

## MIC300-1S

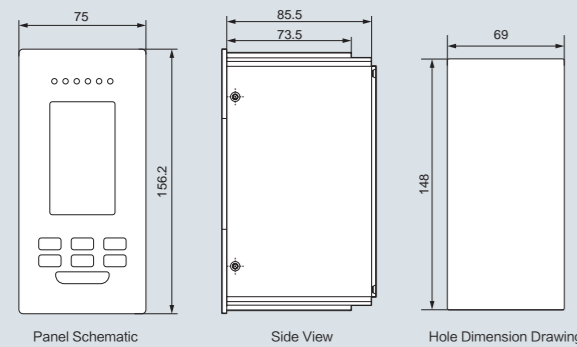
Protection measurement and control device

Scope of use: Mainly used for inflatable cabinets and low-voltage grid connected cabinets.  
Device material: The shell/panel are made of aluminum alloy profiles and flame-retardant wiring terminals.  
Note: 1S series products are available in horizontal and vertical screens.



No.	Name	Description
01	Power supply	AC/DC 85 ~ 265V, DC 48V, etc.
02	AC volume acquisition	8 way
03	Switching quantity acquisition	10 pcs (power supply)
04	Relay outlet	4 , with alarm/trip signal outlet
05	Communication interface	1 RS-485, Modbus-RTU protocol
06	Anti-trip circuit	No

No.	Name	Model	Analog quantity acquisition
01	Comprehensive protection and measurement device	MIC300-1S1	UA UB UC 3u0 ia ib ic 3i0



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## MIC300-1S

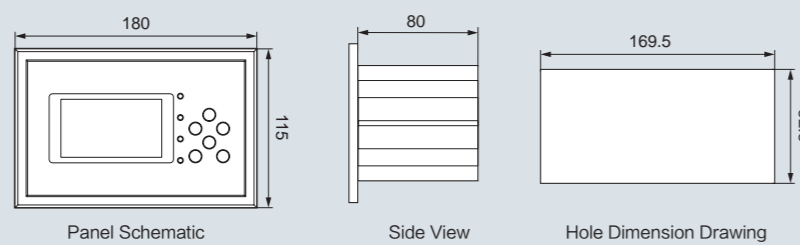
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## MIC300-1S

Protection measurement and control device

Model	Name	Main function	Notes
MIC300-1S1	Integrated protection and measurement device	Motor start, quick break, time limited quick break, overcurrent, overcurrent inverse time limit, post acceleration protection, overload, reclosing, zero sequence overcurrent, zero sequence overvoltage, overvoltage, low voltage, low-frequency load shedding, PT disconnection, unbalanced voltage, unbalanced current, charging protection, negative sequence overcurrent, control circuit disconnection, system power loss, non electric quantity protection, etc Measurement value: Ua Ub Uc Uab Ubc Uca Ia Ib Ic P Q COS Φ F;	Suitable for ring main cabinet, inflatable cabinet, including protection functions such as circuit, transformer, motor, capacitor busbar, PT, etc

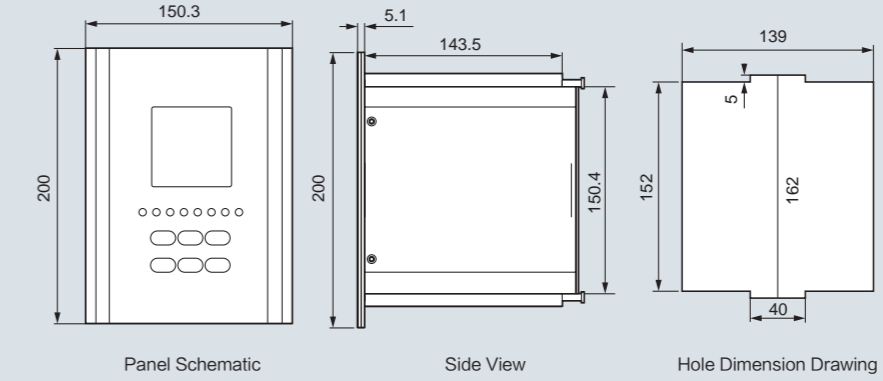
- Working power AC/DC:85-265V,DC48V
- AC volume acquisition 8 way (4-way voltage, 4-way current)
- 10 switch quantity acquisition (passive)
- 4 relay outlets (including alarm/trip signals)
- 1-channel 485 communication interface (standard Modbus RTU protocol)

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## MIC500-5S

Protection measurement and control device

Scope of use: Mainly used for cabinet types with voltage levels of 35KV and below  
Device material: The shell/panel are made of aluminum alloy profiles and flame-retardant wiring terminals.



