More information

		Standard motor starters	High-Feature motor starters	
		Mechanically switching without inputs	Mechanically switching with inputs	Mechanically switching with inputs and soft starter function
Technology designation[4]		**DSe, RSe**	**DSe, RSe**	**sDSSte, sDSte, sRSSte, sRSte**
Mechanics and environment				
Motor starters that can be connected to ET 200pro or modules with width of 110 mm		max. 8		
Mounting dimensions (W x H x D)				
• Direct-on-line starter and reversing starter	mm	110 x 230 x 150		110 x 230 x 160
Permissible ambient temperature				
• During operation	°C	-25 ... +55, from +40 with derating		
• During storage	°C	-40 ... +70		
Permissible mounting positions		Vertical, horizontal		
Vibration resistance acc. to IEC 60068, Part 2-6		2 *g*		
Shock resistance acc. to IEC 60068, Part 2-27		Half-sine 15 *g*/11 ms		
Degree of protection		IP65		
Pollution degree		3, IEC 60664 (IEC 61131)		
Electrical specifications				
Power consumption at 24 V DC				
• From auxiliary circuit L+/M (U1)	mA	Approx. 40		
• From auxiliary circuit A1/A2 (U2)	mA	Approx. 200		
Rated operational current for power bus I_e	A	25		
Rated operational voltage U_e	V AC	400		
• Approval acc. to EN 60947-1, Appendix N	V AC	Up to 400		Up to 400
• Approval acc. to CSA and UL	V AC	Up to 600		Up to 480
Approval				
• DIN VDE 0106, Part 101	V	Up to 400		Up to 480
• CSA and UL approval	V	Up to 600		Up to 480
Conductor cross-sections				
• Incoming energy supply	mm^2	Max. 6 x 4		
Touch protection		Finger-safe		
Rated impulse withstand voltage U_{imp}	kV	6		
Rated insulation voltage U_i	V	400		
Rated operational current for starters I_e				
• AC-1/2/3 at 40 °C				
- at 400 V	A	0.15 ... 2.0/1.5 ... 12.0		0.15 ... 2.0/1.5 ... 12.0[1]
- at 500 V	A	0.15 ... 2.0/1.5 ... 9.0		
• AC-4 at 40 °C				
- at 400 V	A	0.15 ... 2.0/1.5 ... 4.0		
Rated short-circuit breaking capacity	kA	100 at 400 V		
Type of coordination acc. to IEC 60947-4-1		1		
Power of induction motors at 400 V	kW	max. 5.5		Max. 5.5/4[2]
Utilization categories		AC-1, AC-2, AC-3, AC-4		AC-53a[3] (max. 9 A with deactivated soft star function up to CLASS 10)
Protective separation between main and auxiliary circuits	V	400, acc. to EN 60947-1, Appendix N		
Endurance of contactor				
• Mechanical		30 million operating cycles		--
• Electrical		Up to 10 million operating cycles; dependent on the current loading (see Manual)		--
Reliable switching frequency		Dependent on the current loading, motor starting time and relative ON period (see Manual)		
Operating times at 0.85 ... 1.1 x U_e				
• Closing delay	ms	11 ... 50		--
• Opening delay	ms	5 ... 45		--

1) **Caution!**
With deactivated soft starter control function the the permissible rated operational current is reduced to 9 A up to CLASS 10.

2) With parameterization as electronic starter max. 4 kW.

3) 8-hour operation.

4) DS ... direct-on-line starter
RS ... Reversing starters
DSS . Direct-on-line soft starters
RSS . Reversing soft starters
e ..... Motor protection (electronic)
te ..... full motor protection (thermal + electronic)
s ..... electronic switching with semiconductor

Motor starters, Standard and High-Feature

		Standard motor starters	High-Feature motor starters	
		DSe, RSe	DSe, RSe	sDSSte, sDSte, sRSSte, sRSte
Device functions				
Parameterizable rated operational current		Yes		
Parameterizable current limit values		No	Yes, 2 limit values	
Parameterizable response in case of current limit violation		No	Yes	
Zero current monitoring		Yes		
Parameterizable response in case of zero current violation		Yes		
Parameterizable current unbalance limit		No, fixed limit value (30 % x I_e)	Yes, 30 % ... 60 % x I_e	
Parameterizable response in case of unbalance limit violation		Yes		
Motor blocking monitoring		No	Yes	
Parameterizable blocking current limit		No	Yes, 150 % ... 1000 % x I_e	
Parameterizable blocking time limit	s	No	Yes, 1 ... 5	
Current value transmission		Yes		
Group warning diagnostics		No	Yes, parameterizable	
Group diagnostics		Yes, parameterizable		
Emergency start		Yes		
Digital inputs • Parameterizable input signal • Parameterizable input level • Parameterizable input signal delay • Parameterizable input signal extension • Parameterizable input control actions	 ms ms 	 No No No No No	Yes, 4 inputs Yes, latching/ non-latching Yes, NC contacts/NO contacts Yes, 10 ... 80 Yes, 0 ... 200 Yes, 12 different actions	
400 V brake output		Yes, ordering option		
Parameterizable brake enabling delay	s	Yes, -2.5 ... 2.5		
Parameterizable holding time of the brake during stopping	s	Yes, 0 ... 25		
Parameterizable start-up type		No		Yes
Parameterizable ramp-down time		No		Yes
Parameterizable starting voltage		No		Yes
Parameterizable stopping voltage		No		Yes
Local device interface		Yes		
Firmware update		Yes, by trained personnel		
Thermal motor model		Yes		
Parameterizable trip class		No, CLASS 10 fixed	Yes, CLASS 5, 10, 15, 20	
Parameterizable response in case of overload of thermal motor model		No	Yes, 3 possible states	
Advance warning limit for motor heating	%	No	Yes, parameterizable 0 ... 95	
Advance warning limit time-related trip reserve	s	No	Yes, parameterizable 0 ... 500	
Parameterizable recovery time	min	No	Yes, 1 ... 30	
Parameterizable protection against voltage failure		No, permanently integrated	Yes	
Reversing start function		Yes, ordering option		
Parameterizable interlock time for reversing starters		No, 150 ms fixed	Yes, 0 ... 60 s	
Integrated logbook functions		Yes, 3 device logbooks		
Integrated statistics data memory		Yes		
Parameterizable response in case of CPU / master stop		Yes		
Device indications • Group fault • Switching state • Device status • Digital inputs		 SF LED (red) STATE LED (red, yellow, green) DEVICE LED (red, yellow, green) No	 IN 1 ... IN 4, LED	