

# Large Contactors

## AF1250 added to the AF contactor range



Large contactors are used in many different applications and utilization categories. The AF1250 contactor has been specially designed for the requirements in different AC-1 applications, such as wind power control, drive isolation, by-pass, UPS and Generator Sets.

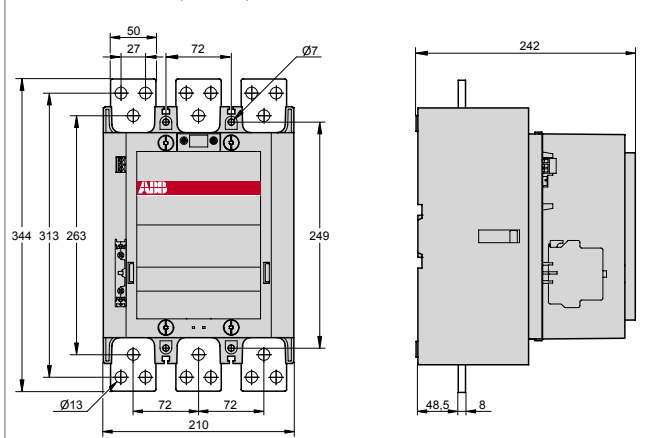
- The most compact 1260 A contactor for resistive loads on the market.
- Dimensions the same as AF750.
- Electronically controlled wide range coil, e.g. 100-250V ac/dc.
- Same range of accessories as the present large AF contactors.

The AF1250 has the same standard features and benefits as the AF400...AF1650 contactor range, such as wide range coil insensitive to voltage variations, PLC control, possibility for low power auxiliary contacts, and a compact and modern design.

### Ordering Details

IEC	$cUL_{us}$	Auxiliary contacts fitted	Type	Order code	Weight kg
Rated current AC-1 A	General use 600 V A		state coil voltage	state coil voltage code <input type="checkbox"/> <input type="checkbox"/>	Packing 1 piece
1260	1210	1 1 2 2	<b>AF1250-30-11</b> <b>AF1250-30-22</b>	1SFL647 001R <input type="checkbox"/> <input type="checkbox"/> 11 1SFL647 001R <input type="checkbox"/> <input type="checkbox"/> 22	16.00 16.00
Description accessories		Type	Order code	Weight kg	
Main contact set		<b>ZL1250</b>	1SFN166 403R 1000	2.10	
Terminal enlargement, 3pcs		<b>LW1250</b>	1SFN076 407R 1000	1.75	
<b>Note:</b> For terminal shrouds, coils and mechanical interlocks use AF750 accessories					

### Dimensions (in mm)



### Coil voltages and codes

Voltage V - 50/60Hz	Voltage V d.c.	Code <input type="checkbox"/> <input type="checkbox"/>
-	24...60	6 8
48...130	48...130	6 9
100...250	100...250	7 0
250...500	250...500	7 1



# AF1250 3-pole Contactors

## Technical Data

### General Technical Data

<b>Rated insulation voltage <math>U_i</math></b> according to IEC 60947-4-1	<b>V</b>	1000
according to UL/CSA	<b>V</b>	600

<b>Rated impulse withstand voltage</b> $U_{imp}$	<b>kV</b>	8
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#### Standards

Devices complying with		
- International standards	IEC 60947-1 / 60947-4-1	
- European standards	EN 60947-1 / 60947-4-1	
- UL	508	

#### Certifications - Approvals



#### Air temperature close to contactor

- fitted with thermal O/L relay	<b>°C</b>	-25 to +70
- without thermal O/L relay	<b>°C</b>	-40 to +70
- for storage	<b>°C</b>	-40 to +70

<b>Operating altitude</b>	<b>m</b>	≤3000
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### Magnet System Characteristics

#### Rated control circuit voltage

<b>(<math>U_{cmin}...U_{cmax}</math>)</b>		
- at 50 Hz	<b>V</b>	48...500
- at 60 Hz	<b>V</b>	48...500
- d.c.	<b>V</b>	24...500

<b>Coil operating limits</b>	$\theta \leq 70\text{ °C}$
according to IEC 60947-4-1	$0.85 \times U_{cmin}...1.1 \times U_{cmax}$

<b>Drop-out voltage</b> in % of $U_{cmin}$ level	55 %
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#### Coil consumption

Average pull-in value	50 Hz	<b>VA</b>	850
	60 Hz	<b>VA</b>	850
	d.c.z.	<b>W</b>	950
Average holding value	50 Hz	<b>VA/W</b>	12/4
	60 Hz	<b>VA/W</b>	12/4
	d.c.	<b>W</b>	4

#### Operating time

A1-A2		
between coil energization and:		
N.O. contact closing	<b>ms</b>	50...120
N.C. contact opening	<b>ms</b>	50...120
between coil de-energization and:		
N.O. contact opening	<b>ms</b>	33...70
N.C. contact closing	<b>ms</b>	33...70
with PLC		
between coil energization and:		
N.O. contact closing	<b>ms</b>	40...90
N.C. contact opening	<b>ms</b>	40...90
between coil de-energization and:		
N.O. contact opening	<b>ms</b>	10 ... 30
N.C. contact closing	<b>ms</b>	10 ... 30

### Main Pole - Utilization Characteristics

<b>Rated operational voltage <math>U_e</math> max.</b>	<b>V</b>	1000
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<b>Rated frequency limits</b>	<b>Hz</b>	25 ... 400
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<b>Conventional free-air thermal current <math>I_{th}</math></b> acc. to IEC 60947-4-1, open contactors $\theta \leq 40\text{ °C}$	<b>A</b>	1260
with bar cross-sectional area	<b>mm<sup>2</sup></b>	1000 <sup>1)</sup>

<b>Rated operational current <math>I_e</math> /AC-1</b> for air temperature close to contactor		
$\theta \leq 40\text{ °C}$	<b>A</b>	<b>1260</b>
$\theta \leq 55\text{ °C}$	<b>A</b>	1040
$\theta \leq 70\text{ °C}$	<b>A</b>	875
with bar cross-sectional area	<b>mm<sup>2</sup></b>	1000 <sup>1)</sup>

<b>General use rating, UL</b>		
<b>Amp-rating</b> 600 V	<b>A</b>	1210
with busbar dim.	<b>Inch</b>	2//3x¼ <sup>2)</sup>

<b>Max. making capacity</b>	<b>A</b>	7500
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<b>Max. breaking capacity</b> at 440V	<b>A</b>	6000
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<b>Short-circuit protection</b>	Product coordination with ABB circuit breaker. Please consult your nearest sales office for more information.
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<b>Rated short-time withstand current <math>I_{cw}</math></b> at 40 °C ambient temp., in free air, from a cold state		
1 s	<b>A</b>	8000
10 s	<b>A</b>	7200
30 s	<b>A</b>	5200
1 min	<b>A</b>	4000
15 min	<b>A</b>	1500

<b>Special breaking capacity</b> at 1000 V $\cos \varphi = 0.2$	<b>A</b>	2770
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<b>Heat dissipation per pole <math>I_e</math> /AC-1</b>	<b>W</b>	80
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<b>Max. electrical switching frequency</b> - for AC-1	<b>cycles/h</b>	300
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<b>Electrical durability</b> - for AC-1, 1260 A		
max. 440 V		200 000 operations
max. 690 V		100 000 operations
max. 1000 V		30 000 operations

<b>Mechanical durability</b> - number of operating cycles - max. mechanical switching frequency		
		500 000
	<b>cycles/h</b>	300

1) Max. connection bar width 50 mm

2) Use LW1250 terminal extension