No.	Name	Description
01	Power supply	AC/DC 85 ~ 265V, DC 48V, etc.
02	AC volume acquisition	12 channels, different models of protection devices analogue definition is different
03	Switching quantity acquisition	14 (AC/DC220V, DC110V, passive, to be specified when ordering)
04	Relay outlet	9, including alarm/trip signal outlet and device loss of power (normally closed)
05	Communication interface	2 RS-485 interfaces, Modbus-RTU protocol
06	Anti-trip circuit	Standard configuration with anti-trip circuits (optional when ordering)
07	Additional Functions	Fault recording, B-code timing

No.	Name:	Model	Analogue acquisition
01	Line protection measurement and control device	MIC500-5S1	UA UB UC 3U0 ia ib ic 3i0 Ia Ib Ic
02	Transformer protection measurement and control device	MIC500-5S2	UA UB UC 3U0 310L ia ib ic 3i0 Ia Ib Ic
03	Motor protection measurement and control device	MIC500-5S3	UA UB UC 3U0 ia ib ic 3i0 Ia Ib Ic
04	Busbar PT protection measurement and control device	MIC500-5S4	UA UB UC 3U0
05	PT parallel protection measurement and control device	MIC500-5S4B	Ua1 Ub1 Uc13U01 Ua2 Ub2 Uc23U02
06	Anti-islanding protection measurement and control device (high voltage)	MIC500-5S5	UA UB UC UX ia ib ic 3i0 Ia Ib Ic
07	Anti-islanding protection measurement and control device (low voltage)	MIC500-5S5D	UA UB UC UX ia ib ic 3i0 Ia Ib Ic
08	Capacitor protection measurement and control device	MIC500-5S6	UA UB UC Uunb lumb ia ib ic 3i0 Ia Ib Ic
09	Busbar self-transfer protection measurement and control device	MIC500-5S7	Ua1 Ub1 Ucl Ua2 Ub2 Uc2 Ujx1 Ujx2 ljx1 ljx2 ia ib ic
10	Incoming line self-transfer protection measurement and control device	MIC500-5S8	1#Ua 1#Ub 1#Uc 2#Ua 2#Ub 2#Uc ljx1 ljx2310 ia ib ic
11	Low-voltage generator backup protection measurement and control device	MIC500-5S88D	UA UB UC ia ib ic 3i0 Ia Ib Ic
12	Busbar protection measurement and control device	MIC500-5S9	UA UB UC 3U0 ia ib ic Ia Ib Ic

Note: This series of devices can be equipped with 2 Ethernet ports and 103 protocol. Add "E" after the corresponding model, for example: "MIC500-5S1E"

