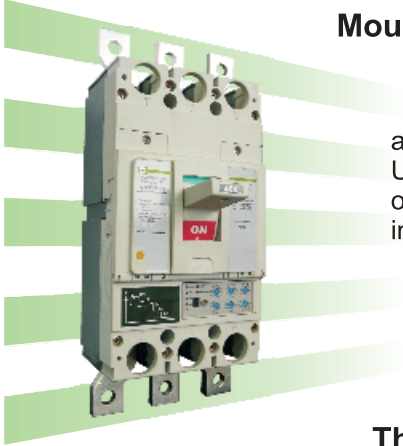




# Moulded Case Circuit Breakers

## Moulded Case Circuit Breakers AB3000C (with electronic motor-drive)

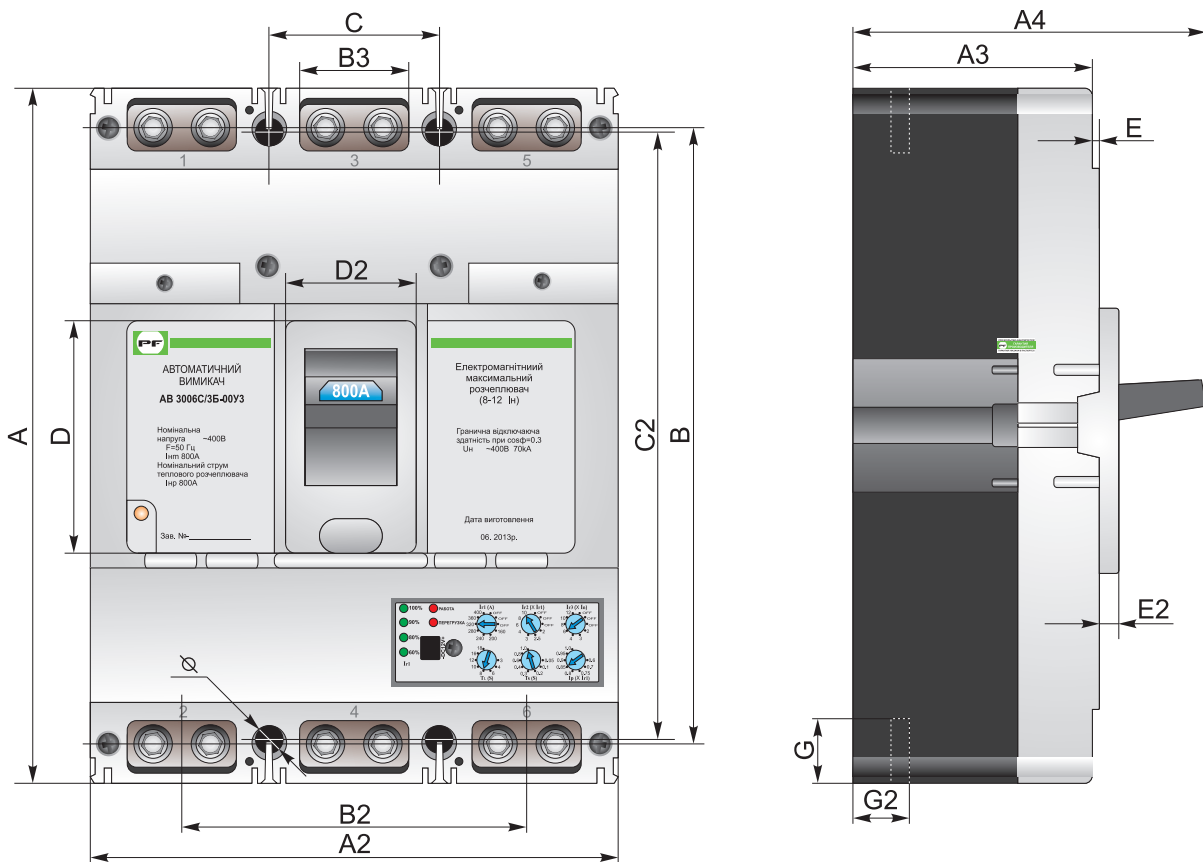
Moulded Case Circuit Breakers AB3000C/3H with electronic motor-drive are designed to protect an electrical circuits from overload and overcurrent. Usage of electronic motor-drive protection with current transformers, instead of the traditional electromagnetic and thermal protection, allows the users independently in the wide ranges configure the current and operating time.



