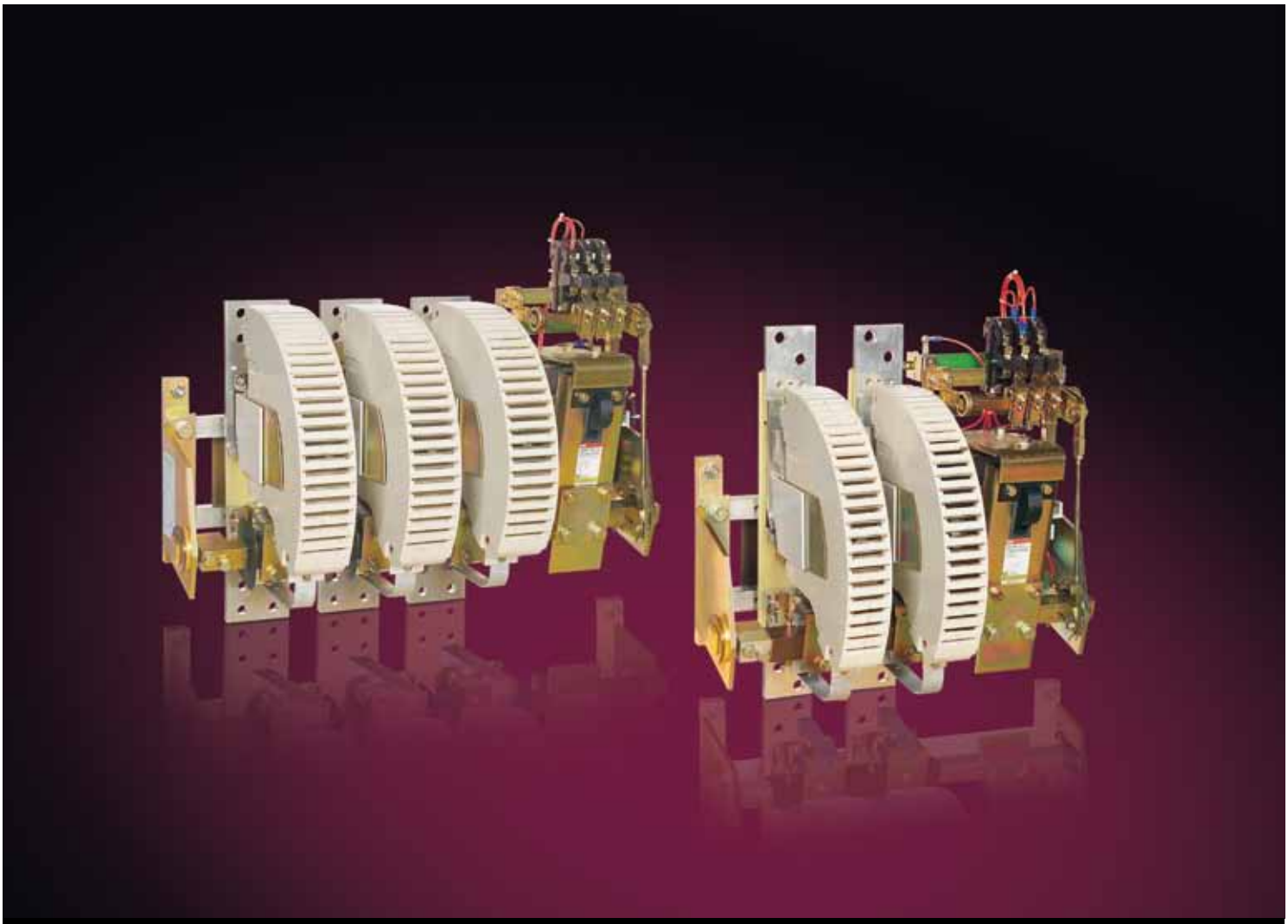


R series contactors
Control of DC power circuits up to 5000 A

Power and productivity
for a better world™

Control your DC circuits up to 5000 A

For every DC switching application...