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## MIC500-5S

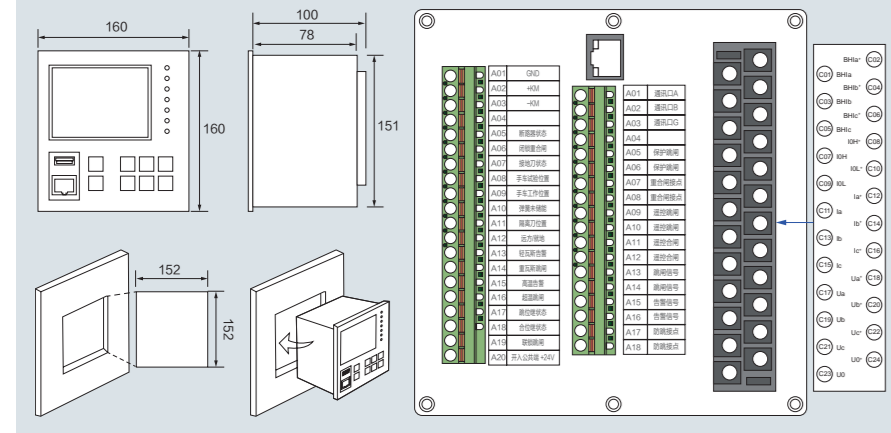
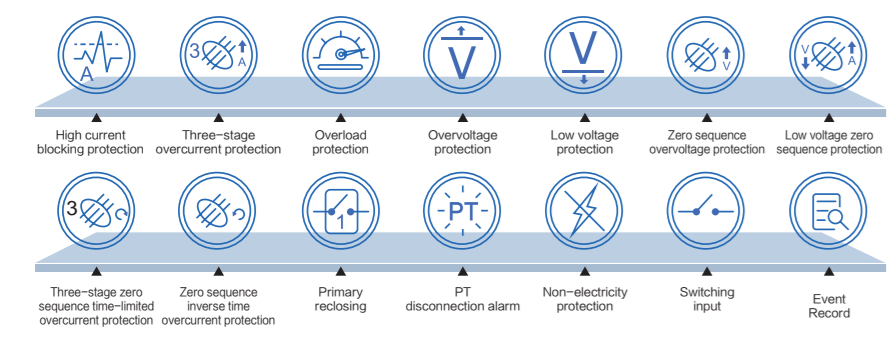
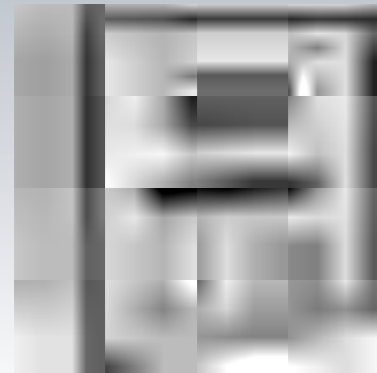
Protection measurement and control device

Model	Name	Main function	Notes
MIC500-5S1E	Line protection measurement and control device	Quick break/limited time quick break/overcurrent/overcurrent inverse time limit/overload/zero sequence overcurrent three stages/overvoltage/low voltage/zero sequence overvoltage/low-frequency load shedding/reclosing/PT disconnection/control circuit disconnection/system power loss and other measurement and control functions: Ua, Ub, Uc, Uab, Ubc, Uca; Ia, Ib, Ic; P, Q, COS; F;	Suitable for line protection and measurement and control of ungrounded systems, resistance grounded systems, and directly grounded systems with voltage levels of 35KV and below
MIC500-5S2E	Transformer protection measurement and control device	Quick break/limited time quick break/overcurrent/overcurrent inverse time limit/overload/zero sequence overcurrent three stages/overvoltage/low voltage/zero sequence overvoltage/high side zero sequence overcurrent/low side zero sequence overcurrent/control circuit disconnection/system power loss/non electric quantity Main transformer door opening, negative control trip, heavy gas, light gas, high temperature, temperature rise, high oil level, low oil level, pressure release, backup non electric quantity, etc. Measurement and control functions: Ua, Ub, Uc, Uab, Ubc, Uca; Ia, Ib, Ic; P, Q, COS; f;	Transformer protection and measurement devices suitable for ungrounded systems, resistance grounded systems, and directly grounded systems with voltage levels of 20KV and below
MIC500-5S3E	Motor protection and measurement device	Quick break/limited time quick break/overcurrent/overcurrent inverse time limit/overload/zero sequence overcurrent three stages/overvoltage/low voltage/zero sequence overvoltage/low-frequency load shedding/PT disconnection/control circuit disconnection/system power loss/temperature rise/high temperature/motor start and other measurement and control functions: Ua, Ub, Uc, Uab, Ubc, Uca; Ia, Ib, Ic; P, Q, COS; F;	Asynchronous motor protection and measurement for ungrounded systems, resistance grounded systems, and directly grounded systems with voltage levels below 10KV
MIC500-5S4E	Bus PT protection measurement and control device	Overvoltage/low voltage/PT disconnection/zero sequence overvoltage measurement and control function: UA UB UC UAB UBC UCA;	Bus PT protection suitable for single busbar connection of voltage levels 35KV and below
MIC500-5S6E	Capacitor protection and measurement device	Quick break/limited time quick break/overcurrent/overcurrent inverse time limit/overload/unbalanced overcurrent/unbalanced overvoltage/overvoltage/low voltage/control circuit disconnection/system power loss and other measurement and control functions: Ua, Ub, Uc, Uab, Ubc, Uca; Ia, Ib, Ic; P, Q, COS; F;	Suitable for parallel capacitor banks in non directly grounded systems or low resistance grounded systems with voltage levels of 35KV and below
MIC500-5S9E	Bus protection measurement and control device	Quick break/limited time quick break/overcurrent/reverse time limit of overcurrent/overload/overvoltage/low voltage/zero sequence overvoltage/PT disconnection/control circuit disconnection/system power loss and other measurement and control functions: Ua, Ub, Uc, Uab, Ubc, Uca; Ia, Ib, Ic; P, Q, COS; F;	Suitable for busbar protection in non directly grounded systems or low resistance grounded systems with voltage levels of 35KV and below

