

# DURAKOOL®

## Relays and Contactors



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## Durakool

Durakool, a Solid State Group Brand, has a long history, some 90 years, in the manufacturing of specialised, highly engineered, electrical and electronic components, primarily for automotive and industrial applications.

This catalogue gives overview information of our current relays and contactors, including HVDC contactors for Electric Vehicle and “green energy” applications.

Durakool’s unique range of miniature automotive relays and HVDC contactors are specially designed for applications up to 1000VDC, together with high current switching of DC loads. Specialist contactors can switch more than 3000A up to 72VDC, or 600A up to 1000VDC, and our miniature automotive Micro, Mini and Maxi ISO style HVDC relays fit industry standard relay sockets and terminals.

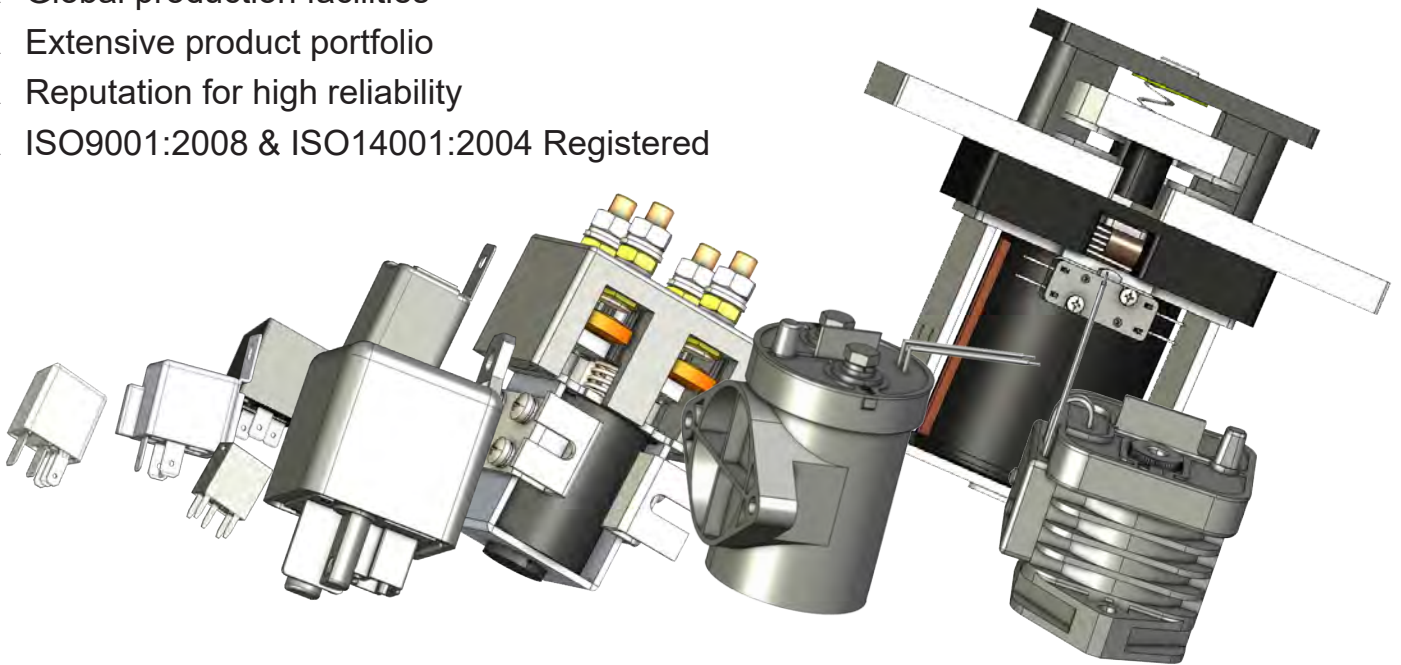
Through our disciplined approach, we have earned an excellent reputation for our technical innovation, agility, rapid response and high reliability. Our Team has a “CAN DO” attitude and is ready to tackle your most challenging applications.

Our creative engineering team has extensive experience in harsh environmental packaging concepts. We use high quality products and make our own glass to metal hermetic seals.

Please contact our Engineering Team at Willow Technologies Limited, AEC, or your local distributor for further information and non standard items from within our extensive product range.

## Controlling electricity for more than 80 years!


- ▲ Global production facilities
- ▲ Extensive product portfolio
- ▲ Reputation for high reliability
- ▲ ISO9001:2008 & ISO14001:2004 Registered















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## Automotive Plug-in Relays

	DC20	DE20	DG55	DG55M	DG56A	DG56C	DG57BM	DG57CM
								
Contact Configuration	SPST-NO-DM	SPST-NO-DM	SPST-NO, SPDT	SPST-NO	SPST-NO, SPDT, SPST-NC, SPST-DM	SPST-NO	SPST-NO, SPDT	SPST-NO
Rated Current	20A (25A PCB)	20A (25A PCB)	60A	40A	40A	70A	60A	80A
Max. Switching Voltage (current dependent)	450VDC	450VDC	24VDC	110VDC	75VDC	75VDC	110VDC	145VDC
Coil Voltages (DC)	12V, 24V, 48V, 60V, 80V	12V, 24V	12V, 24V	12V, 24V, 48V	6V, 12V, 24V	6V, 12V, 24V	6V, 12V, 24V, 36V, 48V, 50V, 60V	6V, 12V, 24V, 36V, 48V, 50V, 60V
Contact Material	AgCu10	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>
Operating Temperature Range (consult factory for >85°C)	-40 to +85°C	-40 to +85°C	-40 to +125°C	-40 to +85°C	-40 to +125°C	-40 to +105°C	-40 to +125°C	-40 to +125°C
Terminal outline	mini-ISO 	Custom 	mini-ISO 	mini-ISO 	mini-ISO 	macro-ISO 	mini-ISO 	macro-ISO 
Mounting	Plug-in, Chassis or PCB	Chassis or PCB	Plug-in	Plug-in	Plug-in or PCB	Plug-in or PCB	Plug-in or PCB	Plug-in or PCB
Magnet arc quench	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Approvals								

Automotive Plug-in Relays

DG82	DG85A	DG85B	DG85BM	DG85C	DG85CM	DG85D	DG85F	
								
SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO	SPST-NO	SPST-NO, SPDT	Contact Configuration
40A	40A	60A	25A	80A	60A	100A	60A	Rated Current
16VDC	30VDC	30VDC	110VDC	30VDC	145VDC	30VDC	30VDC	Max. Switching Voltage (current dependent)
6V, 12V, 24V	6V, 12V, 24V	6V, 12V, 24V	6V, 9V, 12V, 24V, 36V, 48V, 110V	6V, 12V, 24V	6V, 9V, 12V, 24V, 36V, 48V, 110V	6V, 12V, 24V	6V, 12V, 24V	Coil Voltages (DC)
AgNi0.15, AgNi90/10, AgSnOInO	AgNi0.15, AgNi90/10, AgSnOInO	AgNi0.15, AgNi90/10, AgSnOInO	AgSnO <sup>2</sup>	AgNi0.15, AgNi90/10, AgSnOInO	AgSnO <sup>2</sup>	AgSnOInO	AgNi0.15, AgNi90/10, AgSnOInO	Contact Material
-40 to +125°C	-40 to +125°C	-40 to +125°C	-40 to +85°C	-40 to +125°C	-40 to +85°C	-40 to +125°C	-40 to +125°C	Operating Temperature Range (consult factory for >85°C)
								Terminal outline
Plug-in or PCB	Plug-in or PCB	Plug-in or PCB	Plug-in or PCB	Plug-in or PCB	Plug-in or PCB	Plug-in or PCB	Plug-in or PCB	Mounting
			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			Magnet arc quench
			Replaced by DG57BM		Replaced by DG57CM			Approvals