ABB undertakes to continually adapt its offer as its customers' requirements change. Our know-how together with our extended range of contactors enables us to offer a product perfectly suited to your application whatever the environment.

...its bar mounted contactor!

ABB has designed its R series contactors to specifically meet the particular requirements of each DC control application up to 5000 A, where the demands are increasing especially in DC-1 utilization.

This includes:
- power distribution,
- photovoltaic power stations,
- fixed railway equipment,
- batteries,
- lighting equipment.

Stimulate your growth areas

The R series contactors remain the most convenient technology to meet your specific application requirements with operational voltages up to 1500 V DC (IEC) and from 63 A upwards.
With custom-made design, they support the development of your business in heavy duty applications, giving you a significant advantage in order to reach or retain your position as a leading player.

Pushing back limits

R series contactors show their full potential in high power control. Their main characteristic is that they bring solutions far beyond the limit of standard contactors in operational voltages, reaching up to 1500 V DC (IEC) and 600 V DC (UL). They are therefore in line with the latest trends observed in renewable energies such as large scale photovoltaic systems or hydro-electric dams.

Specific contactors for new opportunities

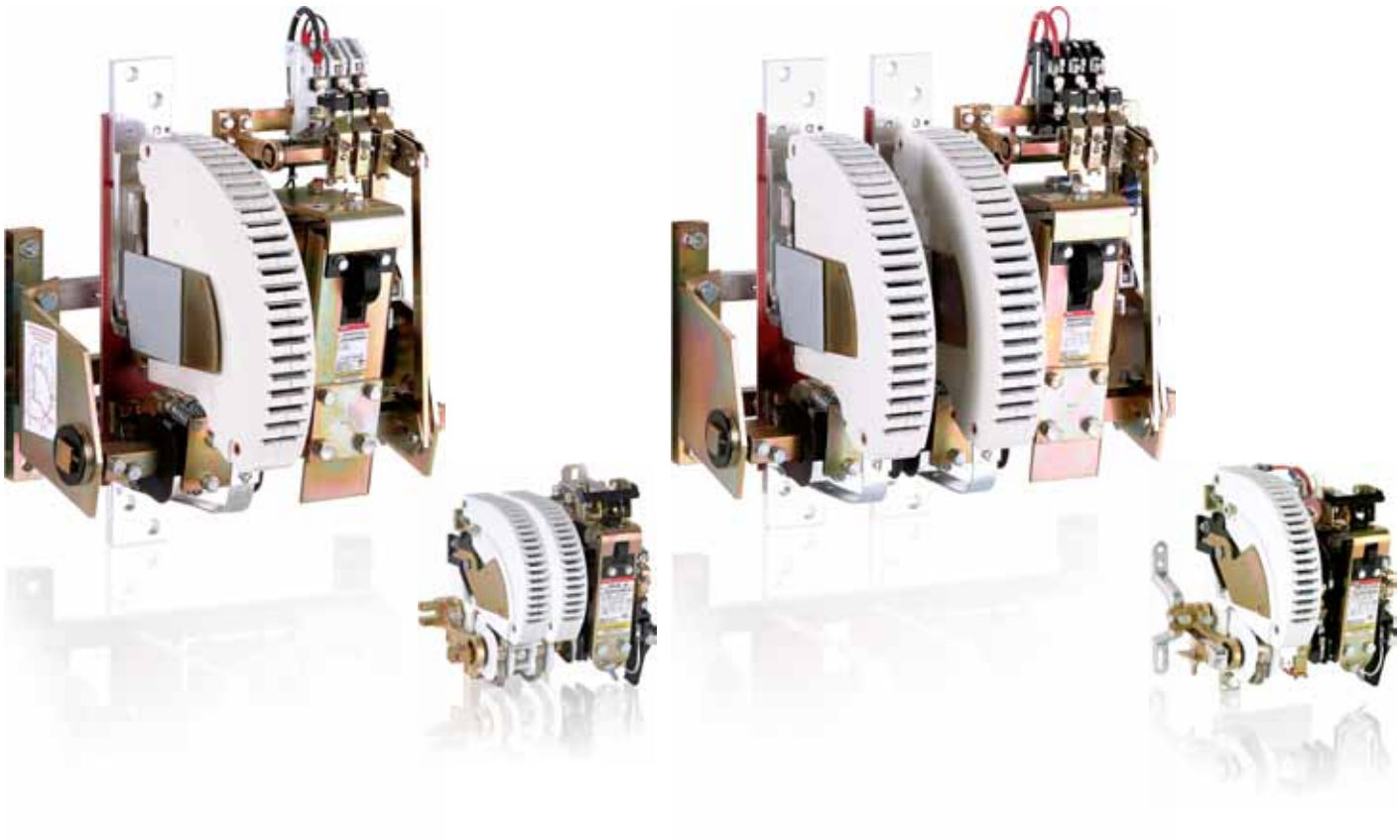
Flexibility of design
- Selection of number of poles
- Adjustable number of auxiliary contacts
- Optional combination of N.O. and N.C. poles

