

Over current switch, 80A, 1p, D-Char

Part no. AZ-3-D80
Article no. 211824
Catalog No. AZ-3-D80

Similar to illustration

Delivery programme

Basic function			Miniature circuit breakers
Number of poles			3 pole
Tripping characteristic			D
Application			Switchgear for industrial and advanced commercial applications
Rated current	I_n	A	80
Rated switching capacity acc. to IEC/EN 60947-2		kA	20
Product range			AZ

Technical data

Electrical

Standards			IEC/EN 60947-2
Rated operational voltage	U_e	V	
	U_e	V AC	230/400
		V DC	60 (per pole)
Rated switching capacity acc. to IEC/EN 60947-2		kA	20
Operational switching capacity		kA	20
Characteristic			Similar: D, C
Max. back-up fuse		A gL/gG	200
Selectivity Class			Compliant with Class 3
Lifespan	Operations		> 10000
Direction of incoming supply			as required

Mechanical

Standard front dimension		mm	45
Enclosure height		mm	90
Terminal protection			Finger and back-of-hand proof to BGV A2
Mounting width per pole		mm	27
Mounting			IEC/EN 60715 top-hat rail
Degree of Protection			IP20, IP40 (when fitted)
Terminals top and bottom			Lift terminals
Terminal capacities		mm^2	
		mm^2	2.5 … 50

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	80
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	21.4
Static heat dissipation, non-current-dependent	P_{vs}	W	0
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	55
			linear, per +1 °C, results in a 0.5% reduction of current carrying capacity
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.