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## MIC500

Microcomputer comprehensive protection device



Working voltage options: DC24V, DC48V, AC/DC110V, AC/DC220V

Functional configuration can be selected: MIC500 synthesis protection

MIC500-B self-transfer device

MIC500-P PT protection

MIC500-P PT PT parallel device

MIC500-M motor protection

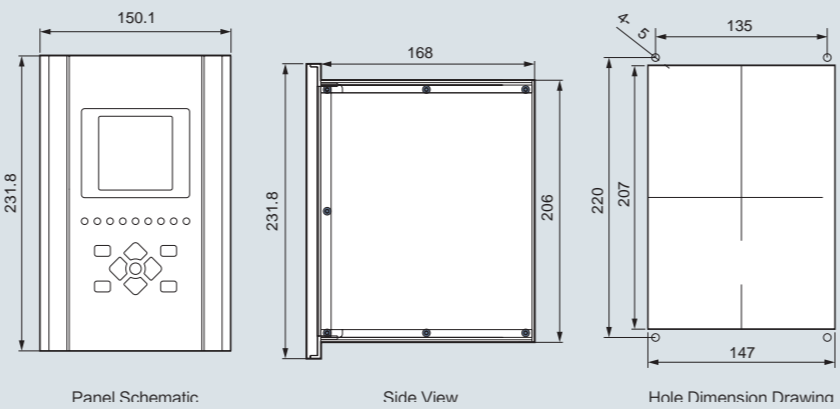
Optional communication protocol: Modbus, 103

## MIC500-6S

Protection measurement and control device

Scope of application: Mainly used for central cabinets and comprehensive projects

Device material: The shell/panel are made of aluminum alloy profiles, flame-retardant wiring terminals, and a 160 \* 260 LCD display



No.	Name	Description
01	Power supply	AC/DC 85 ~ 265V, DC 48V, etc.
02	AC voltage acquisition	14 ways, analogue definition of different models of protection devices is different
03	Switching quantity acquisition	21 (AC/DC220V, DC110V, DC48V)
04	Relay outlet	13, including alarm/trip signals, 1 device loss of power signal (normally closed), 1 after the closing signal outlet
05	Communication interface	RS-485 interface, Modbus-RTU protocol, 2 Ethernet connectors
06	Anti-trip circuit	Standard configuration with anti-tripping circuit (can be exempted when ordering)
07	Additional Functions	Printing, fault recording, B code timing function