Custom-made solutions
- More than 60 years' experience in dealing with customers' projects
- Development of solutions from specifications
- Specialists available to help you, select your product or optimize your configuration
- Pre-sales support for selecting products and optimizing configurations

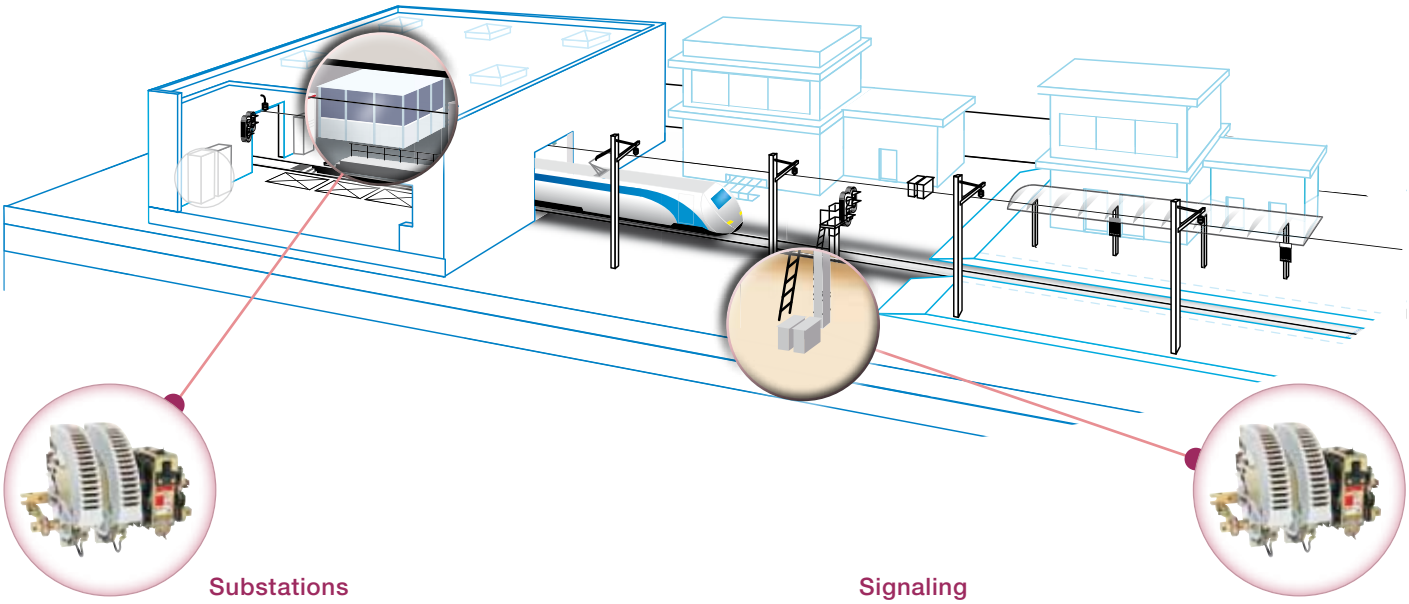
Ideal for heavy duty applications
- High making and breaking capacity
- Fully compatible with the requirements of utilization categories DC-3 and DC-5 (control of DC motors for the mining as well as iron and steel industries)
- Mechanical or magnetic latching as an option for protecting your installation

