D100QS Series aR 1000VDC

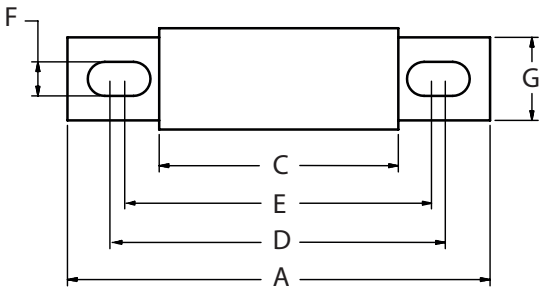
Fast-Acting DC Fuses

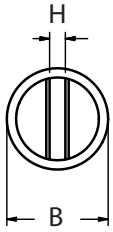
DC HIGH SPEED FUSES

Electrification in construction, marine, agriculture, manufacturing, mining, and other industries, in addition to transportation, is a critical trend in cleaner energy. The D100QS North American style round body high-speed fuse series is Mersen's next evolution for high-power conversion applications protection for those industries shifting to Direct Current (DC) systems today. The D100QS fuse series is specifically designed to reduce the I^2t, peak let-through current, and arc voltages during fault conditions to protect applications such as battery charging systems and other DC components like relays and contactors.

Technical Data Overview	
DC Ratings	50-300A, 1000VDC, L/R ≤1ms, 100kA IR, MBC<3kA

DIMENSIONS D100QS 50-300A





Catalog numbers ending with "-4Y" are designated for metric screws

Article Number	A	B	C	D	E	F	F*	G	H
D100QS50 to 100 in (mm)	4.38 (111)	1 (25.4)	2.88 (73)	3.69 (93.6)	3.50 (88.9)	0.31 (7.9)	0.35 (9.0)	0.75 (19)	0.13 (3.2)
D100QS125 to 200 in (mm)	4.38 (111)	1.22 (31)	2.88 (73)	3.69 (93.6)	3.56 (90.5)	0.31 (7.9)	0.35 (9.0)	1 (25.4)	0.19 (4.8)
D100QS225 to 300 in (mm)	5.09 (129)	1.50 (38.1)	2.84 (72.2)	4.16 (106)	3.53 (89.7)	0.40 (10.2)	-	1 (25.4)	0.25 (6.4)

FEATURES/BENEFITS

- Lower I^2t performance for improved protection of equipment
- Superior cycling ability for long, reliable life on high cyclic loading
- Low watts losses
- High Interrupting rating for optimal short circuit protection
- Designed to provide superior power cycling compared to general purpose fuses
- Built to withstand vibration

APPLICATIONS

- High Power battery charging and management systems protection
- Energy Storage Systems (ESS)
- Electrical Energy Storage (EES)
- Battery Disconnect Unit (BDU)
- Battery pack protection
- DC Fast-Charging station for EV applications
- Backup protection for DC relay/disconnector/switch
- Protection of 1000VDC or less, UPS and inverters

APPROVALS/STANDARDS

- UL Recognized
  UL File: E60314
  DC: 50-300A, 1000VDC
- REACH/RoHS compliant

PRODUCT RANGE

D100QS100-4

D100QS200-4Y

D100QS300-4

D100QS 50-300A Round Body Fuses

Catalog number	Max DC voltage, L/R < 1ms (VDC)*	Rated current I_n (A)	Power dissipation		MBC @1000VDC, L/R <1ms (A)**	Time to clear MBC (ms)	Weight (kg)	Package
			at 0.8I_n (W)	at I_n (W)				
D100QS50-4,-4Y	1000	50	5.3	10	960	40	0.12	5
D100QS60-4,-4Y	1000	60	6.5	12	1160	40	0.12	5
D100QS70-4,-4Y	1000	70	8.1	15	1350	40	0.12	5
D100QS80-4,-4Y	1000	80	9.7	18	1540	40	0.12	5
D100QS90-4,-4Y	1000	90	11	20	1730	40	0.12	5
D100QS100-4,-4Y	1000	100	13	24	1920	40	0.12	5
D100QS125-4,-4Y	1000	125	12	22	940	80	0.19	5
D100QS150-4,-4Y	1000	150	16	29	1130	80	0.19	5
D100QS175-4,-4Y	1000	175	19	35	1320	80	0.19	5
D100QS200-4,-4Y	1000	200	22	41	1510	80	0.19	5
D100QS225-4	1000	225	20	37	2200	80	0.3	5
D100QS250-4	1000	250	23	42	2430	80	0.3	5
D100QS300-4	1000	300	29	53	2920	80	0.3	5
Catalog numbers ending with "-4Y" are designated for metric screws								
*Time Constant: L/R ≤1ms								
**MBC (Minimum Breaking Capacity): Smallest current fuse has been tested to safely open at rated voltage and associated time constant								

