



Motor Protection

Manual Motor Starters
Thermal Overload Relays
Electronic Overload Relays

Contents

Manual Motor Starters

Overview	5/2
Ordering Details MS 116 and Accessories	5/4
Ordering Details MS 325 and Accessories	5/6
Ordering Details MS 450, MS 495 and Accessories	5/8
Technical Data	5/10
Coordination with Short-circuit Protection Devices	5/15

Thermal / Electronic Overload Relays

Overview	5/16
Coordination with Short-circuit Protection Devices	5/40

Thermal Overload Relays

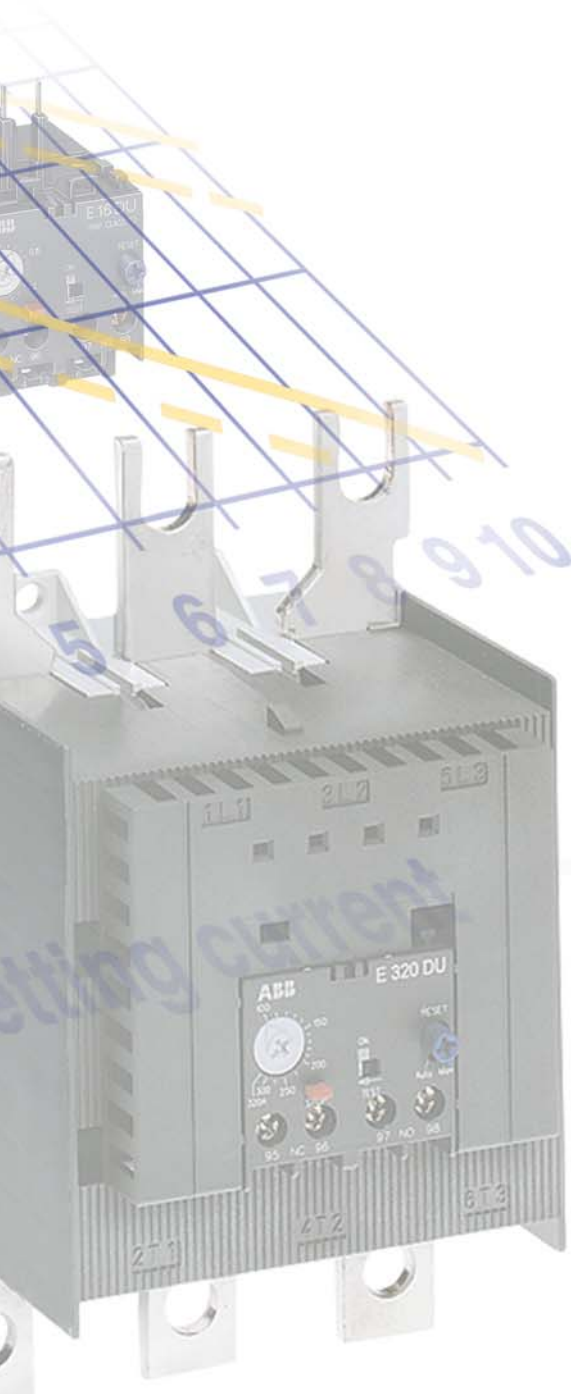
Ordering Details T 7 DU	5/18
Ordering Details TA 25 DU ... TA 450 DU/SU and Accessories	5/19
Description	5/26
Technical Data	5/27
Tripping Curves	5/33

Electronic Overload Relays

Ordering Details E 16 DU and Accessories	5/24
Ordering Details E 200 DU ... E 1250 DU and Accessories	5/25
Technical Data	5/36
Tripping Curves	5/38

Additional Information

General Technical Data and Approvals	Section 7
Terminal Marking and Positioning	Section 8
Dimensions	Section 9



Manual Motor Starters MS...

with Thermal and Magnetic Protection



Manual Motor Starters

		Types	MS 116	MS 325
Setting ranges	Number		11	13
	from		0.16 ... 0.25 A	0.16 ... 0.25 A
	to		10 ... 16 A	20 ... 25 A

Mounting possibilities onto 3-pole contactors

		Types	A 9	A 12	A 16	A 26	A 9	A 12	A 16	A 26
a.c. operated contactor range	Connecting link	Types	BEA 16/116		BEA 26/116		BEA 16/325		BEA 26/325	
		Types	AL 9		AL 12		AL 16		AL 26	
d.c. operated contactor range	Connecting link	Types	BEA 16/116AL		-		BEA 16/325AL		BEA 26/325AL	
		Types	AL 9		AL 12		AL 16		AL 26	

Mounting plates for starters

D.O.L starters	Types	Not required	PM 26-13	Not required	PM 26-13
Reversing starters	Types	PM 26-23		PM 26-23	

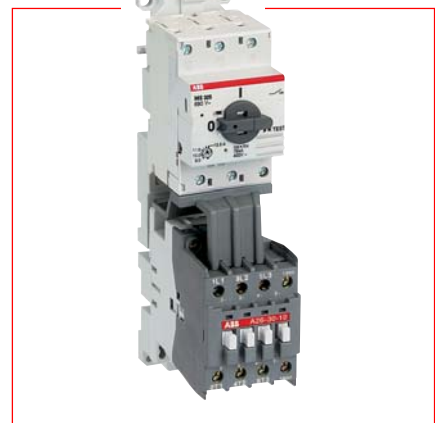
Accessories for Manual Motor Starters

Auxiliary switches - Front mounting	Types	HKF1-11 (1NO + 1NC)	HKF-11 (1NO + 1NC)
-------------------------------------	-------	----------------------------	---------------------------

Examples of Complete Assembly



Manual motor starter **MS 116..** + contactor **A 9..**
+ connecting link **BEA 16/116**



Manual motor starter **MS 325..** + contactor **A 26..**
+ connecting link **BEA 26/325** + mounting plate **PM26-13**