10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

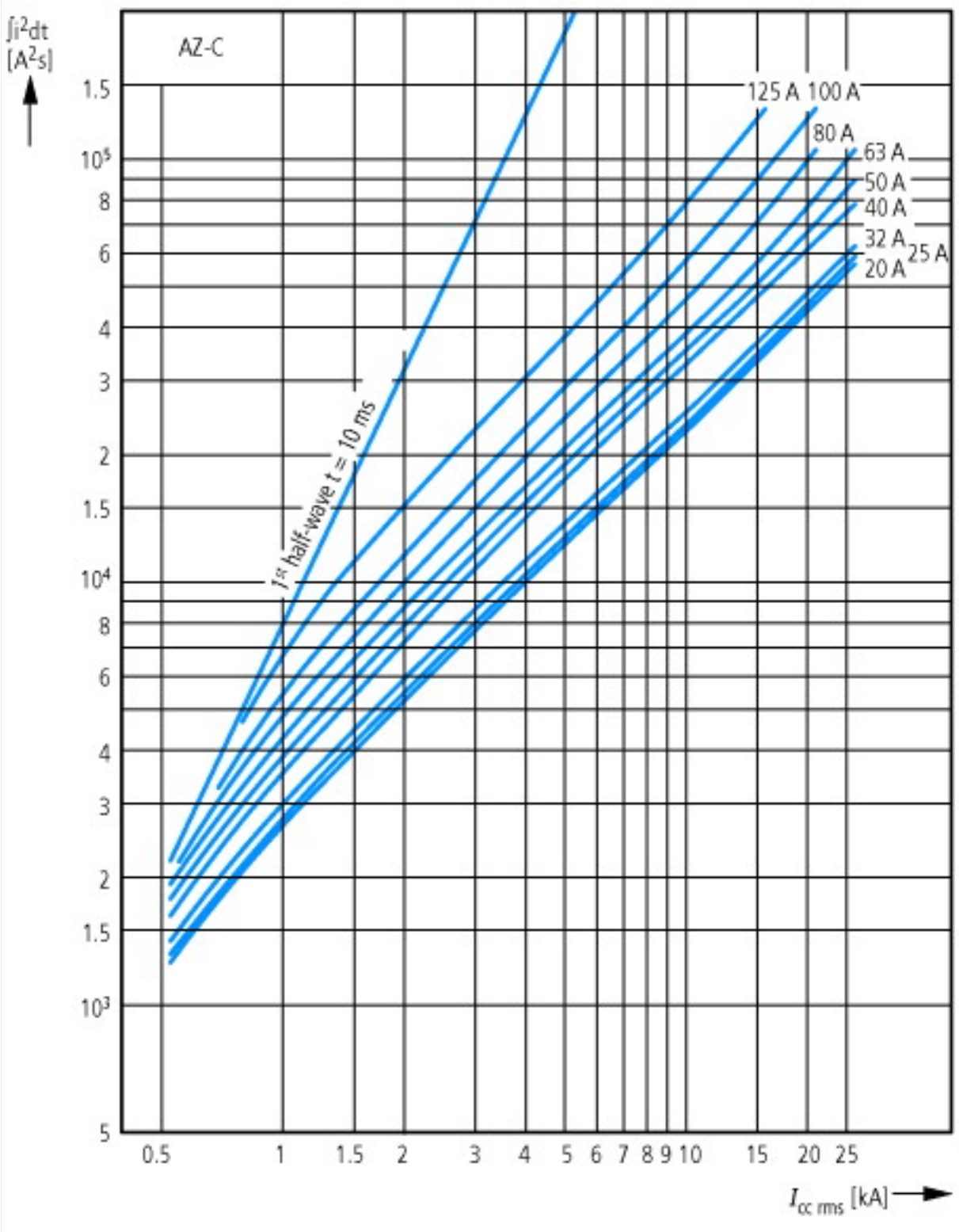
Technical data ETIM 6.0

Circuit breakers and fuses (EG000020) / Miniature