

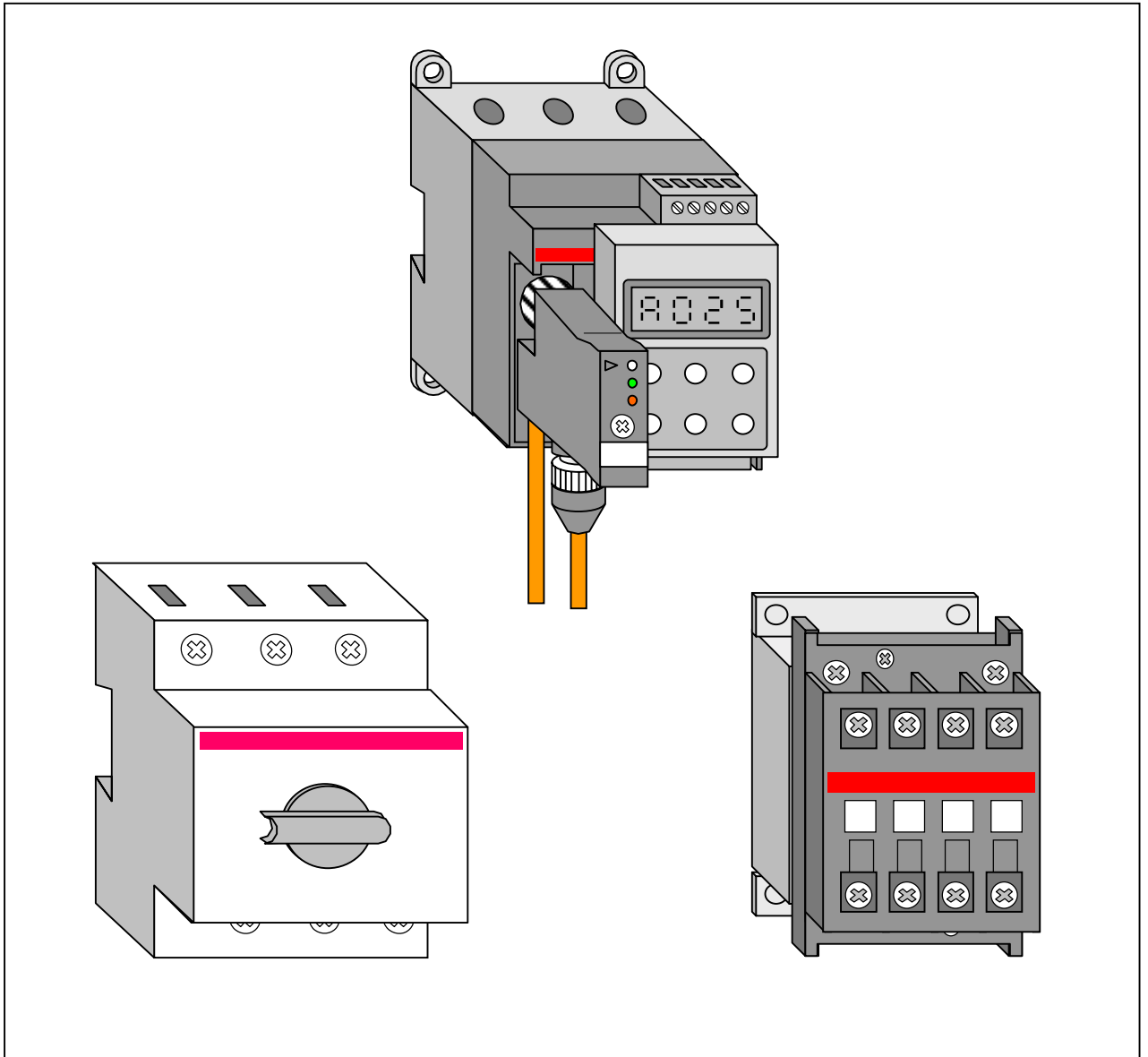
# Coordination Tables (Circuit breakers)

## FBP FieldBusPlug



**Preliminary  
Documentation**  
This document describes  
planned functions that  
subject to change.

## Universal Motor Controller UMC22-FBP





# Universal Motor Controller

## UMC22-FBP

Coordination for Circuit-Breaker / Preliminary



### DOL, 400V, 100kA, Normal start - up, Type 2

Preliminary Table; will be superseded by the official ABB Coordination Tables on ABB Web site on second quarter of 2004