## Automotive Plug-in Relays

	DG85G	DG86N	DG90	DG91/ DG91N	DG92	DG82 JMPR	DG85A JMPR	DG85D JMPR
								
Contact Configuration	SPST-NO, SPDT	SPST-NO	SPST-NO	SPST-NO, SPDT	SPST-NO, SPDT	Link	Link	Link
Rated Current	80A	200A	20A	35A	40A	40A	40A	100A
Max. Switching Voltage (current dependent)	30VDC	40VDC	16VDC	75VDC	75VDC	n/a	n/a	n/a
Coil Voltages (DC)	6V, 12V, 24V	12V, 24V	12V	6V, 12V, 24V	6V, 12V, 24V	n/a	n/a	n/a
Contact Material	AgSnOInO	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	n/a	n/a	n/a
Operating Temperature Range (consult factory for >85°C)	-40 to +125°C	-40 to +85°C	-40 to +120°C	-40 to +125°C	-40 to +85°C	-40 to +125°C	-40 to +125°C	-40 to +125°C
Terminal outline	macro-ISO 	Custom 	micro-ISO 	micro-ISO280 	mini-ISO280 	micro-ISO 	mini-ISO 	macro-ISO 
Mounting	Plug-in or PCB	Plug-in with screw power terminals	Plug-in	Plug-in	Plug-in	Plug-in	Plug-in	Plug-in
Magnet arc quench								
Approvals								

Automotive Special Function Plug-in Relays

DG43A	DG43E	DG43F	DG44	DG46	DG56T	DG82T		
								
Flasher	Flasher	Flasher	Flasher	Seat belt controller	Timer (SPST-NO, SPDT)	Timer (SPST-NO, SPDT)		Function
12.5A	20A	20A	20A	10A	30A	5A		Rated Inrush Current
15VDC	15VDC	15VDC	15VDC	28VDC	145VDC	16VDC		Max. Switching Voltage (current dependent)
12V, 24V	12V, 24V	12V, 24V	12V, 24V	12V, 24V	12V, 24V	12V, 24V		Coil Voltages (DC)
AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>	AgSnO <sup>2</sup>		Contact Material
-40 to +80°C	-40 to +85°C	-40 to +80°C	-40 to +70°C	-30 to +85°C	-30 to +85°C	-40 to +85°C		Operating Temperature Range (consult factory for >85°C)
mini-ISO 	mini-ISO 	mini-ISO 	mini-ISO 	mini-ISO 	mini-ISO 	micro-ISO 		Terminal outline
Plug-in	Plug-in	Plug-in	Plug-in	Plug-in	Plug-in	Plug-in		Mounting
								Magnet arc quench
								Approvals

## Automotive PCB Relays

	DC20	DE20	DG08	DG17	DG17M	DG18	DG19	DG20
								
Contact Configuration	SPST-NO-DM	SPST-NO-DM	2 x SPDT	SPST-NO, SPST-NO-DM, SPDT, SPDT-DB-DM	SPST-NO, SPST-NC	SPST-NO, SPST-NC, SPDT	SPST-NO, SPST-NC, SPDT	SPST-NO, SPDT
Rated Current (continuous)	25A	25A	35A (10mins)	15A, 2 x 10A	15A	20A	45A	30A
Max. Switching Voltage (current dependent)	450VDC	450VDC	16VDC	16VDC	450VDC	16VDC	30VDC	16VDC
Coil Voltages (DC)	12V, 24V, 48V, 60V, 80VDC	12V, 24V	6V, 9V, 10V, 12V, 24V	6V, 12V, 24V	6V, 12V, 24V	6V, 9V, 12V, 24V	6V, 12V, 24V	10V, 12V
Contact Material	AgCu10	AgSnO <sub>2</sub>	AgNi0.15, AgNi90/10, AgSnOInO	AgNi0.15, AgNi90/10, AgSnOInO	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgNi0.15, AgNi90/10, AgSnOInO, AgSnO <sub>2</sub>	AgNi0.15, AgSnOInO
Operating Temperature Range (consult factory for >85°C)	-40 to +85°C	-40 to +85°C	-30 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +125°C	-40 to +105°C
Terminal outline	mini-ISO 							
Mounting	PCB, Plug-in or Chassis	PCB, Plug-in or Chassis	PCB	PCB	PCB	PCB	PCB	PCB
Magnet arc quench	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			
Approvals								









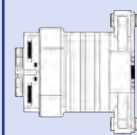
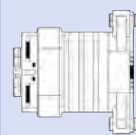
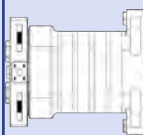


Automotive PCB Relays

DG27	DG31A	DG55M	DG56A	DG56C	DG57BM	DG57CM	DG60	
								
2 x SPST-NO, 2 x SPDT	SPST-NO, SPDT	SPST-NO	SPST-NO, SPDT, SPST- NC, SPST-DM	SPST-NO	SPST-NO, SPDT	SPST-NO	SPDT, 2 x SPDT	Contact Configuration
2 x 30A	20A	40A	40A	70A	60A	80A	25A	Rated Current
16VDC	16VDC	110VDC	75VDC	75VDC	110VDC	145VDC	16VDC	Max. Switching Voltage (current dependent)
6V, 10V, 12V	6V, 12V, 24V	12V, 24V, 48V	6V, 12V, 24V	6V, 12V, 24V	6V, 12V, 24V, 36V, 48V, 50V, 60V	6V, 12V, 24V, 36V, 48V, 50V, 60V	12V	Coil Voltages (DC)
AgNi0.15, AgSnOInO	AgNi0.15, AgNi90/10, AgSnOInO	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	Contact Material
-40 to +105°C	-40 to +85°C	-40 to +85°C	-40 to +125°C	-40 to +125°C	-40 to +125°C	-40 to +125°C	-40 to +105°C	Operating Temperature Range (consult factory for >85°C)
		conforms to mini-ISO 	mini-ISO 	macro-ISO 	mini-ISO 	macro-ISO 		Terminal outline
PCB	PCB	PCB or Plug-in	PCB or Plug-in	PCB or Plug-in	PCB or Plug-in	PCB or Plug-in	PCB	Mounting
		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Magnet arc quench
								Approvals











