

# Formula AIR

## Automatic circuit breakers

### Common data

Rated service voltage $U_e$	[V]	690
Rated insulation voltage $U_i$	[V]	1000
Rated impulse withstand voltage $U_{imp}$	[kV]	12
Frequency	[Hz]	50-60
Number of poles		3-4
Version		Fixed - Withdrawable
Operating temperature		-25°C...+70°C



Formula AIR		FA2	FA4
Performance levels		C	C
Max rated uninterrupted current at 40°C - $I_u$	[A]	800	2500
	[A]	1000	3200
	[A]	1250	4000
	[A]	1600	
	[A]	2000	
Neutral pole current-carrying capacity for 4 poles breakers	[% $I_u$ ]	100	100
Rated ultimate breaking capacity under short circuit - $I_{cu}$	@400-415V [kA]	50	50
	@440V [kA]	50	50
	@500-525V [kA]	42	42
	@690V [kA]	42	42
Rated service breaking capacity under short-circuit - $I_{cs}$	[% $I_{cu}$ ]	100	100
Rated short time withstand current - $I_{cw}$	(1s) @440V [kA]	50	50
	(1s) @690V [kA]	42	42
	(3s) [kA]	25	25
Rated making capacity under short-circuit (peak value) - $I_{cm}$	440 V [kA]	105	105
	690 V [kA]	88	88
Utilization category (according to IEC 60947-2)		B	B
Operating times	[ms]	40	40
Dimensions	H - Fixed/Withdrawable [mm]	371/425	371/425
	D - Fixed/Withdrawable [mm]	270/383	270/383
	W - Fixed 3p/4p [mm]	276/317	384/510
	W - Withdrawable 3p/4p [mm]	317/407	425/551
Weights (CB with trip unit and current sensor)	Fixed 3p/4p kg	41/53	56/70
	Withdrawable 3p/4p kg (fixed part included)	54/99	110/136

Formula AIR		FA2	FA4
Mechanical life with regular ordinary maintenance	[ $I_u$ ]	≤2000	≤3200
	[No. cycles x 1000]	20	15
	Frequency [Oper./Hour]	60	60
Electrical life with regular ordinary maintenance	440 V [No. cycles x 1000]	6	5
	690 V [No. cycles x 1000]	4	2.5
	Frequency [Cycles/Hour]	30	20

# Formula AIR

## Pricelist



Formula AIR		FA2					FA4		
Performance level		C	C	C	C	C	C	C	C
Max rated uninterrupted current - $I_u$	[A]	800	1000	1250	1600	2000	2500	3200	4000
Rated ultimate breaking capacity under short circuit - $I_{cu}$	@400-415V [kA]	50	50	50	50	50	50	50	50
Rated service breaking capacity under short-circuit - $I_{cs}$	[% $I_{cu}$ ]	100	100	100	100	100	100	100	100
Rated short time withstand current - $I_{cw}$	(1s) @440V [kA]	50	50	50	50	50	50	50	50
	(3s) [kA]	25	25	25	25	25	25	25	25
Utilization category (according to IEC 60947-2)		B	B	B	B	B	B	B	B
Dimensions	H - Fixed/Withdrawable [mm]						371/425	371/425	
	D - Fixed/Withdrawable [mm]						270/383	270/383	
	W - Fixed 3p/4p [mm]						276/317	384/510	
	W - Withdrawable 3p/4p [mm]						317/407	425/551	

### ราคาต่อหน่วย (3 Poles Fixed version)

EK1 LI	91,960	94,590	98,260	111,080	127,100	165,500	204,000	305,400
EK1 LSIG	119,800	125,700	138,600	151,400	167,400	205,300	244,600	345,700

### ราคาต่อหน่วย (3 Poles Draw-Out version)

EK1 LI	117,400	118,300	123,000	138,900	158,800	206,800	254,800	381,800
EK1 LSIG	149,800	157,200	173,200	189,300	209,100	256,600	305,800	432,000

### Accessories

Geared motor charging spring with shunt closing release set FA2 FA4	38,940	38,940	38,940	38,940	38,940	38,940	38,940	38,940
Electronic time delay device with Undervoltage release set	17,620	17,620	17,620	17,620	17,620	17,620	17,620	17,620
Shunt Opening release YO 220-240 VAC/DC	6,990	6,990	6,990	6,990	6,990	6,990	6,990	6,990
Shunt Closing release - YC 220-240 VAC/DC	11,220	11,220	11,220	11,220	11,220	11,220	11,220	11,220
Geared motor charging spring M 220-250 VAC/DC	38,940	38,940	38,940	38,940	38,940	38,940	38,940	38,940
Undervoltage release - YU 220-240 VAC/DC	8,020	8,020	8,020	8,020	8,020	8,020	8,020	8,020
Electronic time-delay device for undervoltage release - UVD 220..250V AC/DC	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Auxiliary contacts - AUX 6Q 400VAC	15,500	15,500	15,500	15,500	15,500	15,500	15,500	15,500
Rack in-out Aux 5 contacts 400 Vac FA2-FA4 (Left set)	6,990	6,990	6,990	6,990	6,990	6,990	6,990	6,990
Key lock in open position	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160
Mechanical interlocks FA2-FA2 Type A	51,530	51,530	51,530	51,530	51,530	51,530	51,530	51,530
Mechanical interlocks FA4-FA4 Type A	51,530	51,530	51,530	51,530	51,530	51,530	51,530	51,530
Mechanical interlocks FA2-FA2 Type C	83,600	83,600	83,600	83,600	83,600	83,600	83,600	83,600
Mechanical interlocks FA4-FA4 Type C	83,600	83,600	83,600	83,600	83,600	83,600	83,600	83,600

### อุปกรณ์เสริมมาตรฐานที่มาพร้อมกับเซอร์กิตเบรกเกอร์ทุกรุ่น

- 4 Auxiliary contacts (Change-Over)
- Mechanical Tripping Indicator
- Electrical Tripping Indicator
- Door flange
- External neutral current transformer (สำหรับรุ่น LSIG)