Motor		Manual Protection Circuit Breaker		Contactor		Connecting link	Current transformer	Electronic Overload Protection Relay	
Rated Output	Rated Current	Type	Magnetic tripping current	Type	Rated Operational Current AC-3	between Circuit Breaker and Contactor	Type	Type	Current setting range
Pe[kW]	Ie [A]		[A]		[A]				[A]
0,06	0,22	MO325-0,4	2,44	A12	12	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,09</b>	<b>0,34</b>	<b>MO325-0,4</b>	<b>3,9</b>	<b>A12</b>	<b>12</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,12	0,44	MO325-0,63	6,14	A12	12	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,18</b>	<b>0,72</b>	<b>MO325-1</b>	<b>11,5</b>	<b>A12</b>	<b>12</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,25	0,83	MO325-1	11,5	A12	12	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,37</b>	<b>1,12</b>	<b>MO325-1,6</b>	<b>18,4</b>	<b>A12</b>	<b>12</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,55	1,45	MO325-1,6	18,4	A12	12	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,75</b>	<b>1,9</b>	<b>MO325-2,5</b>	<b>28,7</b>	<b>A12</b>	<b>12</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
1,1	2,6	MO325-4	48	A12	12	BEA 16/325	-	UMC22	0,24 - 63 **
<b>1,5</b>	<b>3,5</b>	<b>MO325-4</b>	<b>48</b>	<b>A12</b>	<b>12</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
2,2	4,8	MO325-6,3	94	A12	12	BEA 16/325	-	UMC22	0,24 - 63 **
<b>3</b>	<b>6,5</b>	<b>MO325-9</b>	<b>135</b>	<b>A26</b>	<b>26</b>	<b>BEA 26/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
4	8,5	MO325-9	135	A26	26	BEA 26/325	-	UMC22	0,24 - 63 **
<b>5,5</b>	<b>11,5</b>	<b>MO497-16</b>	<b>208</b>	<b>A26</b>	<b>26</b>	-	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
7,5	15	MO497-20	260	A26	26	-	-	UMC22	0,24 - 63 **
<b>11</b>	<b>22</b>	<b>MO497-25</b>	<b>325</b>	<b>A26</b>	<b>26</b>	-	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
15	28,5	MO497-32	416	A30	30	-	-	UMC22	0,24 - 63 **
<b>18,5</b>	<b>35</b>	<b>MO497-40</b>	<b>520</b>	<b>A50</b>	<b>50</b>	-	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
22	41	MO497-50	650	A50	50	-	-	UMC22	0,24 - 63 **
<b>30</b>	<b>56</b>	<b>MO497-63</b>	<b>819</b>	<b>A63</b>	<b>63</b>	-	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
37	68	MO497-75	975	A75	75	-	KORC 4L - 185/4	UMC22	60 - 185 **
<b>45</b>	<b>83</b>	<b>MO497-90</b>	<b>1170</b>	<b>A95</b>	<b>95</b>	-	<b>KORC 4L - 185/4</b>	<b>UMC22</b>	<b>60 - 185 **</b>
55	98	MO497-100	1300	A110	110	-	KORC 4L - 185/4	UMC22	60 - 185 **
<b>75</b>	<b>135</b>	<b>S3X200 In200 *</b>	<b>2200</b>	<b>A145</b>	<b>145</b>	<b>BEA 185/S3/S4</b>	<b>KORC 4L - 185/4</b>	<b>UMC22</b>	<b>60 - 185 **</b>
90	158	S3X200 In200 *	2200	A185	185	BEA 185/S3/S4	KORC 4L - 185/4	UMC22	60 - 185 **
<b>110</b>	<b>193</b>	<b>S4L250 PR211-I In250 *</b>	<b>3000</b>	<b>A210</b>	<b>210</b>	<b>BEA 210/S4</b>	<b>KORC 4L - 310/4</b>	<b>UMC22</b>	<b>180 - 310 **</b>
132	232	S5L400 PR211-I In320 *	3840	A260	260	BEA 300/S5	KORC 4L - 310/4	UMC22	180 - 310 **
<b>160</b>	<b>282</b>	<b>S5L400 PR211-I In400 *</b>	<b>4800</b>	<b>A300</b>	<b>300</b>	<b>BEA 300/S5</b>	<b>KORC 4L - 310/4</b>	<b>UMC22</b>	<b>180 - 310 **</b>
200	349	S6L630 PR211-I In630 *	6300	AF400	400	BEA 750/S6	KORC 5L - 500/4	UMC22	300 - 500 **
<b>250</b>	<b>430</b>	<b>S6L630 PR211-I In630 *</b>	<b>7560</b>	<b>AF580</b>	<b>580</b>	<b>BEA 750/S6</b>	<b>KORC 5L - 500/4</b>	<b>UMC22</b>	<b>300 - 500 **</b>
290	520	S6L800 PR211-I In800 *	8000	AF580	580	BEA 750/S6	KORC 5L - 850/4	UMC22	450 - 850 **
<b>315</b>	<b>545</b>	<b>S6L800 PR211-I In800 *</b>	<b>9600</b>	<b>AF580</b>	<b>580</b>	<b>BEA 750/S6</b>	<b>KORC 5L - 850/4</b>	<b>UMC22</b>	<b>450 - 850 **</b>
355	610	S6L800 PR211-I In800 *	9600	AF750	750	BEA 750/S6	KORC 5L - 850/4	UMC22	450 - 850 **
<b>400</b>	<b>675</b>	<b>S6L800 PR211-I In800 *</b>	<b>9600</b>	<b>AF750</b>	<b>750</b>	<b>BEA 750/S6</b>	<b>KORC 5L - 850/4</b>	<b>UMC22</b>	<b>450 - 850 **</b>