## Automotive PCB Relays

	DG81	DG81B	DG81C	DG82	DG85A	DG85B	DG85C	DG85D
								
Contact Configuration	SPST-NO, SPST-NO-DM, SPDT	SPST-NO-DM	SPST-NO-DM	SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO
Rated Current	25A, 2 x 10A	2 x 15A	2 x 30A	40A	60A	60A	80A	100A
Max. Switching Voltage (current dependent)	16VDC	16VDC	16VDC	16VDC	30VDC	30VDC	30VDC	30VDC
Coil Voltages (DC)	6V, 9V, 10V, 12V, 24V	6V, 9V, 10V, 12V	6V, 9V, 10V, 12V	6V, 12V, 24V	6V, 12V, 24V	6V, 12V, 24V	6V, 12V, 24V	6V, 12V, 24V
Contact Material	AgNi0.15, AgSnOInO	AgNi0.15, AgSnOInO	AgNi0.15, AgSnOInO	AgNi0.15, AgNi90/10, AgSnOInO	AgNi0.15, AgNi90/10, AgSnOInO	AgNi0.15, AgNi90/10, AgSnOInO	AgNi0.15, AgNi90/10, AgSnOInO	AgSnOInO
Operating Temperature Range (consult factory for >85°C)	-30 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +125°C	-40 to +125°C	-40 to +125°C	-40 to +125°C	-40 to +125°C
Terminal outline				micro-ISO 	mini-ISO 	mini-ISO 	macro-ISO 	macro-ISO 
Mounting	PCB	PCB	PCB	PCB or Plug-in	PCB or Plug-in	PCB or Plug-in	PCB or Plug-in	PCB or Plug-in
Magnet arc quench								
Approvals								





















Automotive PCB Relays & HVDC Contactors

DG85F	DG85G	DG88A			DEVR 03 PCB	DEVR 05 PCB	DEVR 10 PCB	
								
SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO, SPDT, SPST-DM			SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	Function
60A	80A	40A			30A	55A	100A	Rated Inrush Current
30VDC	30VDC	75VDC			900V	900V	900V	Max. Switching Voltage (current dependent)
6V, 12V, 24V	6V, 12V, 24V	6V, 12V, 24V			6V, 12V, 24V, 28V, 36V, 48V, 72V	6V, 12V, 24V, 28V, 36V, 48V, 72V	6V, 12V, 24V, 28V, 36V, 48V, 72V	Coil Voltages (DC)
AgNi0.15, AgNi90/10, AgSnOInO	AgSnOInO	AgSnO, AgSnOInO			T2 + Ag	T2 + Ag	T2 + Ag	Contact Material
-40 to +125°C	-40 to +125°C	-40 to +85°C			-40 to +85°C	-40 to +85°C	-40 to +85°C	Operating Temperature Range (consult factory for >85°C)
mini-ISO 	macro-ISO 	mini-ISO 						Terminal outline
PCB or Plug-in	PCB or Plug-in	PCB or Plug-in			PCB	PCB	PCB	Mounting
					☑	☑	☑	Magnet arc quench
								Approvals



## Automotive HVDC Contactors - up to 1000VDC

	DEVR 01	DEVR 03	DEVR 03 PCB	DEVR 05	DEVR 05 PCB	DEVR 10	DEVR 10 PCB	DEVR 10DP	DEVR 13	DEVR 15
										
Contact Configuration	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	2 X SPST-NO-DM	SPST-NO-DM	SPST-NO-DM, SPST-NC-DB
Rated Current	10A	30A	30A	55A	55A	120A	120A	2 x 120A	135A	150A
Max. Continuous Current (600s)	20A (180s)	90A (30s)	90A (30s)	150A (30s)	150A (30s)	140A	140A	2 x 140A	200A	250A
Max. Short Circuit Current	100A	300A	300A	500A	500A	600A	600A	2 x 600A	650A	NO:1000A NC:1500A
Max. Switching Voltage	900VDC	900VDC	900VDC	900VDC	900VDC	900VDC	900VDC	1000VDC	900VDC	900VDC
Coil Voltages (DC)	6V, 12V, 24V, 28V, 36V, 48V, 72V	6V, 12V, 24V, 28V, 36V, 48V, 72V	6V, 12V, 24V, 28V, 36V, 48V, 72V	6V, 12V, 24V, 28V, 36V, 48V, 72V	6V, 12V, 24V, 28V, 36V, 48V, 72V	6V, 12V, 24V, 28V, 36V, 48V, 72V	6V, 12V, 24V, 28V, 36V, 48V, 72V	12V	6V, 12V, 24V, 28V, 36V, 48V, 72V	6V, 12V, 24V, 28V, 36V, 48V, 72V
Operating Temperature Range	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C
Auxiliary Switch (Optional)						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Coil Economizer									Optional External PWM Economiser	Optional External PWM Economiser
Dimensions (approx.) mm (varies with options)	37.2 x 51.3 x 47.8	37.2 x 51.3 x 47.8	49.5 x 51 x 37.7	37.2 x 51.3 x 47.8	49.5 x 51 x 37.7	40 x 53.8 x 59.1	61.1 x 53.8 x 43	93 x 58.5 x 79	40 x 54 x 59, 47.3 x 69.5 x 66.7	53.8 x 69.4 x 66.7
Approx. weight (varies with options)	120g	120g	150g	120g	150g	190g	220g	510g	190g / 355g (with PWM)	355g / 375g (with PWM)
Approvals	UK CA CE	UK CA CE	UK CA CE	UK CA CE	UK CA CE	UK CA CE	UK CA CE	UK CA CE	UK CA CE	UK CA CE

Automotive HVDC Contactors - up to 1000VDC

DHVC 200	DLVC 400	DEVR 20	DEVR 25	DEVR 30	DEVR 35	DEVR 40	DEVR 45	DEVR 50	DEVR 60	
										
SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	Contact Configuration
200A	400A	400A	450A	500A	550A	600A	600A	600A	600A	Rated Current
500A	400A	500A	550A	600A	650A	700A	700A	800A	1000A	Max. Continuous Current (600s)
2000A	4000A	2000A	2000A	2000A	2000A	2000A	3300A	3300A	3300A	Max. Short Circuit Current
900VDC	120VDC	1000VDC	1000VDC	1000VDC	1000VDC	1000VDC	1000VDC	1000VDC	1000VDC	Max. Switching Voltage
9 ~ 36V 32 ~ 95V	12V, 24V, 48V, 60V	9 ~ 36V 32 ~ 95V	9 ~ 36V 32 ~ 95V	9 ~ 36V 32 ~ 95V	9 ~ 36V 32 ~ 95V	9 ~ 36V 32 ~ 95V	9 ~ 36V	9 ~ 36V	9 ~ 36V	Coil Voltages (DC)
-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	Operating Temperature Range
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Auxiliary Switch (Optional)
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Coil Economizer
80.4 x 52 x 85.8	59.6 x 58.2 x 93.8	58.2 x 80.5 x 72.1	58.2 x 80.5 x 72.1	58.2 x 80.5 x 72.1	58.2 x 80.5 x 72.1	58.2 x 80.5 x 72.1	78 x 67 x 104.5	78 x 67 x 104.5	78 x 67 x 104.5	Dimensions (approx.) mm (varies with options)
550g	650g	430g	430g	430g	430g	430g	800g	800g	800g	Approx. weight (varies with options)
										Approvals