circuit breaker (MCB) (EC000042)

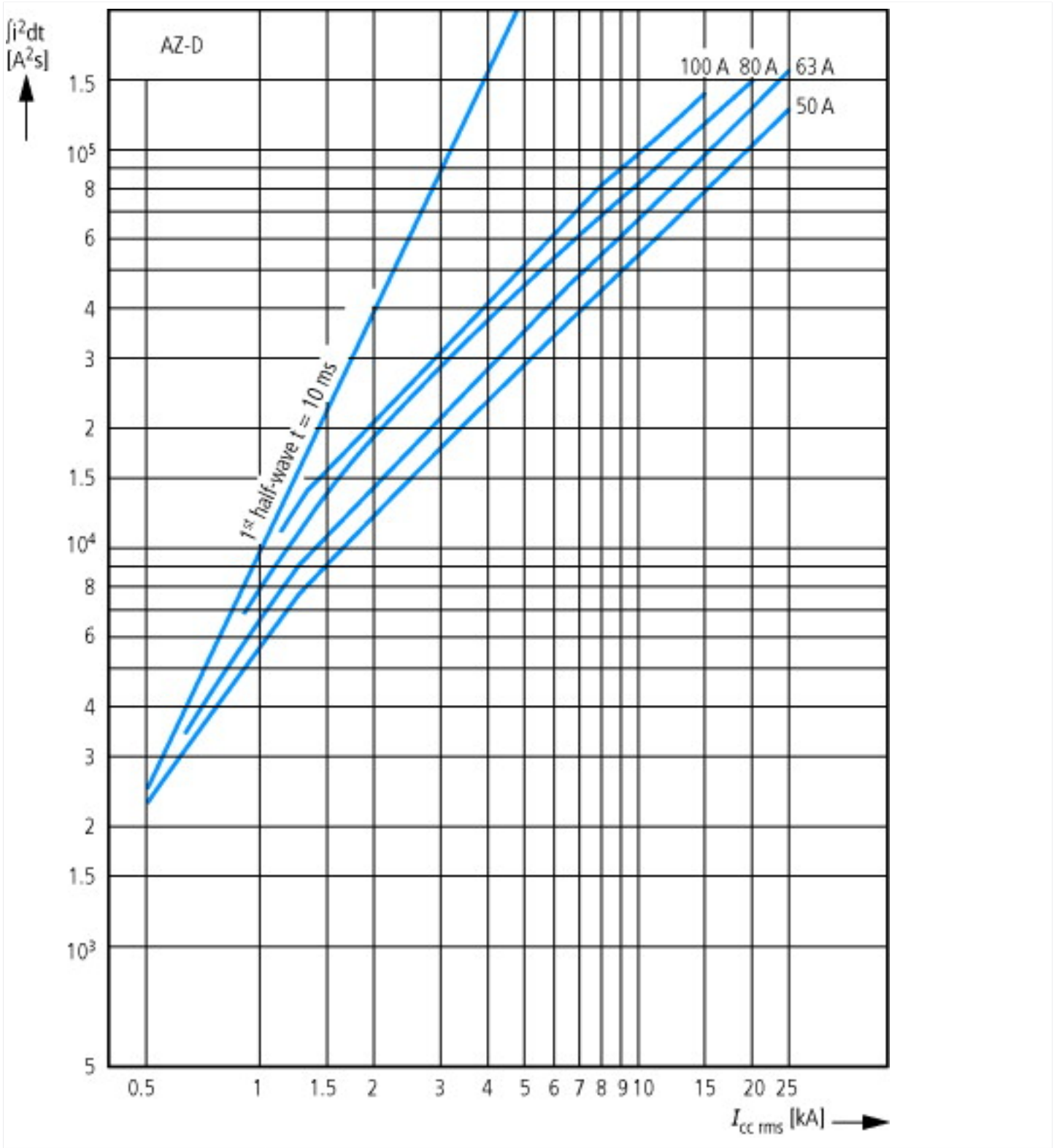
Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ecl@ss8.1-27-14-19-01 [AAB905011])

