circuit breaker control of cutter circuit and oil pump circuit
- Time-of-use payment and vehicle locking
- Bolted door, top wiring chamber, 10.4" display, matrix keyboard, emergency stop button on the front side, power indicator

QJGZ-400/3300-6



TECHNICAL PARAMETERS

Rated voltage	AC3300V
Rated current	≤ 400A
IP rating	IP55
Weight	1350kg
Dimension	1680*824*815mm

CHARACTERISTIC

- Suitable for 3300V intelligent miner bolters of China Railway Construction Heavy Industry Corporation Limited
- Fully imported high-end configuration, control core: BBR/EPEC
- Motor control for 6 circuits or fewer circuits, with all connectors as quick connectors
- Imported disconnectors and contactors
- Time-of-use payment and vehicle locking
- Quick-opening sliding door, left wiring chamber, 10.4" display, matrix keyboard, emergency stop button on the front side, power indicator

KXJ-400/1140 (660)



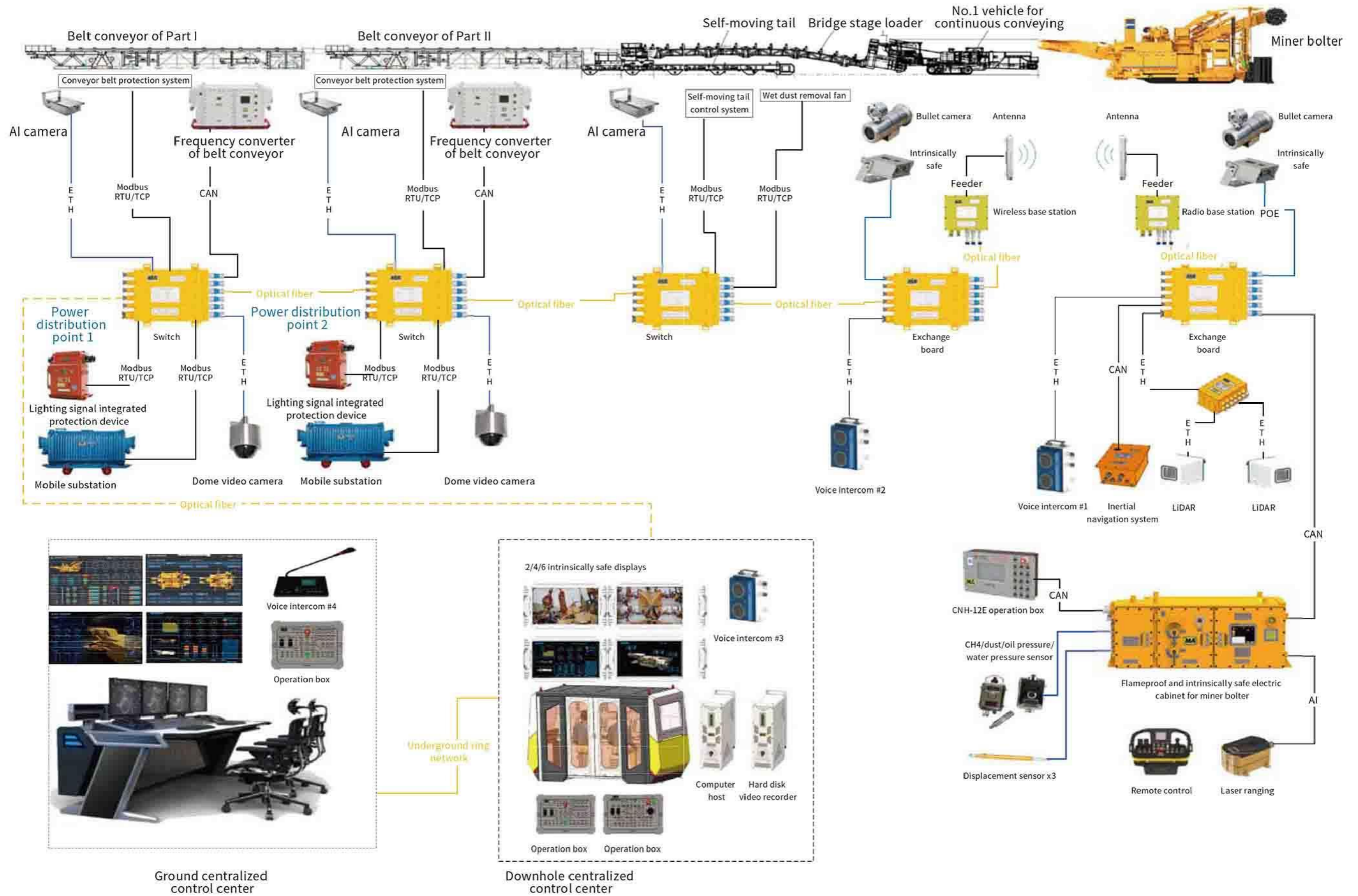
TECHNICAL PARAMETERS

Rated voltage	AC1140/660V
Rated current	≤ 400A
IP rating	IP54
Weight	850kg
Dimensions	1300*670*725mm

FEATURES

- Suitable for intelligent anchoring and breaking, self-moving tail, etc. of China Railway Construction Heavy Industry Corporation Limited
- Imported or domestic configuration of contactor, control core: EPEC
- Motor control for 5 circuits or fewer circuits
- With phase reversal disconnecter
- Time-of-use payment and vehicle locking
- Bolted door, 10.4" display, matrix keyboard, emergency stop button on the front side, power indicator

INTELLIGENT REMOTE CONTROL SYSTEM FOR MINER BOLTER WORKING FACE



KXJ-630/1140L - Continuous mining machine series



Purpose

• It is mainly used for the intelligent control and protection of the electrical systems of continuous mining machine in the underground coal mine, which respectively controls the start, stop and protection of pump motor, cutter motor, dust removal motor, and traction motor. Intelligent section cutting can be carried out according to external sensors. The system, being immune from interference, has stable and reliable overall performance, and is suitable for mining environments with vibration, high temperature, humidity, and strong electromagnetic interference.