No.	Name	Model	Note
01	Line protection measurement and control device	MIC500-6S71	Incoming and feeder circuits for the same period of reclosing with checking
02	Line comprehensive protection measurement and control device	MIC500-6S71C	Line protection with differential, without phase detection
03	Transformer protection measurement and control device	MIC500-6S72	Zero sequence at neutral on LV side possible
04	Transformer comprehensive protection measurement and control device	MIC500-6S72C	with differential, transformer wiring possible
05	Motor protection measurement and control device	MIC500-6S73	Asynchronous motor
06	Comprehensive protection and measurement device for electric motors	MIC500-6S73C	Asynchronous motor with differential, CT ratio settable on both sides
07	Capacitor protection and measurement device	MIC500-6S73Y	Asynchronous motors with magnetically balanced differentials
08	Busbar protection measurement and control device	MIC500-6S76	Fixed non-grouping protection
09	Backup automatic switching protection device	MIC500-6S79	Applicable to single busbar 110kV and below busbar
10	Backup automatic switching protection device	MIC500-6S63	With busbar self-transfer (optional for HV and LV)
11	Capacitor switching protection measurement and control device	MIC500-6S63F	Without busbar self-transfer (optional for HV and LV)
12	Busbar PT protection measurement and control device	MIC500-6S64	Fixed 2-group capacitor protection
13	Busbar PT parallel protection measurement and control device	MIC500-6S65	Single busbar PT
14	Frequency and voltage emergency control device	MIC500-6S66	Busbar PT protection + automatic busbar/metering PT parallelism
15	Anti islanding protection measurement and control device	MIC500-6S50	Frequency/voltage trip by turn
16	Fault disconnection protection measurement and control device	MIC500-6S51	Voltage/frequency/inverse power etc. trip
17	Out of step splitting device	MIC500-6S52	Zero-voltage/high-low frequency/high-low voltage trip
18	Reverse power protection measurement and control device	MIC500-6S53	2-segment low/overvoltage, low/high cycle, out-of-step release function under power angle instability
19	Main transformer on load voltage regulation and control device	MIC500-6S54	3-stage current protection / 4-stage reverse power trip and recovery closing
20	Main transformer backup protection measurement and control device	MIC500-6S80	Gear display + gear adjustment control
21	Main transformer non electric quantity protection device	MIC500-6S81	Applicable to high, medium and low side backup protection
22	Main transformer differential protection device	MIC500-6S85	Main transformer non-power
23	Generator backup protection measurement and control device	MIC500-6S93	Longitudinal difference + non-power, transformer wiring mode can be set
24	Generator grounding protection measurement and control device	MIC500-6S88	Thermal power below 100MW, water machine below 10MW
25	Generator differential protection device	MIC500-6S89	Excitation voltage not more than 500V
26	Generator comprehensive protection measurement and control device	MIC500-6S98	Longitudinal differential + non-electrical
27	Public measurement and control device	MIC500-6S88C	Backup + differential, applicable to small capacity generators
28	Public measurement and control device	MIC500-6S60A	Acquisition of one section of voltage and current with UO,UX,UD
29	Public measurement and control device	MIC500-6S60B	Acquisition of full voltage
30	Public measurement and control device	MIC500-6S60C	Acquisition of two voltages and currents