Exceptional durability
- Mechanical durability up to 10 million operations
- Mechanical rate up to 1200 cycles per hour
- Electrical endurance up to 350 000 cycles in DC switching

Easy maintenance
- Direct access to all the components of the contactor
- Complete and didactic instruction manual
- Spare parts available



Control your DC power circuits in railway applications



Substations
Bar mounted contactors...
(Motor starters...)

Signaling
Bar mounted contactors...
(Power applications...)

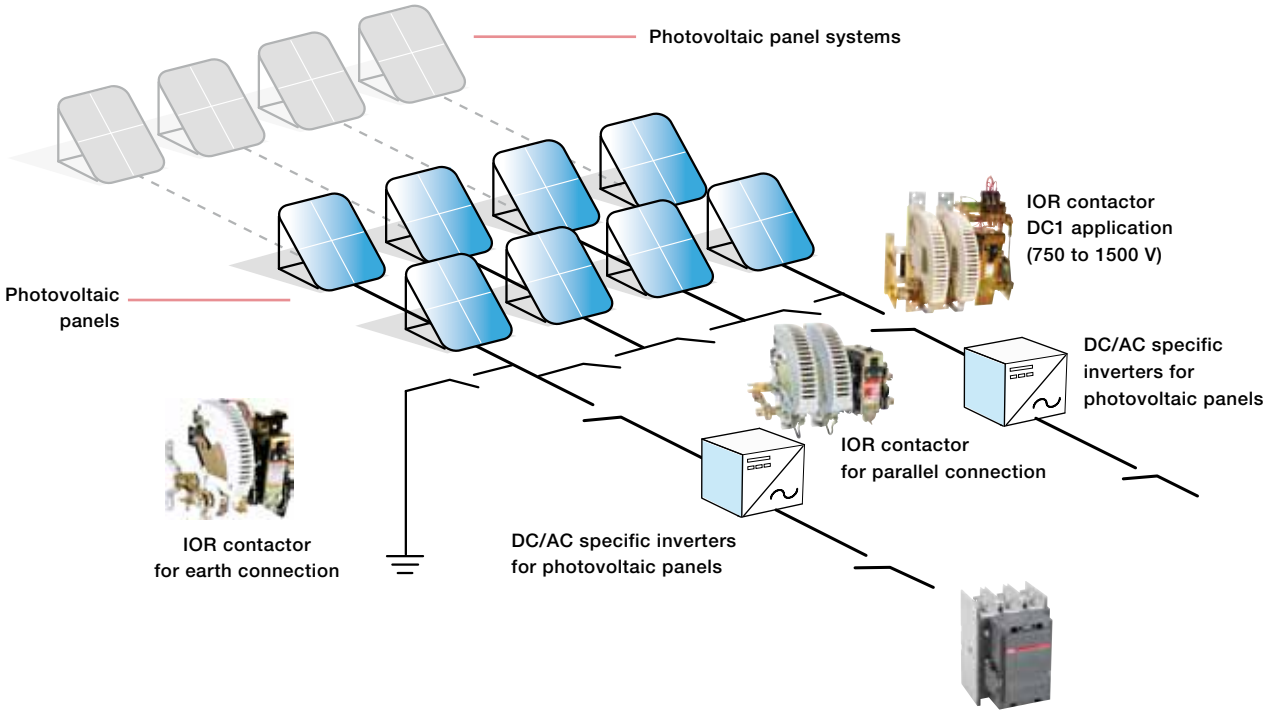
On track with railway systems

Designed for durability under severe working conditions, the R series contactors no longer have to demonstrate their ability to meet the high requirements of the railway industry. As illustrated by the long-standing confidence shown by the main players in the sector, they are the standard choice for network and fixed railway equipment throughout the world.

Examples of use:
- heating circuit control of trains in station,
- supply contactors for traction lines,
- rail grounding contactors in repair workshops.

Generally speaking, R series contactors are able to control any DC power circuit by virtue of the many options offered by pole coupling in particular.

Contactors used for photovoltaic solar energy



Solar power at its zenith

Proved by nearly 60 years' experience in traditional DC control applications, the R series contactors remain the right products for supporting the development of the emergent renewable energy industries, particularly in photovoltaic applications.

Examples of use:
- grounding contactor,
- control of power circuits between the photovoltaic panels and the DC/AC inverters,
- contactor for connecting the photovoltaic panels in parallel.

Using R series contactors guarantees optimal operation, provides a guarantee of safety as well as the possibility of switching high powers (up to 1500 V – 5000 A).