## Automotive LVDC Contactors - up to 120VDC

	DJQ05	DJQ10	DJQ20	DJQ40	DJQ60	DLVC400	DSC05D	DSC08
								
Contact Configuration	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NC-DB	SPST-NO-DM
Rated Current	50A	100A	200A	400A	600A	400A	50A	80A
Max. Switching Voltage	48VDC	48VDC	48VDC	48VDC	48VDC	80VDC	48VDC	120VDC
Coil Voltages (DC)	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 30V, 36V, 48V, 60V, 72V, 80V, 96V, 120V	12V, 24V, 30V, 36V, 48V, 60V, 72V, 80V, 96V, 120V
Contact Material	AgCuO	AgCuO	AgCuO	AgCuO	AgCuO	Cu	AgCuO	AgCu
Operating Temperature Range	-40 to 65°C	-40 to 65°C	-40 to 65°C	-40 to 65°C	-40 to 65°C	-40 to 85°C	-40 to 65°C	-25 to 85°C
Approx. weight (varies with options)	0.175kgs	0.280kgs	0.495kgs	1.020kgs	1.500kgs	0.650kgs	0.175kgs	0.180kgs
Auxiliary Switch (Optional)			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Built-in Twin Coil Economizer		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Latching type available								
Magnetic arc quench						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> (optional)
Approvals								

Automotive LVDC Contactors - up to 120VDC

DSC10	DSC10D	DSC12	DSC15	DSC20	DSC20D	DSC25	DSC30	
								
SPST-NO-DM	SPST-NC-DB	SPST-NO-DM, SPDT, DPDT, DPST-NO	SPST-NO-DM	SPST-NO-DM, SPDT, DPDT, DPST-NO	SPST-NC-DB	SPST-NO-DM	SPST-NO-DM	Contact Configuration
100A	100A	125A	150A	200A	200A	250A	300A	Rated Current
120VDC	48VDC	120VDC	120VDC	120VDC	48VDC	60VDC	60VDC	Max. Switching Voltage
12V, 24V, 30V, 36V, 48V, 60V, 72V, 80V, 96V, 120V	12V, 24V, 48V, 60V	12V, 24V, 30V, 36V, 48V, 60V, 72V, 80V, 96V, 120V	12V, 24V, 30V, 36V, 48V, 60V, 72V, 80V, 96V, 120V	12V, 24V, 30V, 36V, 48V, 60V, 72V, 80V, 96V, 120V	12V, 24V, 48V, 60V	12V, 24V, 30V, 36V, 48V, 60V, 72V, 80V, 96V, 120V	12V, 24V, 48V, 60V	Coil Voltages (DC)
AgCu	AgCuO	AgCu	AgCu	AgCu	AgCuO	AgCu	AgCu	Contact Material
-25 to 85°C	-25 to 65°C	-25 to 85°C	-25 to 85°C	-25 to 85°C	-40 to 65°C	-25 to 85°C	-25 to 85°C	Operating Temperature Range
0.201kgs	0.280kgs	≥ 0.380kgs	0.380kgs	>0.420kgs	0.495kgs	0.480kgs	0.800kgs	Approx. weight (varies with options)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Auxiliary Switch (Optional)
	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			Built-in Twin Coil Economizer
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Latching type available
<input checked="" type="checkbox"/> (optional)		<input checked="" type="checkbox"/> (optional)	<input checked="" type="checkbox"/> (optional)	<input checked="" type="checkbox"/> (optional)				
								Approvals









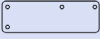

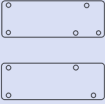
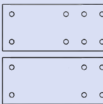











## Automotive LVDC Contactors - up to 120VDC

	DSC30M	DSC40	DSC40D	DSC50	DSC60	DSC60D	DSC80	DSC80D
								
Contact Configuration	SPST-NO-DM	SPST-NO-DM, SPDT, DPDT, DPST-NO	SPST-NC-DB	SPST-NO-DM	SPST-NO-DM	SPST-NC-DB	SPST-NO-DM	SPST-NC-DB
Rated Current	300A	400A	400A	500A	600A	600A	800A	800A
Max. Switching Voltage	120VDC	120VDC	48VDC	60VDC	60VDC	48VDC	60VDC	48VDC
Coil Voltages (DC)	12V, 24V, 48V, 60V	12V, 24V, 30V, 36V, 48V, 60V, 72V, 80V, 96V, 120V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V
Contact Material	AgCu	AgCu	AgCuO	AgCu	AgCu	AgCuO	AgCu	AgCuO
Operating Temperature Range	-25 to 85°C	-25 to 85°C	-40 to 65°C	-25 to 85°C	-25 to 85°C	-40 to 65°C	-25 to 85°C	-40 to 65°C
Approx. weight (varies with options)	0.800kgs	> 0.820kgs	1.020kgs	0.970kgs	1.000kg	1.500kgs	2.000kgs	1.500kgs
Auxiliary Switch (Optional)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Built-in Twin Coil Economizer			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Latching type available	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Magnetic arc quench	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (optional)						
Approvals								







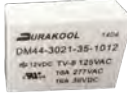

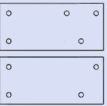
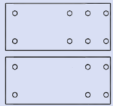
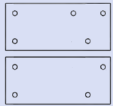


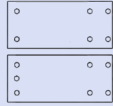
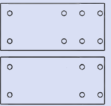
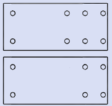







Automotive LVDC Contactors - up to 60VDC & 2000A

DSC100	DSC100D	DSC120	DSC150	DSC180	DSC200			
								
SPST-NO-DM	SPST-NC-DB	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM	SPST-NO-DM			Contact Configuration
1000A	1000A	1200A	1500A	1800A	2000			Rated Current
60VDC	48VDC	60VDC	60VDC	60VDC	60VDC			Max. Switching Voltage
12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V	12V, 24V, 48V, 60V			Coil Voltages (DC)
AgCu	AgCuO	AgCu	AgCu	AgCu	AgCu			Contact Material
-25 to 85°C	-40 to 65°C	-25 to 85°C	-25 to 85°C	-25 to 85°C	-25 to 85°C			Operating Temperature Range
3.020kgs	3.020kgs	3.020kgs	4.370kgs	4.37kgs	4.37kgs			Approx. weight (varies with options)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Auxiliary Switch (Optional)
	<input checked="" type="checkbox"/>							Built-in Twin Coil Economizer
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Latching type available
								Magnetic arc quench
								Approvals







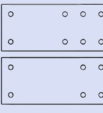
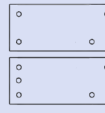
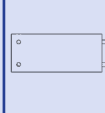
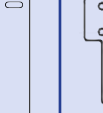
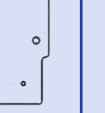