## MIC500-6S

Protection measurement and control device

Model	Name	Main function	Notes
MIC500-6S71	Line protection measurement and control device	Overcurrent I, II, III sections/overcurrent inverse time limit/post acceleration protection/overload/zero sequence overcurrent I, II, III sections/zero sequence overcurrent inverse time limit/reclosing/overvoltage/low voltage/zero sequence overvoltage/low-frequency protection/PT disconnection/PT voltage loss/control circuit disconnection/system power loss and other measurement and control functions: Ua, Ub, Uc, Uab, Ubc, Uca; Ia, Ib, Ic; P, Q, COS; F;*	Applicable to protection and measurement and control of transmission lines with voltage levels below 110kV
MIC500-6S72	Transformer protection measurement and control device	Overcurrent sections I, II, III/overcurrent inverse time limit/negative sequence overcurrent sections I, II/overload/zero sequence overcurrent sections I, II, III/low side zero sequence overcurrent sections I, II, III/overvoltage/low voltage/zero sequence overvoltage/low-frequency protection/PT disconnection/PT voltage loss/control circuit disconnection/system power loss/non electric quantity protection and other measurement and control functions: Ua, Ub, Uc, Uab, Ubc, Uca; Ia, Ib, Ic; P, Q, COS; F;*	Integrated device for protection, measurement and control of station transformers, grounding transformers, and other equipment with voltage levels below 110kV
MIC500-6S73	Motor protection and measurement device	Over current I, II, III sections/Over current inverse time limit/Negative sequence Over current I, II sections/Over load/Locked rotor protection/Over voltage/Low voltage/Zero sequence Over voltage/Overheat protection/Start time too long/Low frequency protection/Over frequency protection/PT Line break/PT Voltage loss/Control circuit break/System power loss/Non electric quantity protection and other measurement and control functions: Ua, Ub, Uc, Uab, Ubc, Uca; Ia, Ib, Ic; P, Q, COS; F;*	An integrated protection, measurement and control device suitable for high and low voltage asynchronous motors and other equipment.
MIC500-6S76	Capacitor protection and measurement device*	Measurement and control functions for overcurrent sections I, II, III/inverse time limit/overload/zero sequence overcurrent sections I, II, III/unbalanced overcurrent/unbalanced overvoltage/PT disconnection/control circuit disconnection/system power loss: Ua, Ub, Uc, Uab, Ubc, Uca; Ia, Ib, Ic; P, Q, COS; F;*	Suitable for the protection and measurement of parallel capacitors in non directly grounded systems or low resistance grounded systems with voltage levels below 110kV.
MIC500-6S63	Backup automatic switching protection measurement and control device	Backup automatic switching mode 1 (used for incoming line 1 closing position, bus joint position, incoming line 2 opening position. If incoming line 1 fails, jump to incoming line 1 first and then close incoming line 2, with self recovery) Backup automatic switching mode 2 (used for the opening and closing of incoming line 1, bus union position, and incoming line 2. If incoming line 2 fails, jump to incoming line 2 first and then close incoming line 1, with self recovery) Backup automatic switching mode 3 (used for the closure of incoming line 1, busbar separation, and incoming line 2. If incoming line 1 fails, jump to incoming line 1 first and then close the busbar, with self recovery) Backup automatic switching mode 4 (used for the closure of incoming line 1, busbar separation, and incoming line 2. If there is a fault in incoming line 2, jump to incoming line 2 first and then close the busbar, with self recovery) Three stage overcurrent protection (tripping) Over current inverse time limit protection (general/very/extreme optional) Overload (alarm/trip) Control circuit disconnection (alarm) Measurement and control functions: UAB1, UCB1, UAB2, UCB2, UX1, UX2; Ix1, Ix2;*	Suitable for backup automatic switching of incoming switches, internal bridge switches, and switches on both sides of the main transformer for voltage levels below 110kV
MIC500-6S81	Main transformer backup protection measurement and control device	Overcurrent sections I, II, III/overcurrent inverse time limit/overload/starting air cooling/blocking voltage regulation/zero sequence overcurrent section I, II/zero sequence overcurrent III/zero sequence overcurrent inverse time limit/gap zero sequence overcurrent/overvoltage/low voltage/zero sequence overvoltage/PT disconnection/PT disconnection return current/PT voltage loss/control circuit disconnection/system power loss/SF6 pressure abnormal measurement and control functions: Ua, Ub, Uc, Uab, Ubc, Uca; Ia, Ib, Ic; P, Q, COS; F;*	Suitable for transformers with voltage levels below 110kV, meeting the requirements for backup protection on either side (high, medium, and low voltage sides), used for transformer protection with separate backup protection configurations.*
MIC500-6S93	Main transformer differential protection measurement and control device	Differential quick break/ratio differential/CT line break/differential current exceeding limit, etc Measure current: Ia1, Ib1, Ic1, Ia2, Ib2, Ic2, Ia3, Ib3, Ic3;*	Suitable for two turn and three turn power transformers with voltage levels of 110kV and below, meeting the requirements of three side differential. Used for transformer protection separately configured for main protection.*
MIC500-6S88	Generator backup protection measurement and control device	Overcurrent sections I, II, III/overcurrent inverse time limit/overload/negative sequence overcurrent protection/negative sequence overcurrent inverse time limit/zero sequence overcurrent protection/loss of excitation protection/reverse power protection/frequency protection (over frequency, low frequency)/voltage protection (over voltage, low voltage)/zero sequence overvoltage protection/third harmonic voltage stator grounding protection/PT wire break alarm/PT voltage loss alarm/system power loss/control circuit wire break Measurement and control functions: Ua, Ub, Uc, Uab, Ubc, Uca; Ia, Ib, Ic; P, Q, COS $\phi$ ; F;*	Suitable for generator protection with a water turbine capacity not exceeding 10MW and a steam turbine generator capacity not exceeding 100MW, it forms a complete generator protection together with generator differential protection and generator grounding protection.
MIC500-6S89	Generator grounding protection measurement and control device	One point grounding protection/two point grounding protection; Analog quantity: Ue, Rg, K;*	Suitable for generator protection with a water turbine capacity not exceeding 10MW and a steam turbine generator capacity not exceeding 100MW, it forms a complete generator protection together with generator differential protection and generator grounding protection.*
MIC500-6S98	Generator differential protection measurement and control device	Differential quick break/Ratio differential/CT line break/Differential current over limit/Non electric quantity protection; Measure current: Ia1, Ib1, Ic1, Ia2, Ib2, Ic2;*	Main protection of small and medium-sized generators



# Integrated protection and measurement device



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