R series contactors for the DC circuits switching

Voltage U_e up to **440 V DC**

Current I_e up to **550 A**

Contactor type	AC control circuit ~		IOR 85	IOR 170	IOR 260	IOR 420	IOR 550
	DC control circuit ⎓		IORE 85	IORE 170	IORE 260	IORE 420	IORE 550
Number of poles in series*	**Categories**	**U_e max.**					
1 pole	**DC-1**	220 V DC	I_e 85 A	170 A	275 A	400 A	550 A
	DC-3 / DC-5	220 V DC	I_e 68 A	140 A	205 A	350 A	500 A
2 poles	**DC-1**	440 V DC	I_e 85 A	170 A	275 A	400 A	550 A
	DC-3 / DC-5	440 V DC	I_e 68 A	140 A	205 A	350 A	500 A

*Number of poles to be fitted in series according to the operational voltage and the utilization categories.

Voltage U_e up to **1500 V DC**

Current I_e up to **5000 A**

Contactor type	AC control circuit ~		IOR 63..-CC	IOR 125..-CC	IOR 200..-CC	IOR 500..-CC
	DC control circuit ⎓		IORE 63..-CC	IORE 125..-CC	IORE 200..-CC	IORE 500..-CC
Number of poles in series*	**Categories**	**U_e max.**				
1 pole	**DC-1**	500 V DC	I_e 85 A	170 A	275 A	550 A
	DC-3 / DC-5	500 V DC	I_e 68 A	140 A	205 A	500 A
2 poles	**DC-1**	1000 V DC	I_e 85 A	170 A	275 A	550 A
	DC-3 / DC-5	1000 V DC	I_e 68 A	140 A	205 A	500 A
3 poles	**DC-1**	1500 V DC	I_e 85 A**	170 A**	275 A**	550 A**
	DC-3 / DC-5	1500 V DC	I_e 68 A**	140 A**	205 A**	500 A**

*Number of poles to be fitted in series according to the operational voltage and the utilization categories.

**Version with increased insulation for 1000V DC < Ue ≤ 1500V DC, please consult us.

Recap:
All contactors fulfill the IEC 60947-4-1 / EN 60947-4-1 standards.

Utilization category DC-1: max. breaking current = 1.5 x I_e, max. making current = 1.5 x I_e.

Utilization categories DC-3 / DC-5: max. breaking current = 4 x I_e, max. making current = 4 x I_e.

Contactors with NC poles, magnetic or mechanical latching devices on request.