\* : Magnetic adjustable setting only

S3X : Magnetic adjustable from 4 to 12 In

S5L & S6L PR211-I adjustable : 1,5-2-4-6-8-10-12x In

\*\* : Electronic Overload Protection - class 10 selecter



# Universal Motor Controller

## UMC22-FBP

Coordination for Circuit-Breaker / Preliminary



### DOL, 400V, 100kA, Normal start - up, Type 1

Preliminary Table; will be superseded by the official ABB Coordination Tables on ABB Web site on second quarter of 2004

Motor		Manual Protection Circuit Breaker		Contactor		Connecting link	Current transformer	Electronic Overload Protection Relay	
Rated Output	Rated Current	Type	Magnetic tripping current	Type	Rated Operational Current AC-3	between Circuit Breaker and Contactor	Type	Type	Current setting range
Pe[kW]	Ie [A]		[A]		[A]				[A]
0,06	0,22	MO325-0,4	2,44	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,09</b>	<b>0,34</b>	<b>MO325-0,4</b>	<b>3,9</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,12	0,44	MO325-0,63	6,14	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,18</b>	<b>0,72</b>	<b>MO325-1</b>	<b>11,5</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,25	0,83	MO325-1	11,5	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,37</b>	<b>1,12</b>	<b>MO325-1,6</b>	<b>18,4</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,55	1,45	MO325-1,6	18,4	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,75</b>	<b>1,9</b>	<b>MO325-2,5</b>	<b>28,7</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
1,1	2,6	MO325-4	48	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>1,5</b>	<b>3,5</b>	<b>MO325-4</b>	<b>48</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
2,2	4,8	MO325-6,3	94	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>3</b>	<b>6,5</b>	<b>MO325-9</b>	<b>135</b>	<b>A9</b>	<b>9</b>	<b>BEA 26/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
4	8,5	MO325-9	135	A9	9	BEA 26/325	-	UMC22	0,24 - 63 **

\*\* : Electronic Overload Protection Relay - class 10 selecter



# Universal Motor Controller UMC22-FBP

Coordination for Circuit-Braker / Preliminary



## DOL, 400V, 100kA, Normal start - up, Type 2, Heavy Duty\*\*

Preliminary Table; will be superseded by the official ABB Coordination Tables on ABB Web side on second quarter of 2004

Motor		Manual Protection Circuit Breaker		Contactor		Connecting link	Current transformer	Electronic Overload Protection Relay	
Rated Output	Rated Current	Type	Magnetic tripping current	Type	Rated Operational Current AC-3 [A]	between Circuit Breaker and Contactor	Type	Type	Current setting range
Pe[kW]	Ie [A]		[A]						[A]
0,06	0,22	MO325-0,4	2,44	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,09</b>	<b>0,34</b>	<b>MO325-0,4</b>	<b>3,9</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,12	0,44	MO325-0,63	6,14	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,18</b>	<b>0,72</b>	<b>MO325-1</b>	<b>11,5</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,25	0,83	MO325-1	11,5	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,37</b>	<b>1,12</b>	<b>MO325-1,6</b>	<b>18,4</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,55	1,45	MO325-1,6	18,4	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,75</b>	<b>1,9</b>	<b>MO325-2,5</b>	<b>28,7</b>	<b>A12</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
1,1	2,6	MO325-4	48	A12	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>1,5</b>	<b>3,5</b>	<b>MO325-4</b>	<b>48</b>	<b>A12</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
2,2	4,8	MO325-6,3	94	A12	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>3</b>	<b>6,5</b>	<b>MO325-9</b>	<b>135</b>	<b>A26</b>	<b>9</b>	<b>BEA 26/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>