## PCB Power Relays

	DG5N	DG6D	DG6L	DM84	DG33	DM05	DG31	DG31H
								
Contact Configuration	SPST-NO	SPST-NO	SPST-NO, SPDT	DPST-NO, DPDT	SPST-NO	SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO, SPDT
Rated Current (continuous)	5A/250VAC, 5A/28VDC	5A/250VAC, 5A/30VDC	8A/250VAC, 5A/30VDC	8A/250VAC, 8A/24VDC	10A/250VAC	10A/250VAC, 10A/30VDC	12A/120VAC, 10A/250VAC, 10A/28VDC	15A/125VAC, 10A/250VAC
Max. Switching Voltage (current dependent)	250VAC, 28VDC	250VAC, 30VDC	440VAC, 125VDC	400VAC	250VAC, 28VDC	277VAC, 30VDC	250VAC, 28VDC	250VAC, 28VDC
Coil Voltages	3, 5, 6, 9, 12, 24VDC	5, 12, 24VDC	5, 6, 12, 18, 24, 48, 60VDC	3, 5, 6, 9, 12, 18, 24, 36, 48, 60, 110VDC. 12, 24, 48, 60, 110, 115, 120, 220, 230, 240VAC	3, 5, 6, 9, 12, 24, 48VDC	3, 5, 6, 9, 12, 24VDC	3, 5, 6, 9, 12, 24, 48VDC	3, 5, 6, 9, 12, 24, 48VDC
Contact Material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgNi90/10, AgSnO <sub>2</sub>	AgNi90/10, AgNi90/10 +5um Au, AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Operating Temperature Range	-40 to +85°C	-25 to +70°C	-40 to +85°C	AC: -40 to +70°C DC: -40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +105°C
Terminal outline								
Mounting	PCB	PCB	PCB	PCB	PCB	PCB	PCB	PCB
Dimensions (approx.) L x W x H mm	20.5 x 7 x 15	17.5 x 6.5 x 12.5	28.5 x 10 x 12.3	29 x 12.7 x 15.7	18.4 x 15.2 x 10.2	20 x 10 x 15.2	19.5 x 15.5 x 16	19 x 15.4 x 15
Magnet arc quench								
Approvals								

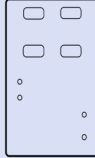
PCB Power Relays

DM87	DX84	DX87	DG05	DG39	DG70	DM44	DM85	
								
SPST-NO, SPDT	DPST-NO, DPDT	SPST-NO, SPDT	SPST-NO	SPST-NO	SPST	SPST-NO, SPDT	SPST-NO, SPDT	Contact Configuration
12A/250VAC, 12A/24VDC	12A/250VDC, 8A/30VDC	10A/250VAC, 12A/250VAC, 10A/30VDC	16A/250VAC, 16A/30VDC	16A/250VAC	16A/250VAC	16A/277VAC, 16A/30VDC	16A/250VAC, 16A/24VDC	Rated Current (continuous))
400VAC	440VAC, 125VDC	440VAC, 125VDC	250VAC, 30VDC	250VAC	250VAC, 20VDC	277VAC, 30VDC	440VAC	Max. Switching Voltage (current dependent)
3, 5, 6, 9, 12, 18, 24, 36, 48, 60, 110VDC. 12, 24, 48, 60, 110, 115, 120, 220, 230, 240VAC	3, 5, 6, 9, 12, 18, 24, 36, 48, 60, 110VDC	3, 5, 6, 9, 12, 18, 24, 36, 48, 60, 110VDC	3, 5, 6, 9, 12, 18, 24VDC	3, 5, 6, 9, 12, 18, 24, 48VDC	9, 12, 24, 48VDC (latching)	3, 5, 6, 9, 12, 18, 24, 48VDC	3, 5, 6, 9, 12, 18, 24, 36, 48, 60, 110VDC. 12, 24, 48, 60, 110, 115, 120, 220, 230, 240VAC	Coil Voltages
AgNi90/10, AgNi90/10 +5um Au, AgSnO <sub>2</sub>	AgNi90/10, AgSnO <sub>2</sub>	AgNi90/10, AgSnO <sub>2</sub>	AgSnO <sub>2</sub> , AgSnO <sub>2</sub> .In <sub>2</sub> O <sub>3</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgNi90/10, AgSnO <sub>2</sub>	Contact Material
AC: -40 to +70°C DC: -40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +70°C	-30 to +105°C	AC: -40 to +70°C DC: -40 to +85°C	Operating Temperature Range
								Terminal outline
PCB	PCB	PCB	PCB	PCB	PCB	PCB	PCB	Mounting
29 x 12.7 x 15.7	29 x 12.7 x 15.7	29 x 12.7 x 15.7	18.3 x 10.2 x 15.2	23 x 16.2 x 10.2	29.4 x 13.6 x 22.8	29.2 x 12.8 x 20.6	29 x 12.7 x 15.7	Dimensions (approx.) L x W x H mm
								Magnet arc quench
								Approvals

## PCB Power Relays

	DX85	DG71	DM85H	DM85V	DE20	DE35	DG34	DG38
								
Contact Configuration	SPST-NO, SPDT	SPST	SPST-NO	SPST-NO	SPST-NO-DM	DPST-NO-DM	SPST-NO, SPDT	SPST-NO, SPDT
Rated Current (continuous)	16A/250VAC, 16A/30VDC	20A/250VAC	20A/250VAC	20A/250VAC	25A/450VDC	2 x 40A, 1 x 75A (277VAC)	40A/250VAC	40A/250VAC
Max. Switching Voltage (current dependent)	440VAC, 125VDC	277VAC, 20VDC	440VAC, 125VDC	440VAC, 125VDC	450VDC	277VAC	250VAC, 110VDC	250VAC, 110VDC
Coil Voltages	5, 6, 9, 12, 18, 24, 48, 60, 110VDC	5, 9, 12, 24VDC (latching)	5, 6, 9, 10, 12, 18, 24, 48VDC	5, 6, 9, 10, 12, 18, 24, 48VDC	12, 24VDC	12, 24VDC	3, 5, 6, 9, 12, 18, 24, 48, 110VDC, 12, 24, 110, 120, 220VAC.	3, 5, 6, 9, 12, 18, 24, 48, 110VDC, 12, 24, 110, 120, 220VAC.
Contact Material	AgNi90/10, AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub> , AgSnOInO	AgSnO <sub>2</sub>
Operating Temperature Range	-40 to +85°C	-40 to +70°C	-40 to +105°C	-40 to +105°C	-40 to +85°C	-40 to +85°C	-40 to +125°C	-40 to +125°C
Terminal outline								
Mounting	PCB	PCB	PCB	PCB	PCB, Chassis	PCB	PCB, Chassis	PCB
Dimensions (approx.) L x W x H mm	29 x 12.7 x 15.7	29 x 12.7 x 15.7	44.5 x 12.7 x 15.7	40.5 x 12.7 x 15.7	41.2 x 30.2 x 31.38	49 x 26.5 x 30	32 x 27.5 x 19.5	32.5 x 27.5 x 29
Magnet arc quench					<input checked="" type="checkbox"/>			
Approvals								