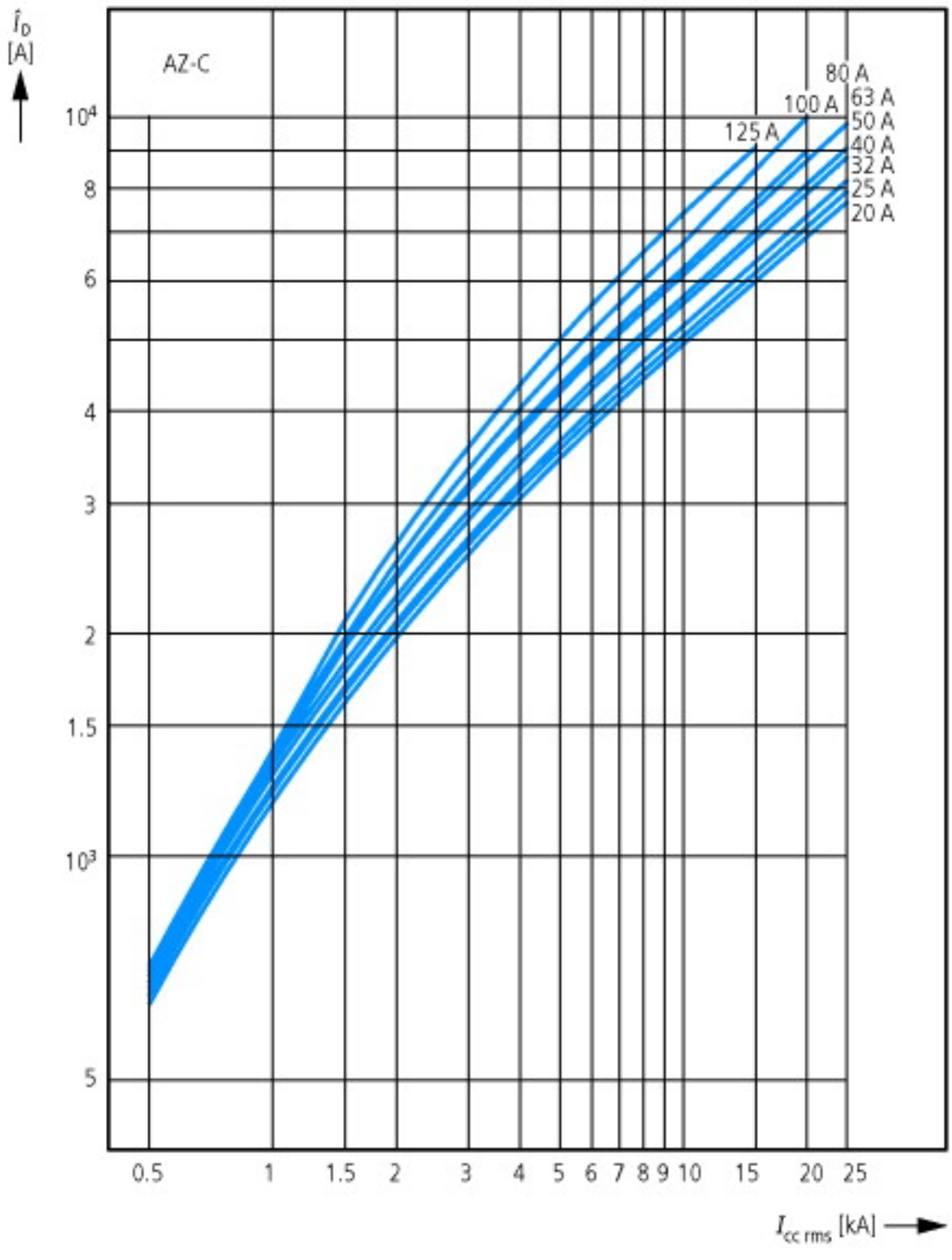
Release characteristic			D
Number of poles (total)			3
Number of protected poles			1
Nominal rated current		A	80
Nominal rated voltage		V	400
Rated short-circuit breaking capacity Icn EN 60898 at 230 V		kA	20
Rated short-circuit breaking capacity Icn EN 60898 at 400 V		kA	20
Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V		kA	0
Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V		kA	0
Voltage type			AC
Current limiting class			3
Frequency		Hz	50 - 60
Concurrently switching N-neutral			No
Suitable for flush-mounted installation			No
Over voltage category			3
Pollution degree			2
Width in number of modular spacings			4.5
Built-in depth		mm	75
Additional equipment possible			Yes
Degree of protection (IP)			IP20