### The main technical data of AB3000C

Type of circuit breaker	3004	3005	3006
Rated current, A	400	630	800
Rated current of release, A	160-400	252-630	320-800
Rated operational voltage $U_n$ , B	380	380	380
Rated insulation voltage $U_i$ , B	800	800	800
Number of poles	3	3	3
Rated limiting breaking capacity at 400V, kA	70	70	70
Rated operating breaking capacity at 400V, kA	70	70	70
Weight (N/W), kg	5.6	9.3	10.7

### Overall dimensions of Moulded Case Circuit Breakers AB3004C...3006C



Circuit breaker type	A	A2	A3	A4	B	B2	B3	C	C2	D	D2	E	E2	G	G2	∅
AB3004C	260	140	103	155	225	87	30	45	194	90	50	6	9	28	37	6
AB3005/6C	275	210	104	155	245	140	48	70	242	90	50	6	9	28	25	8

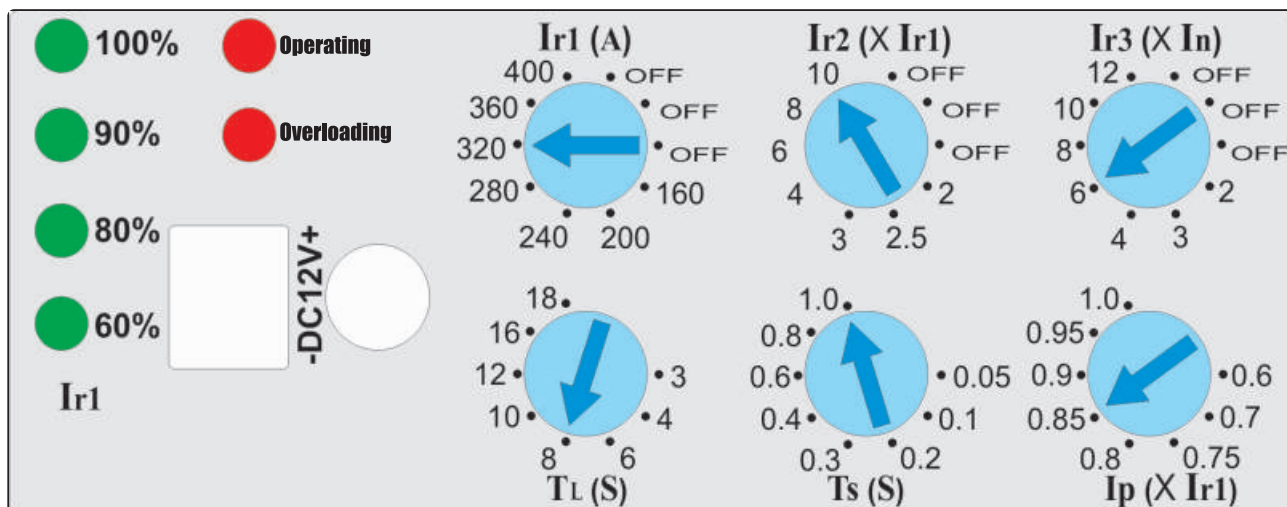


# Moulded Case Circuit Breakers

## Settings panel

Load indicator

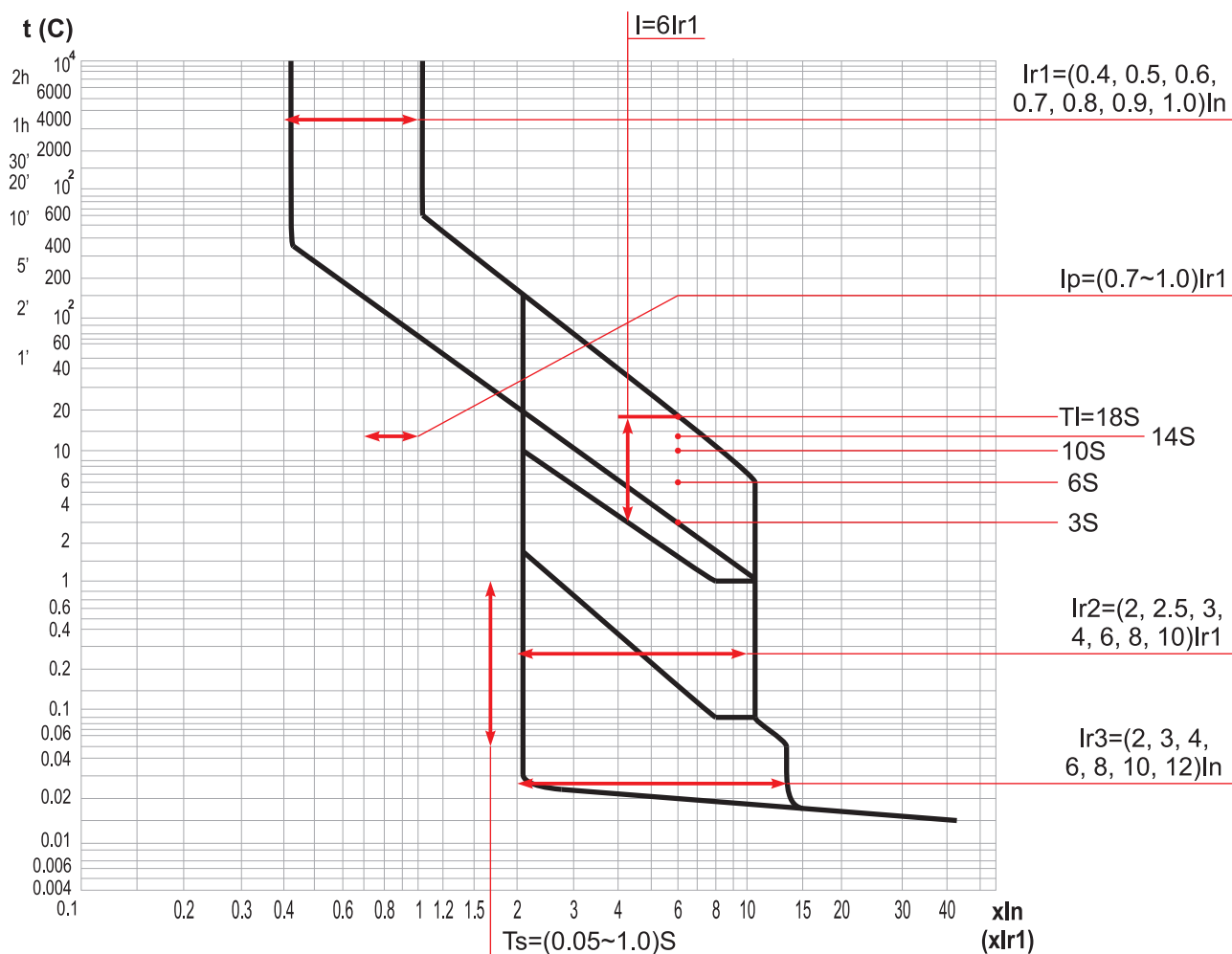
Settings regulators



### Regulators functions:

- Ir1 - setting of the breaker rated thermal current;
- Ir2 - current settings for shunt release of short-time delays;
- Ir3 - current settings for instantaneous release;
- Ti - time settings of overheating protection response rate;
- Ts - time settings of short-time delays;
- Ip - current settings of overload indicator activation.

### Time-current characteristic of Moulded Case Circuit Breakers AB3000C





# Moulded Case Circuit Breakers

## Table of parameter settings

Current settings and tripping time of overheating protection		
Current settings by regulator	$I_{rl}=I_n \times \dots$	0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1 (current value can be specified in amperes) + OFF (protection tripping)
Protective action	$\leq 1.05 I_{rl}$	$\geq 2h$ without action
	$> 1.2 I_{rl}$	$< 1h$ without tripping