PCB Power Relays

DG38B	DG38L	DX71F	DX71E	DX71D				
								
SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO + SPST-NO (aux)	SPST-NO + SPST-NO (aux)	SPST-NO + SPST-NO (aux)				Contact Configuration
40A/250VAC	45A/24VDC, 20A/80VDC	80A/24VDC	110A/60VDC	125A/80VDC				Rated Current (continuous)
250VAC, 110VDC	277VAC, 80VDC	24VDC	60VDC	80VDC				Max. Switching Voltage (current dependent)
3, 5, 6, 9, 12, 18, 24, 48, 110VDC, 12, 24, 110, 120, 220VAC.	5, 6, 9, 12, 24, 48VDC	12, 24, 48, 60VDC (latching)	12, 24, 48, 60VDC (latching)	12, 24, 48, 60VDC (latching)				Coil Voltages
AgSnO <sub>2</sub>	AgSnOInO	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>				Contact Material
-40 to +125°C	-55 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C				Operating Temperature Range
								Terminal outline
PCB	PCB	PCB	PCB	PCB				Mounting
32.5 x 27.5 x 21	32..2 x 27.5 x 28	39.2 x 22 x 27.5	39.2 x 22 x 27.5	39.2 x 22 x 27.5				Dimensions (approx.) L x W x H mm
	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				Magnet arc quench
								Approvals

## Industrial Relays

	DB30	DE35	DG34	DG36	DI8	DLR	DT	DX15A
								
Contact Configuration	DPST-NO, DPST-NC, DPDT, 3PST-NO	DPST-NO-DM	SPST-NO, SPDT	DPST-NO, DPDT	SPDT, DPDT	SPST-NO, DPST-NO	SPST-NO, SPST-NC, SPST-NO+SPST-NC, DPST-NO, DPST-NC, DPDT	DPDT, 3PDT
Rated Current (continuous)	40A / 50A	40A	40A	30A	8A, 10A, 12A, 16A	20A, 25A, 30A	10A	10A
Max. Switching Voltage (current dependent)	440VAC, 28VDC	277VAC	250VAC, 110VDC	277VAC, 30VDC	440VAC, 125VDC	250VAC, 30VDC	5000VAC	277VAC, 30VDC
Coil Voltages	12VDC, 24VDC, 48VDC, 110VDC, 12VAC, 24VAC, 48VAC, 110VAC, 230VAC	12VDC, 24VDC	3 to 110VDC, 12 to 220VAC	5 to 110VDC, 24 to 277VAC	12VDC, 24VDC, 24VAC, 110VAC, 230VAC	6 to 110VDC, 12 to 230VAC	6 to 220VDC, 6 to 400VAC	6VDC, 12VDC, 24VDC, 110VDC, 12VAC, 24VAC, 110VAC, 220VAC
Contact Material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub> , AgSnOInO	AgSnO <sub>2</sub>	AgNi90/10	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgNi90/10
Operating Temperature Range (consult factory for >85°C)	-55 to 70°C	-40 to 85°C	-40 to 125°C	-40 to 85°C, -40 to 65°C	-40 to 85°C, -40 to 70°C	-40 to 85°C	-40 to 55°C	-40 to 70°C
Terminal arrangement	Fast-on Blades	PCB Solder pins	Fast-on Blades, PCB solder pins	Fast-on Blades, PCB solder pins	Screw terminals	Screw terminals, Fast-on Blades, PCB solder pins	Fast-on Blades	Terminal pins for socket mounting
Mounting	DIN Rail, PCB & Chassis sockets	PCB	Chassis or PCB	Chassis or PCB	DIN Rail	Chassis, DIN Rail or PCB	Chassis	DIN Rail, PCB & Chassis sockets
Test Lever or Button						<input checked="" type="checkbox"/> (optional)		<input checked="" type="checkbox"/>
LED						<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Durakool Socket	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Approvals								

Industrial Relays

DX2	DX3	DX4	DXN	DY	DYN			
								
DPDT	3PDT	4PDT	4PDT	SPST-NO, SPDT, DPST- NO, DPDT, 3PDT, 4PDT	DPDT			Contact Configuration
10A	7A	5A	5A	12A, 16A	10A			Rated Current
277VAC, 30VDC	277VAC, 30VDC	277VAC, 30VDC	277VAC, 30VDC	277VAC, 28VDC	277VAC, 30VDC			Max. Switching Voltage (current dependent)
6 to 110VDC, 6 to 240VAC	6 to 110VDC, 6 to 240VAC	6 to 110VDC, 6 to 240VAC	6 to 110VDC, 6 to 240VAC	12VDC, 24VDC, 110VDC, 220VDC, 12VAC, 24VAC, 110VAC, 220VAC	6 to 110VDC, 6 to 240VAC, 24VAC or DC			Coil Voltages
AgNi90/10	AgNi90/10	AgNi90/10	AgNi90/10, AgNi90/10+Au	AgSnO <sub>2</sub> , AgNi90/10	AgNi90/10, AgNi90/10+Au			Contact Material
-40 to 70°C	-40 to 70°C	-40 to 70°C	-40 to 70°C	-40 to 70°C	-40 to 70°C			Operating Temperature Range (consult factory for >70°C)
Terminal blades for socket mounting	Terminal blades for socket mounting	Terminal blades for socket mounting	Terminal blades for socket mounting, PCB solder pins	Fast-on Blades, Terminal Blades for sockets, PCB solder pins	Terminal blades for socket mounting, PCB solder pins			Terminal arrangement
DIN Rail, PCB & Chassis sockets	DIN Rail, PCB & Chassis sockets	DIN Rail, PCB & Chassis sockets	DIN Rail, PCB & Chassis sockets	Chassis, DIN Rail sockets or PCB	DIN Rail, PCB & Chassis sockets			Mounting
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<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			LED
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Durakool Socket
								Approvals











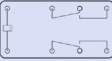

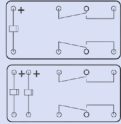





## Latching (bi-stable) Relays

	DG70	DG71	DG73	DG74	DG75	DG76C	DG77A	DG77B
								
Contact Configuration	SPST	SPST	SPST	SPST	SPST	SPST	SPST	SPST
Rated Current (continuous)	16A/250VAC	20A/250VAC	80A/250VAC	100A/250VAC	40A/250VAC	90A/250VAC	60A/250VAC	80A/250VAC
Max. Switching Voltage (current dependent)	250VAC, 20VDC	277VAC, 20VDC	250VAC, 20VDC	250VAC, 20VDC	250VAC, 20VDC	250VAC	250VAC, 20VDC	250VAC, 20VDC
Coil Voltages	9, 12, 24, 48VDC	5, 9, 12, 24VDC	9, 12, 24, 48VDC	9, 12, 24, 48VDC	9, 12, 24, 48VDC	5, 6, 9, 12, 24, 48VDC	9, 12, 24, 48VDC	9, 12, 24, 48VDC
Contact Material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Operating Temperature Range	-40 to +70°C	-40 to +70°C	-40 to +70°C	-40 to +70°C	-40 to +70°C	-40 to +85°C	-40 to +70°C	-40 to +70°C
Terminal outline			Custom	Custom	Custom		Custom	Custom
Mounting	PCB	PCB	PCB, Busbar or Chassis	PCB, Busbar or Chassis	PCB	PCB	PCB	PCB
Dimensions (approx.) L x W x H mm	29.4 x 13.6 x 22.8	29 x 12.7 x 15.7	38 x 30.9 x 16.5	40 x 30 x 22	39 x 15 x 29	38 x 16.5 x 30	38 x 17 x 33	38 x 17 x 33
Magnet arc quench								
Approvals								