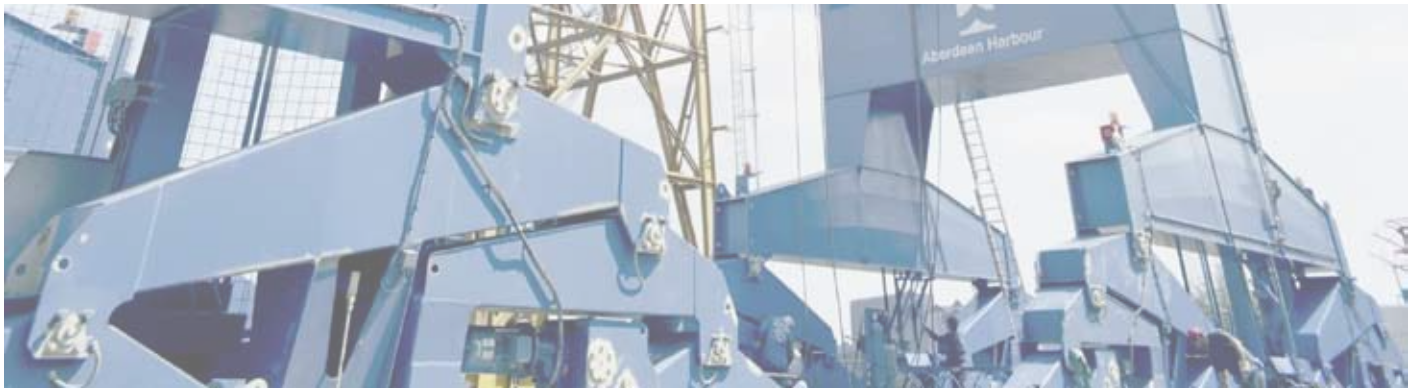
Contactors
UL/CSA approved

Voltage U_e up to **600 V DC**

Current I_e up to **2000 A**

Contactor type	AC control circuit ~	IORR 800-10-CC	IORR 1000-10-CC	IORR 1400-10-CC	IORR 1700-10-CC	IORR 2100-10-CC
	DC control circuit ⎓	IORE 800-10-CC	IORE 1000-10-CC	IORE 1400-10-CC	IORE 1700-10-CC	IORE 2100-10-CC
	U max.					
1 pole	General use 600 V DC	I_e 800 A	1000 A	1300 A	1700 A	2000 A

	IOR 800..-CC	IORR 1000..-CC	IORR 1400..-CC	IORR 1700..-CC	IORR 2100..-CC	IORR 2500..-CC	IORR 3200..-CC	IORR 3800..-CC	IORR 4500..-CC	IORR 5100..-CC
	IORE 800..-CC	IORE 1000..-CC	IORE 1400..-CC	IORE 1700..-CC	IORE 2100..-CC	IORE 2500..-CC	IORE 3200..-CC	IORE 3800..-CC	IORE 4500..-CC	IORE 5100..-CC
U_e max.										
750 V DC	800 A	1000 A	1250 A	1600 A	2000 A	2300 A	3200 A	3800 A	4500 A	5000 A
600 V DC	720 A	1000 A	1250 A	1600 A	2000 A	On request	On request	On request	On request	On request
1500 V DC	800 A	1000 A	1250 A	1600 A	2000 A	2300 A	3200 A	3800 A	4500 A	5000 A
1000 V DC	720 A	1000 A	1250 A	1600 A	2000 A	On request	On request	On request	On request	On request
1500 V DC	800 A	1000 A	1250 A	1600 A	2000 A	2300 A	3200 A	3800 A	4500 A	5000 A
1500 V DC	720 A	1000 A	1250 A	1600 A	2000 A	On request	On request	On request	On request	On request



Contact us

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http://www.abb.com/contacts -> Low Voltage products

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1SBC104116B0201 - Printed in France (V 09.2010 Ferréol)

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