Characteristics

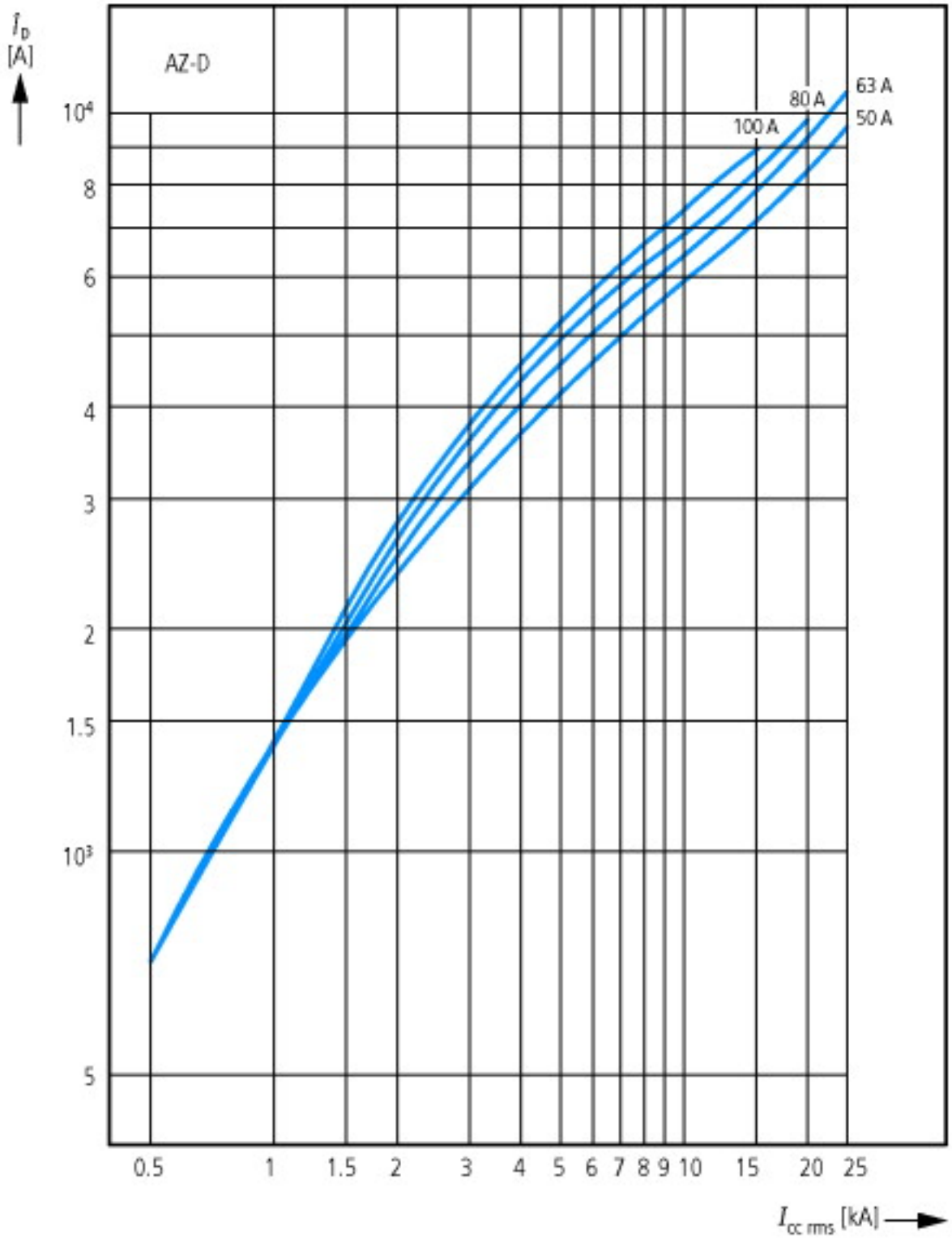


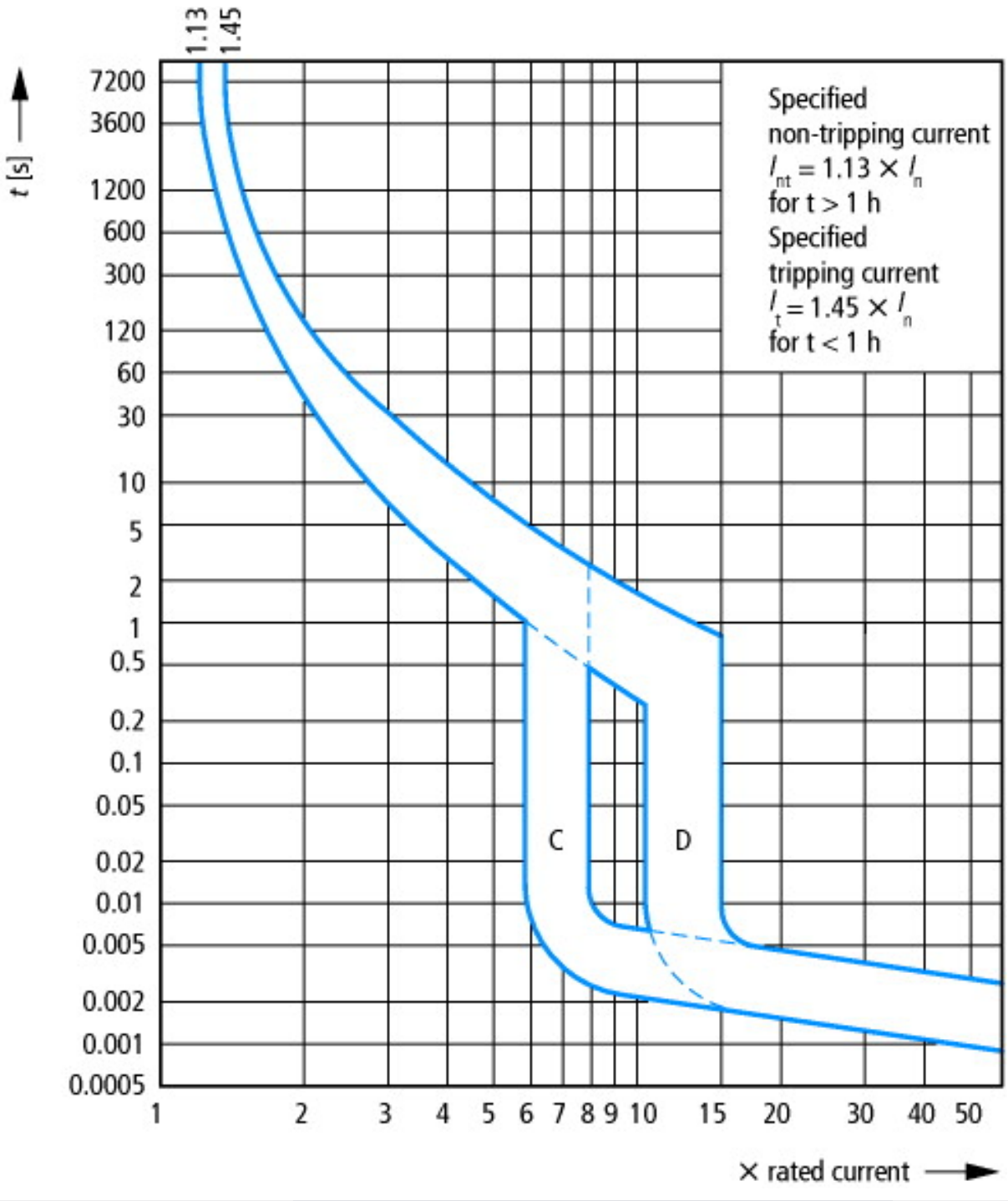
Let-through energy I^2t


∫i²dt
[A²s]
AZ-D
100 A
80 A
63 A
50 A
1ˢᵗ half-wave t = 10 ms
1.5
10⁵
8
6
4
3
2
1.5
10⁴
8
6
4
3
2
1.5
10³
5
0.5
1
1.5
2
3
4
5
6
7
8
9
10
15
20
25
I cc rms [kA]



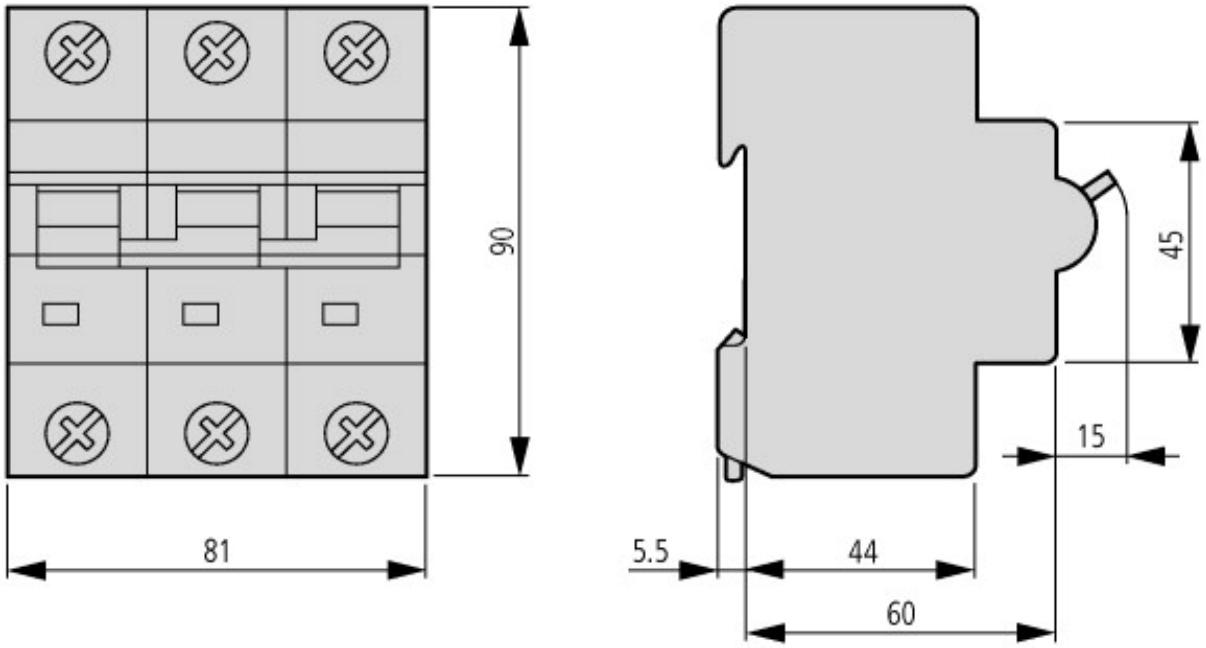
Let-through current $\hat{i}_D$


I_D [A]
AZ-D
10^4
8
6
4
3
2
1.5
10^3
5
63 A
80 A
100 A
50 A
0.5
1
1.5
2
3
4
5
6
7
8
9
10
15
20
25
$I_{cc\ rms}$ [kA]



Tripping characteristic at 30 °C:
C, D according to IEC/EN 60898

Dimensions



Additional product information (links)

AWA1220-1755 Circiut-breaker	
AWA1220-1755 Circiut-breaker	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/17550701.pdf

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