Latching (bi-stable) Relays

DG78	DG79	DG79B	DX71F	DX71E	DX71D	DTC3	DTC4	
								
SPST	SPST	SPST	SPST-NO + SPST-NO (aux)	SPST-NO + SPST-NO (aux)	SPST-NO + SPST-NO (aux)	DPDT	DPDT	Contact Configuration
120A	100A	120A	80A/24VDC	110A/60VDC	125A/80VDC	1A/125VAC, 2A/30VDC	0.5A/125VAC, 1A/30VDC	Rated Current (continuous))
250VAC, 30VDC	250VAC, 20VDC	250VAC, 20VDC	24VDC	60VDC	80VDC	250VAC, 220VDC (125VA/90W)	250VAC, 220VDC (62.5VA/30W)	Max. Switching Voltage (current dependent)
9V, 12V, 24V, 48V	5V, 9V, 12V, 24V, 48V	5V, 9V, 12V, 24V, 48V	12, 24, 48, 60VDC (latching)	12, 24, 48, 60VDC (latching)	12, 24, 48, 60VDC (latching)	3, 5, 6, 9, 12, 24VDC	3, 5, 6, 9, 12, 24VDC	Coil Voltages
AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgNi0.15+Au, AgPd/AgPd+Au	AgNi0.15+Au	Contact Material
-40 to +70°C	-40 to 85°C	-40 to 85°C	40 to +85°C	40 to +85°C	40 to +85°C	-40 to +85°C	-40 to +70°C	Operating Temperature Range
Custom	Custom	Custom						Terminal outline
PCB or Chassis	Custom, PCB	Custom, PCB	PCB	PCB	PCB	PCB	PCB	Mounting
76 x 43 x 25	52 (max) x 43 x 22	52 (max) x 43 x 22	39.2 x 22 x 27.5	39.2 x 22 x 27.5	39.2 x 22 x 27.5	20.2 x 10.2 x 10.6	14 x 9 x 5	Dimensions (approx.) L x W x H mm
				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Magnet arc quench
								Approvals











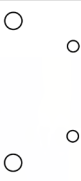
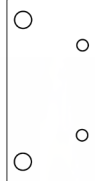
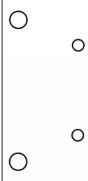
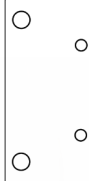
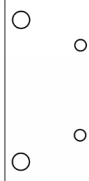
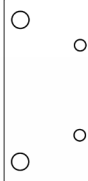








## Signal Relays

	DTC0	DTC0B	DTC1	DTC2	DTC3	DTC3 (latching)	DTC4	
								
Contact Configuration	SPDT	SPDT	SPDT	DPDT	DPDT	DPDT	DPDT	
Rated Current (continuous)	5A/120VAC, 5A/24VDC	5A/120VAC, 5A/24VDC	0.5A/125VAC, 1A/30VDC	1A/120VAC, 2A/24VDC	0.5A/120VAC, 2A/30VDC	1A/125VAC, 2A/30VDC	0.5A/125VAC, 1A/30VDC	
Max. Switching Voltage (current dependent)	120VAC, 24VDC	120VAC, 24VDC	125VAC, 60VDC (62.5VA/30W)	120VAC, 30VDC (120VA/48W)	250VAC, 220VDC (125VA/60W)	250VAC, 220VDC (125VA/90W)	250VAC, 220VDC (62.5VA/30W)	
Coil Voltages	3, 5, 6, 9, 12, 24VDC	3, 5, 6, 9, 12, 24VDC	1.5, 3, 5, 6, 9, 12, 24VDC	3, 5, 6, 9, 12, 24, 48VDC	3, 5, 6, 9, 12, 24, 48VDC	3, 5, 6, 9, 12, 24VDC	3, 5, 6, 9, 12, 24VDC	
Contact Material	AgNi0.15, AgNi0.15+Au	AgNi0.15, AgNi0.15+Au	AgNi0.15+Au	AgNi0.15+Au	AgNi0.15+Au	AgNi0.15+Au, AgPd/AgPd+Au	AgNi0.15+Au	
Operating Temperature Range	-25 to +55°C	-25 to +55°C	-30 to +70°C	-30 to +80°C	-30 to +90°C	-40 to +85°C	-40 to +70°C	
Terminal outline								
Mounting	PCB	PCB	PCB	PCB	PCB	PCB	PCB	
Dimensions (approx.) L x W x H mm	16 x 11 x 11.5	16 x 11 x 11.5	12.5 x 7.5 x 10	21 x 10 x 11.6	20.2 x 10.2 x 10.6	20.2 x 10.2 x 10.6	14 x 9 x 5	
Approvals								

Solid-state Relays

	SRA1	SRA2	SRA3	SSG1C	SSG1C			
								
Load type	SPST-NO	2 x SPST-NO	3PST-NO	SPST-NO	SPST-NO			
Rated Current (continuous)	10, 20, 25, 30, 40, 60, 80A	10, 15, 20, 25, 30, 40A	10, 20, 25, 30, 40, 60, 80A	60, 80, 100, 120, 150A	200, 300, 350A			
Load Switching Voltage	24~240VAC, 40~480VAC (Zero X-Over)	24~240VAC, 40~480VAC (Zero X-Over)	24~240VAC, 40~480VAC (Zero X-Over)	60~1200VAC (Zero X-Over)	60~1200VAC (Zero X-Over)			
Maximum Peak Voltage	900V	900V	900V	1600V	1600V			
Control Voltage	4~32VDC, 90~250VAC	4~32VDC	4~32VDC, 90~250VAC	3~14VDC, 3~32VDC	3~14VDC, 3~32VDC			
Operating Temperature Range	-30 to +80°C	-30 to +80°C	-30 to +80°C	-30 to +80°C	-30 to +80°C			
Terminal outline								
Mounting	Chassis	Chassis	Chassis	Chassis	Chassis			
Dimensions (approx.) L x W x H mm	60 x 45.1 x 28	57 x 44 x 30.3	106 x 75 x 38	94 x 25 x 36.2	94 x 34 x 43			
Approvals								