\*\* : Electronic Overload Protection - class 20 selectec



**Universal Motor Controller**  
**UMC22-FBP**  
 Coordination for Circuit-Braker / Preliminary



**DOL, 400V, 100kA, Normal start - up, Type 1,  
 Heavy Duty\*\***

Preliminary Table; will be superseded by the official ABB Coordination Tables on ABB Web side on second quarter of 2004

Motor		Manual Protection Circuit Breaker		Contactor		Connecting link	Current transformer	Electronic Overload Protection Relay	
Rated Output	Rated Current	Type	Magnetic tripping current	Type	Rated Operational Current AC-3	between Circuit Breaker and Contactor	Type	Type	Current setting range
Pe[kW]	Ie [A]		[A]		[A]				[A]
0,06	0,22	MO325-0,4	2,44	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,09</b>	<b>0,34</b>	<b>MO325-0,4</b>	<b>3,9</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,12	0,44	MO325-0,63	6,14	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,18</b>	<b>0,72</b>	<b>MO325-1</b>	<b>11,5</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,25	0,83	MO325-1	11,5	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,37</b>	<b>1,12</b>	<b>MO325-1,6</b>	<b>18,4</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,55	1,45	MO325-1,6	18,4	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>0,75</b>	<b>1,9</b>	<b>MO325-2,5</b>	<b>28,7</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
1,1	2,6	MO325-4	48	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>1,5</b>	<b>3,5</b>	<b>MO325-4</b>	<b>48</b>	<b>A9</b>	<b>9</b>	<b>BEA 16/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
2,2	4,8	MO325-6,3	94	A9	9	BEA 16/325	-	UMC22	0,24 - 63 **
<b>3</b>	<b>6,5</b>	<b>MO325-9</b>	<b>135</b>	<b>A9</b>	<b>9</b>	<b>BEA 26/325</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>

\*\* : Electronic Overload Protection - class 20 selectec



# Universal Motor Controller

## UMC22-FBP

Coordination for Circuit-Breaker / Preliminary



### DOL, 690 V, 75 kA, Normal start - up, Type 2

Preliminary Table; will be superseded by the official ABB Coordination Tables on ABB Web side on second quarter of 2004