Inverse time, delay of time s $T=(6I_{rl})^2 \times TL / I^2$	TL=	3, 4, 6, 8, 10, 12, 16, 18
	$\leq 2 I_{rl}$	tripping time in sec = $TL \times 9$
	$\leq 6 I_{rl}$	tripping time in sec = TL
	measurement accuracy	$\pm 10\%$
Overcurrent protection with time-delay		
Current settings by regulator	$I_{r2}=I_{r1} \times \dots$	2, 2.5, 3, 4, 6, 8, 10 + OFF (protection tripping)
Productivity characteristics	$\leq 0.9 I_{r2}$	without action
	$> 1.1 I_{r2}$	tripping
Time of delay (s)	Ts=	0.05, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, 1
	accuracy	+10% up to $8I_n$ , 20% over $8I_n$ (the delays up to 0.4sec are not guaranteed at "cold" start, minimal delay depends on the short-circuit current value), at currents more than $8I$ - tripping time $T=(8I_{r1})^2 \times T_s / I^2$
Overcurrent protection without time-delay		
Current settings by regulator	$I_{r3}=I_n \times \dots$	2, 3, 4, 6, 8, 10, 12 + OFF (protection tripping)
Productivity characteristics	$\leq 0.85 I_{r3}$	without action
	$> 1.15 I_{r3}$	tripping
Overload signal		
Current settings by regulator	$I_p=I_{r1} \times \dots$	0.6, 0.7, 0.75, 0.8, 0.85, 0.9, 0.95, 1.0
Productivity characteristics	$\leq 0.9 I_p$	without signal
	$> 1.0 I_p$	tripping
Additionally	Light load indicator 60, 70, 75, 80, 85, 90, 95, 100%, signal of electric block operation, current rate indicator, that are adjusted.	
Productivity characteristics	$\leq 0.9 I_p$	without signal
	$> 1.0 I_p$	tripping

## Range of Moulded Case Circuit Breakers AB3000C

Type	Adjustable range of thermal protection, A	Ordering code
AB3004C/3Б-00Y3	160-400	040030043C
AB3005C/3Б-00Y3	252-630	063030043C
AB3006C/3Б-00Y3	320-800	080030043C