Applications



Input voltage: AC1140

Drive circuit: 6 circuits

Supporting models: EBZ100~EBZ350

Locking method: bolted door

Explosion-proof type: flameproof and intrinsically safe Exd [ib] I Mb

Full protection, remote control supported, optional vehicle locking system

All imported components, maintenance-free and fully remotely controlled

Complete functions, meeting the requirements of various working conditions

Operation in environments with high vibration supported

CUSTOMIZED SERVICE CLASSIFICATION MODEL



GKB-400/1140L



TECHNICAL PARAMETERS	
Rated voltage	AC1140/660V
Rated current	≤630A
IP rating	IP54
Weight	1050kg (KXJ), 750kg (KXJT), 260kg (GKB)
Dimensions	1736*714*680mm (KXJ), 694*641*580mm (GKB), 932*777*54mm (KXJT)

FEATURES	
Suitable for XCMG continuous mining machine of basic coal mines	
Multiple choices between imported and domestic configurations	
Motor control for 6 circuits or fewer circuits	
Optional disconnectors and circuit breakers	
Time-of-use payment and vehicle locking	

KXJT-2×60/1140L-K



TECHNICAL PARAMETERS	
Rated voltage	AC1140/660V
Rated current	≤630A
IP rating	IP54
Weight	1050kg (KXJ), 750kg (KXJT), 260kg (GKB)
Dimensions	1736*714*680mm (KXJ), 694*641*580mm (GKB), 932*777*54mm (KXJT)

FEATURES	
Suitable for XCMG continuous mining machine of basic coal mines	
Multiple choices between imported and domestic configurations	
Motor control for 6 circuits or fewer circuits	
Optional disconnectors and circuit breakers	
Time-of-use payment and vehicle locking	

KXJ-630/1140L



TECHNICAL PARAMETERS	
Rated voltage	AC1140/660V
Rated current	≤630A
IP rating	IP54
Weight	1050kg (KXJ), 750kg (KXJT), 260kg (GKB)
Dimensions	1736*714*680mm (KXJ), 694*641*580mm (GKB), 932*777*54mm (KXJT)