Motor		Manual Protection Circuit Breaker		Contactor		Connecting link	Current transformer	Electronic Overload Protection Relay	
Rated Output	Rated Current	Type	Magnetic tripping current	Type	Rated Operational Current AC-3	between Circuit Breaker and Contactor	Type	Type	Current setting range
Pe[kW]	Ie [A]		[A]		[A]				[A]
0,12	0,26	MO325-0,40	3,9	A12	12	-	-	UMC22	0,24 - 63 **
<b>0,18</b>	<b>0,42</b>	<b>MO325-0,63</b>	<b>6,14</b>	<b>A12</b>	<b>12</b>	-	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,25	0,48	MO325-0,63	6,14	A12	12	-	-	UMC22	0,24 - 63 **
<b>0,37</b>	<b>0,65</b>	<b>MO325-1,00</b>	<b>11,5</b>	<b>A12</b>	<b>12</b>	-	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
0,55	0,84	MO325-1,00	11,5	A12	12	-	-	UMC22	0,24 - 63 **
<b>0,75</b>	<b>1,1</b>	<b>MO325-1,60</b>	<b>18,4</b>	<b>A12</b>	<b>12</b>	-	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
1,1	1,5	MO325-1,60	18,4	A12	12	-	-	UMC22	0,24 - 63 **
<b>1,5</b>	<b>1,99</b>	<b>T4L250 MA In10 *</b>	<b>60</b>	<b>A12</b>	<b>12</b>	-	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
1,85	2,54	T4L250 MA In10 *	60	A12	12	-	-	UMC22	0,24 - 63 **
<b>2,2</b>	<b>2,77</b>	<b>T4L250 MA In10 *</b>	<b>60</b>	<b>A12</b>	<b>12</b>	-	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
3	3,74	T4L250 MA In10 *	60	A12	12	-	-	UMC22	0,24 - 63 **
<b>4</b>	<b>4,97</b>	<b>T4L250 MA In10 *</b>	<b>70</b>	<b>A26</b>	<b>26</b>	-	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
5,5	6,41	T4L250 MA In10 *	80	A26	26	-	-	UMC22	0,24 - 63 **
<b>7,5</b>	<b>8,54</b>	<b>T4L250 MA In10 *</b>	<b>130</b>	<b>A26</b>	<b>26</b>	-	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
11	12,4	T4L250 MA In25 *	175	A26	26	-	-	UMC22	0,24 - 63 **
<b>15</b>	<b>18</b>	<b>T4L250 MA In25 *</b>	<b>275</b>	<b>A95</b>	<b>95</b>	-	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
18,5	21	T4L250 MA In52 *	312	A145	145	BEA 185/S3/S4	-	UMC22	0,24 - 63 **
<b>22</b>	<b>25</b>	<b>T4L250 MA In52 *</b>	<b>364</b>	<b>A145</b>	<b>145</b>	<b>BEA 185/S3/S4</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
30	33	T4L250 MA In52 *	468	A145	145	BEA 185/S3/S4	-	UMC22	0,24 - 63 **
<b>37</b>	<b>41</b>	<b>T4L250 MA In100 *</b>	<b>600</b>	<b>A145</b>	<b>145</b>	<b>BEA 185/S3/S4</b>	-	<b>UMC22</b>	<b>0,24 - 63 **</b>
45	49	T4L250 MA In100 *	700	A145	145	BEA 185/S3/S4	-	UMC22	0,24 - 63 **
<b>55</b>	<b>60</b>	<b>T4L250 MA In100 *</b>	<b>900</b>	<b>A145</b>	<b>145</b>	<b>BEA 185/S3/S4</b>	<b>KORC 4L - 185/4</b>	<b>UMC22</b>	<b>60 - 185 **</b>
75	80	T4L250 MA In125 *	1250	A145	145	BEA 185/S3/S4	KORC 4L - 185/4	UMC22	60 - 185 **
<b>90</b>	<b>95</b>	<b>T4L250 MA In125 *</b>	<b>1375</b>	<b>A145</b>	<b>145</b>	<b>BEA 185/S3/S4</b>	<b>KORC 4L - 185/4</b>	<b>UMC22</b>	<b>60 - 185 **</b>
110	115	T4L250 MA In200 *	1600	A145	145	BEA 185/S3/S4	KORC 4L - 185/4	UMC22	60 - 185 **
<b>132</b>	<b>139</b>	<b>T4L250 MA In200 *</b>	<b>2000</b>	<b>A185</b>	<b>185</b>	<b>BEA 300/S5</b>	<b>KORC 4L - 185/4</b>	<b>UMC22</b>	<b>60 - 185 **</b>
160	167	T4L250 MA In200 *	2400	A185	185	BEA 300/S5	KORC 4L - 185/4	UMC22	60 - 185 **
<b>200</b>	<b>202</b>	<b>T5L400 PR221 DS-I In320 *</b>	<b>3000</b>	<b>A210</b>	<b>210</b>	<b>BEA 400/S5</b>	<b>KORC 4L - 310/4</b>	<b>UMC22</b>	<b>180 - 310 **</b>
250	242	T5L400 PR221 DS-I In400 *	3600	AF400	400	BEA 750/S6	KORC 4L - 310/4	UMC22	180 - 310 **
<b>290</b>	<b>301</b>	<b>T5L630 PR221 DS-I In630 *</b>	<b>4725</b>	<b>AF400</b>	<b>400</b>	<b>BEA 750/S6</b>	<b>KORC 4L - 310/4</b>	<b>UMC22</b>	<b>180 - 310 **</b>
315	313	T5L630 PR221 DS-I In630 *	4725	AF400	400	BEA 750/S6	KORC 4L - 500/4	UMC22	300 - 500 **
<b>355</b>	<b>370</b>	<b>T5L630 PR221 DS-I In630 *</b>	<b>6300</b>	<b>AF580</b>	<b>580</b>	<b>BEA 750/S6</b>	<b>KORC 4L - 500/4</b>	<b>UMC22</b>	<b>300 - 500 **</b>
400	420	T5L630 PR221 DS-I In630 *	6300	AF580	580	BEA 750/S6	KORC 5L - 500/4	UMC22	300 - 500 **
<b>450</b>	<b>470</b>	<b>S6X630 PR211-I In630 *</b>	<b>7560</b>	<b>AF580</b>	<b>580</b>	<b>BEA 750/S6</b>	<b>KORC 5L - 500/4</b>	<b>UMC22</b>	<b>300 - 500 **</b>
500	500	S6X630 PR211-I In630 *	7560	AF750	750	BEA 750/S6	KORC 5L - 850/4	UMC22	450 - 850 **

\* : Magnetic adjustable setting only

T4L MA : Magnetic adjustable from 6 to 14 In

T5L PR221 DS-I : Magnetic adjustable 1-1,5-2-2,5-3-3,5-4-5-5,5-6-5,7-7,5-8-8,5-9-10x In

S6X630 PR211-I : Magnetic adjustable 1,5-2-4-6-8-10-12x In

\*\* : Electronic Overload Protection - class 10 selected





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