## Solid-State Relays & Contactors

	SDA1-10	SDA1-15	SDA1-20	SDA1-25	SDA1-30	SDA1-40	SDA1-60	SDA1-80
								
Load type	SPST-NO	SPST-NO	SPST-NO	SPST-NO	SPST-NO	SPST-NO	SPST-NO	SPST-NO
Rated Current (continuous)	10A	15A	20A	25A	30A	40A	60A	80A
Load Switching Voltage	40~480VAC (Zero X-Over)	40~480VAC (Zero X-Over)	40~480VAC (Zero X-Over)	40~480VAC (Zero X-Over)	40~480VAC (Zero X-Over)	40~480VAC (Zero X-Over)	40~480VAC (Zero X-Over)	40~480VAC (Zero X-Over)
Maximum Peak Voltage	900V	900V	900V	900V	900V	900V	900V	900V
Control Voltage	4~32VDC	4~32VDC	4~32VDC, 90~250VAC	4~32VDC, 90~250VAC	4~32VDC, 90~250VAC	4~32VDC, 90~250VAC	4~32VDC, 90~250VAC	4~32VDC, 90~250VAC
Terminal outline								
Mounting	DIN Rail or Chassis	DIN Rail or Chassis	DIN Rail or Chassis	DIN Rail or Chassis	DIN Rail or Chassis	DIN Rail or Chassis	DIN Rail or Chassis	DIN Rail or Chassis
Dimensions (approx.) L x W x H mm	100 x 24 x 107	100 x 24 x 107	100 x 48 x 107	100 x 48 x 107	100 x 48 x 107	100 x 80 x 107	100 x 110 x 127	100 x 110 x 127
Approvals								

Solid-State Relays & Contactors

SDB1-60	SDB1-80	SDA3-10	SDA3-15	SDA3-20	SDA3-25	SDA3-30	SDA3-40	
								
SPST-NO	SPST-NO	3PST-NO	3PST-NO	3PST-NO	3PST-NO	3PST-NO	3PST-NO	Load type
60A	80A	10A	15A	20A	25A	30A	40A	Rated Current (continuous)
60~660VAC (Zero X-over)	60~660VAC (Zero X-over)	40~480VAC (Zero X-over)	40~480VAC (Zero X-over)	40~480VAC (Zero X-over)	40~480VAC (Zero X-over)	40~480VAC (Zero X-over)	40~480VAC (Zero X-over)	Load Switching Voltage
900V	900V	900V	900V	900V	900V	900V	900V	Maximum Peak Voltage
4~32VDC, 90~250VAC	4~32VDC, 90~250VAC	4~32VDC, 90~250VAC	4~32VDC, 90~250VAC	4~32VDC, 90~250VAC	4~32VDC, 90~250VAC	4~32VDC, 90~250VAC	4~32VDC, 90~250VAC	Control Voltage
								Terminal outline
DIN Rail or Chassis	DIN Rail or Chassis	DIN Rail or Chassis	DIN Rail or Chassis	DIN Rail or Chassis	DIN Rail or Chassis	DIN Rail or Chassis	DIN Rail or Chassis	Mounting
100 x 110 x 127	100 x 110 x 127	100 x 110 x 80	100 x 110 x 80	100 x 110 x 130	100 x 110 x 130	100 x 110 x 130	125 x 110 x 130	Dimensions (approx.) L x W x H mm
								Approvals

## Definite Purpose Contactors

	30C20	30C25	30C30	30C40	30C50	30C60	30C75	30C90
								
Contact Configuration	SPST-NO-DM, DPST-NO-DM, 3PST-NO-DM, 4PST-NO-DM	SPST-NO-DM, DPST-NO-DM, 3PST-NO-DM, 4PST-NO-DM	SPST-NO-DM, DPST-NO-DM, 3PST-NO-DM, 4PST-NO-DM	SPST-NO-DM, DPST-NO-DM, 3PST-NO-DM, 4PST-NO-DM	DPST-NO-DM, 3PST-NO-DM	DPST-NO-DM, 3PST-NO-DM	DPST-NO-DM, 3PST-NO-DM	DPST-NO-DM, 3PST-NO-DM
FLA Rating	20A	25A	30A	40A	50A	60A	75A	90A
LRA Rating (max.) (voltage dependent)	120A	150A	180A	240A	300A	360A	450A	540A
Max. Switching Voltage (AC) (current dependent)	600V	600V	600V	600V	600V	600V	600V	600V
Coil Voltages (AC)	24V, 120V, 230V, 277V, 480VAC	24V, 120V, 230V, 277V, 480VAC	24V, 120V, 230V, 277V, 480VAC	24V, 120V, 230V, 277V, 480VAC	24V, 120V, 230V, 277V, 480VAC	24V, 120V, 230V, 277V, 480VAC	24V, 120V, 230V, 277V, 480VAC	24V, 120V, 230V, 277V, 480VAC
Contact Material	AgCdO, AgSnOInO	AgCdO, AgSnOInO	AgCdO, AgSnOInO	AgCdO, AgSnOInO	AgCdO, AgSnOInO	AgCdO, AgSnOInO	AgCdO, AgSnOInO	AgCdO, AgSnOInO
Operating Temperature Range	-40 to +65°C	-40 to +65°C	-40 to +65°C	-40 to +65°C	-40 to +65°C	-40 to +65°C	-40 to +65°C	-40 to +65°C
Coil Terminals	0.25" QC's + 6-32 screw	0.25" QC's + 6-32 screw	0.25" QC's + 6-32 screw	0.25" QC's + 6-32 screw	0.25" QC's + 6-32 screw	0.25" QC's + 6-32 screw	0.25" QC's + 6-32 screw	0.25" QC's + 6-32 screw
Power Terminals	10-32 screw + 0.25" QC's	10-32 screw or 14-4 box lug + 0.25" QC's	10-32 screw or 14-4 box lug + 0.25" QC's	10-32 screw or 14-4 box lug + 0.25" QC's	14-2 box lug + 0.25" QC's	14-2 box lug + 0.25" QC's	14-1/0 box lug + 0.25" QC's	14-1/0 box lug + 0.25" QC's
Mounting	Chassis	Chassis	Chassis	Chassis	Chassis	Chassis	Chassis	Chassis
Dimensions (approx.) L x W x H (inches)	1P: 3.3 x 2.1 x 2.54" 2P: 3.3 x 2.1 x 2.6" 3P: 3.75 x 2.4 x 3" 4P: 3.8 x 2.75 x 3"	1P: 3.3 x 2.1 x 2.54" 2P: 3.3 x 2.1 x 2.6" 3P: 3.75 x 2.4 x 3" 4P: 3.8 x 2.75 x 3"	1P: 3.3 x 2.1 x 2.54" 2P: 3.3 x 2.1 x 2.6" 3P: 3.75 x 2.4 x 3" 4P: 3.8 x 2.75 x 3"	1P: 3.3 x 2.1 x 2.54" 2P: 3.3 x 2.1 x 2.6" 3P: 3.75 x 2.4 x 3" 4P: 3.8 x 2.75 x 3"	4 x 2.8 x 3.6"	4 x 2.8 x 3.6"	5 x 3.75 x 4"	5 x 3.75 x 4"
Approvals								



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