FEATURES	
Suitable for XCMG continuous mining machine of basic coal mines	
Multiple choices between imported and domestic configurations	
Motor control for 6 circuits or fewer circuits	
Optional disconnectors and circuit breakers	
Time-of-use payment and vehicle locking	

KXBT-2*60/1140-K



TECHNICAL PARAMETERS	
Rated voltage	AC3300V
Rated current	≤400A
IP rating	IP54
Weight	1130kg (KXBT), 2818kg (KXBG)
Dimensions	1200*780*1152mm (KXBT), 2200*660*1005mm (KXBG)

FEATURES	
Suitable for export-type and high-power continuous mining machine for potash salt ores	
Imported or domestic configuration of contactor, control core: Beckhoff	
Motor control for 8 circuits or fewer circuits	
Imported disconnector: Filnor	
Time-of-use payment and vehicle locking	
Bolted door, 10.4" display, matrix keyboard, emergency stop button on the front side, power indicator	

KXBG-400/3300



TECHNICAL PARAMETERS	
Rated voltage	AC3300V
Rated current	≤400A
IP rating	IP54
Weight	1130kg (KXBT), 2818kg (KXBG)
Dimensions	1200*780*1152mm (KXBT), 2200*660*1005mm (KXBG)

FEATURES	
Suitable for export-type and high-power continuous mining machine for potash salt ores	
Imported or domestic configuration of contactor, control core: Beckhoff	
Motor control for 8 circuits or fewer circuits	
Imported disconnector: Filnor	
Time-of-use payment and vehicle locking	
Bolted door, 10.4" display, matrix keyboard, emergency stop button on the front side, power indicator	

Application cases

Engineering machinery



· Miner Bolter of China Railway Engineering Equipment Group Co., Ltd.



· TBM5



· CRCC Variable Frequency Cutter & Miner Bolter



· Motor Frequency Converter Unit Used by CRCC



· Anchor Machine of Jinglong Heavy Equipment



· XCMG tunnel roadheader

Mining



· Shenhua Shendong Group



· Dongtan Coal Mine



· Tongfuxin Coal Mine



· Tangkou Coal Mine



· Wanli No.1 Coal Mine



· Shangwan Coal Mine

Oil and gas



· Oil and Gas Fracturing Equipment



· TBM4



· Sinopec



· Drilling Platform Mud Pump



· Oil and Gas Cementing Truck



· Drilling Platform Mud Pump

Metallurgy



· Hebei Jinxi Iron & Steel - 710 Cold Sawing Machine 2



· Application of Belt Conveyor in Qingdao Steel Plant



· 400kw Blast Furnace Pump of Shiheng Special Steel



· Application of Belt Conveyor in Qingdao Steel Plant



· 800kW Dust Removal Fan of Shiheng Special Steel



· Supporting Facilities for Dust Removal Fan of Qingdao Steel Plant

Port



· Dongjiakou



· Dong Mine



· For Belt Conveyor of Tianjin Port



· Lianyungang



· Tianjin Port



· Lianyungang Port

Enterprise honor

Over the past ten years since its establishment, CCS has been deeply engaged in its main business. With technological innovations and disruptive products, it has successively won many industry awards such as the First Prize for Scientific and Technological Invention of China Machinery Industry Federation and the First Prize for Science and Technology of China National Coal Association. Over the years, various mechanical devices independently developed and produced by CCS have not only filled the domestic gap, but also reached the international first-class level. CCS is showing the world the power of Made in China!



Technology Changing the World, Innovation Driving the Future

Facing the ever-changing global development situation and complex and changing market environment, CCS, relying on its own technical reserves and China's efficient and perfect manufacturing system, insists on independent research and development and independent production. Through the construction of digital workshops and smart factories, it integrates first-class production lines and advanced management systems to build an industrial Internet platform, thus comprehensively improving production efficiency and product quality to ensure your safe and efficient production.

With the revolutionary technology in the field of control and transmission, CCS strives for advanced drive products and services for ports, ships, metallurgy, engineering machinery and cement applications, and is committed to making transmission operations more affordable, energy-saving, efficient and reliable.

Although the road is far, CCS will reach the destination. It is CCS's unremitting pursuit to become the world's best provider of variable frequency electromechanical and drive equipment, so that every continent of the world has the presence of CCS!