ACCESSORIES

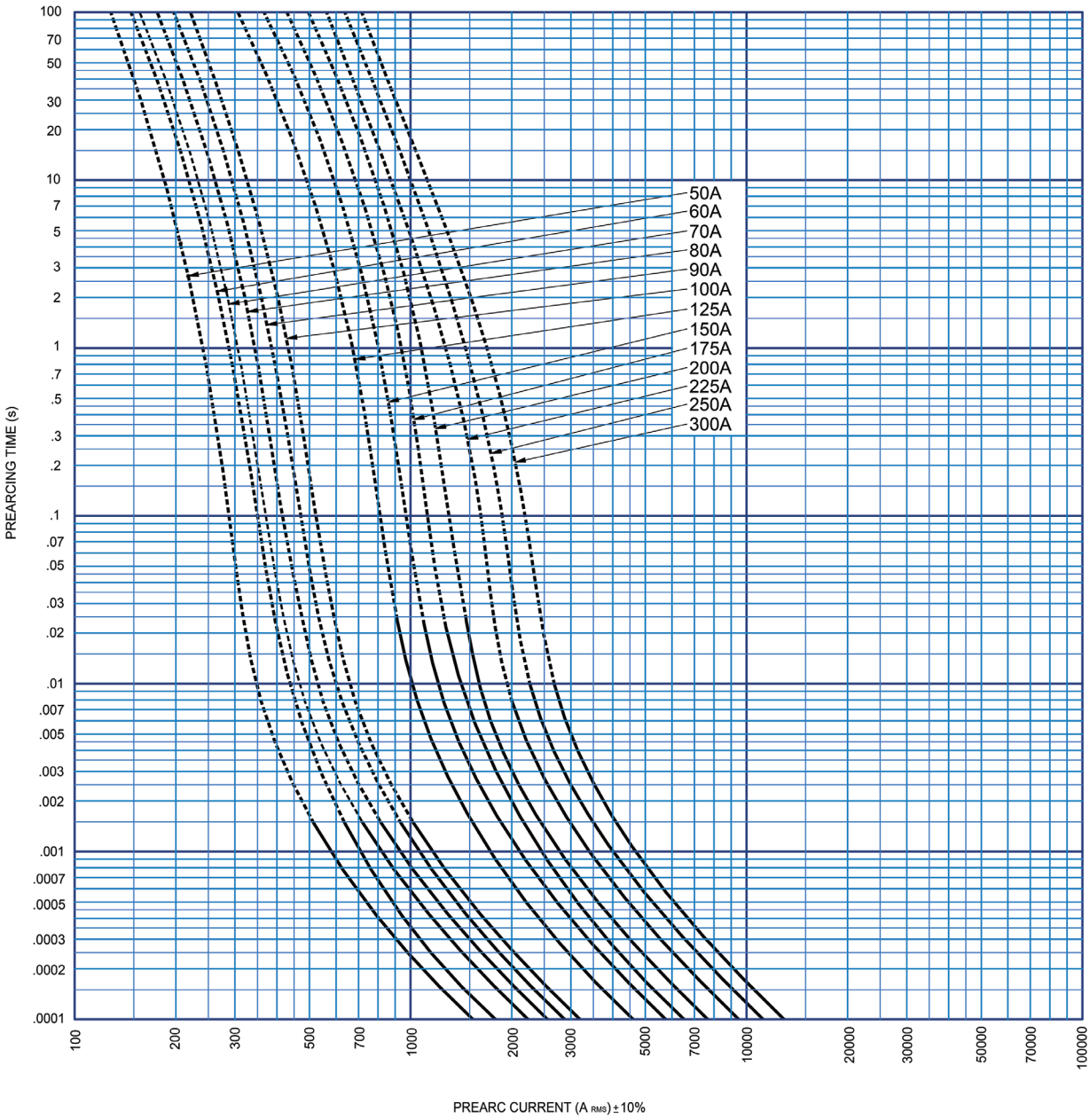
P243C

1SC250

Fuse blocks

Catalog number	Item number	Rated DC voltage	Application DC Fuses	Contact Materials	Weight
P243 Fuse blocks					
P243C	P243C	700 V	D70QS fuses from 225 to 600A	Tin-Plated Copper	0.12 kg
P266 Fuse blocks					
P266A	P266A	1000 V	D100QS fuses from 225 to 300A	Stainless Steel	0.39 kg
1SC/1MSC Modular Fuse blocks					
1SCM8	1SCM8	1000 V	D100QS up to 200A and D70QS up to 400A	Zinc-Plated Steel	68 g
1SC250	1SC250	1000 V	D100QS up to 200A and D70QS up to 400A	Zinc-Plated Steel	68 g
1SC375	1SC375	1000 V	D100QS 225A-300A and D70QS 450A-600A	Zinc-Plated Steel	68 g
1SCM10	1SCM10	1000 V	D100QS 225A-300A and D70QS 450A-600A	Zinc-Plated Steel	68 g

MELTING TIME CURRENT CURVE



WATTS LOSS VS % RATED CURRENT