

Air Circuit breaker

AS-40E3-40A



General

Brand name	Metasol
Device application	Protection
Selectivity category	Category B
Suitability for isolation	Yes conforming to IEC 60947-2
Quality certification	ISO 9001
Environmental management system certificate	ISO 14001
Standards	IEC 60947-2
Testing laboratory	DEKRA, PT&T
Certification	CE, CCC, EAC, Marine(LR, RINA, NK, KR, BV, ABS, DNV)

Characteristics

Network type	AC
Network frequency	50/60 Hz
Poles [p]	3.0
Mounting mode	Withdrawable
Power loss [W]	528.0
Rated current [A]	4000.0
Rated voltage	690V / 600V / 550V
	500V / 480V / 460V
	415V / 380V / 230V / 220V
Operational current [A]	-

Operational voltage [V]	-
Rated impulse withstand voltage (Uimp)	12 kV conforming to IEC-60947-2
Rated insulation Voltage (Ui)	1000 V AC 50/60 Hz conforming to IEC-60947-2
Rated service short-circuit breaking capacity in % of Icu (Ics)	1.0
Rated ultimate short-circuit breaking capacity (Icu)	85 kA Icu at 220/415 V AC 50/60 Hz conforming to IEC 60947-2
	85 kA Icu at 460/500 V AC 50/60 Hz conforming to IEC 60947-2
	85 kA Icu at 550/690 V AC 50/60 Hz conforming to IEC 60947-2
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Rated short-circuit making capacity (Icm)	187 kA Icm at 220/415 V AC 50/60 Hz conforming to IEC 60947-2
	187 kA Icm at 460/500 V AC 50/60 Hz conforming to IEC 60947-2
	187 kA Icm at 550/690 V AC 50/60 Hz conforming to IEC 60947-2
Rated short-time withstand current (Icw)	85 kA 1s conforming to IEC 60947-2
	65 kA 3s conforming to IEC 60947-2
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Individual pole short-circuit (IIT)	48 kA at 690 V AC 50/60 Hz conforming to IEC 60947-2
Maximum breaking time	25 ms over Icw
	50 ms under Icw
Maximum closing response time	80 ms
Maximum Arcing time	40 ms
Max. temperature rise over 40 deg.C ambient	80 K
EMC & Climatic	YES conforming to IEC 60947-2
Material of Main contacts	Ag Alloy
Material of arcing contacts	Cu

Mechanical durability	15000 (60 times per hour)
Electrical durability	5000 (30 times per hour)
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	-
	-
Withdrawable durability	200.0
Power frequency withstand voltage (Vrms)	3.5 kVac/min - Main circuit
	1.5 kVac/5s - Control and Auxiliary
Rated impulse withstand voltage (1.2x50 microsecond)	12 kVac - Main circuit
	4 kVac - Control and Auxiliary
Average spring charging time	Less than 6s at Minimum voltage
	Less than 5s at Norminal voltage
	Less than 4s at Maximum voltage
Operation time for Shunt trip Coil	20 ms - Contacts part
	40 ms - Contacts fully open
Operation time for Closing Coil	55 ms - Contacts touchn
	75 ms - Contacts fully close

Environment

Polution degree	3 conforming to IEC 60947-1
Ambient air temperature for operation ¹⁾	-20 to 60 °C
Ambient air temperature for storage	-50 to 80 °C
Humidity	85% at 40 °C
	90% at 20 °C
Altitude	under 2000 m
IP degree	IP 30 (without Dust cover)
	IP 54 (with Dust cover)
Product Net Width	412 mm

Product Net Height	430 mm
Product Net Depth	375 mm
Product Net Weight	87 kg with cradle
Distance between phases to phase	Vertical type : 150 mm
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Distance between phases to earth	Vertical type : 22 mm
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Distance between main contacts	34 mm
Distance between arcing contacts	40 mm

1) For a special environment, please contact us.

Options

Spring charge motor	DC 24~30 V 5 A (Inrush current is 5 times of load current)
	AC/DC 48~60 V 3 A (Inrush current is 5 times of load current)
	AC/DC 100~130 V 1 A (Inrush current is 5 times of load current)
	AC/DC 200~250 V 0.5 A (Inrush current is 5 times of load current)
	AC 380 V 0.3 A (Inrush current is 5 times of load current)
	AC 440~480V 0.3 A (Inrush current is 5 times of load current)
Shunt trip coil	DC 24~30 V (Inrush 200 W Steady-state 5 W)
	AC 48 V (Inrush 200 W Steady-state 5 W)
	AC/DC 48~60 V (Inrush 200 W Steady-state 5 W)
	AC/DC 100~130 V (Inrush 200 W Steady-state 5 W)
	AC/DC 200~250 V (Inrush 200 W Steady-state 5 W)
	AC 380~480 V (Inrush 200 W Steady-state 5 W)
Closing coil	DC 24~30 V (Inrush 200 W Steady-state 5 W)
	AC 48 V (Inrush 200 W Steady-state 5 W)
	AC/DC 48~60 V (Inrush 200 W Steady-state 5 W)
	AC/DC 100~130 V (Inrush 200 W Steady-state 5 W)
	AC/DC 200~250 V (Inrush 200 W Steady-state 5 W)

	AC 380~480 V (Inrush 200 W Steady-state 5 W)
UVT coil	DC 24~30 V (Inrush 200 W Steady-state 5 W)
	AC 48 V (Inrush 200 W Steady-state 5 W)
	AC/DC 48~60 V (Inrush 200 W Steady-state 5 W)
	AC/DC 100~130 V (Inrush 200 W Steady-state 5 W)
	AC/DC 200~250 V (Inrush 200 W Steady-state 5 W)
	AC 380~480 V (Inrush 200 W Steady-state 5 W)
Auxillary switches ²⁾	3a3b Standard OFF charge
	3a3b Standard ON charge
	3a3b High capacity OFF charge
	3a3b High capacity ON charge
	5a5b Standard OFF charge
	5a5b Standard ON charge
	5a5b High capacity OFF charge
	5a5b High capacity ON charge
	6a6b Standard ON charge
	6a6b High capacity ON charge
Arcing contacts and arc chutes are provided	YES
Emergency Manual charging facility provided	YES
Mechanical position indicator provided?	YES
Charge/Discharge indicator provided?	YES
Operation counter provided?	YES
Automatic safety shutter provided?	YES
Trip circuit supervision relay furnished	YES

