

Contactors

System Overview

Contactors	1
DILM185 - DILM820	
Multivoltage coils	
24 – 48 V DC	
48 – 110 V AC/DC	
110 – 250 V AC/DC	
250 – 500 V AC	
0,7 – 1,15 × Vr	
Operating options:	
• directly	
• from the PLC	
• via a low-consumption contact	
Minimal pick-up and sealing consumption	
→ page 03/016	
Cable terminal block	2
1 or 2 conductors per phase	
Round and flat conductor connectable	
Finger-safe	
→ page 03/056	

















Flat strip conductor terminals	3
1 or 2 strips per phase	
Control circuit terminal	
Cover to keep finger safe	
→ page 03/056	
Mechanical interlock	4
→ page 03/055	
Overload relay	5
For direct mounting	
For separate mounting	
Protection of EEx e motors	
PTB certificate	
→ page 04/004	

Terminal cover	6
Finger safe	
→ page 03/056	
Auxiliary contact modules	7
2-pole, for side mounting	
→ page 03/016	

DIL Contactors

Basic Devices, Modules

UL / CSA / IEC / CE

Rating data		General purpose continuous current open/enclosed		IEC/EN 60 947 Max. 3-phase motor ratings (kW)		Standard auxiliary contacts		Terminal markings						
UL/CSA max. Horsepower rating 50/60 Hz		A		AC-3 220 V 380 V 660 V 230 V 400 V 690 V		N.O. = normally open N.C. = normally closed		Circuit diagram						
1 phase		3 phase												
115 V	200 V	230 V	200 V	230 V	460 V	575 V								
HP	HP	HP	HP	HP	HP	HP								
Basic devices														
3-pole, with auxiliary contacts 	½	1	1 ½	2	3	5	5	15/13.5	2,2	4	4	1	–	
	½	1	1 ½	2	3	5	5		2,2	4	4	–	1	
4-pole	½	1	1 ½	2	3	5	5		2,2	4	4	–	–	
Auxiliary contact modules														
2-pole 								10				–	2	
												1	1	
												2	2	
												–	–	
4-pole								10				–	2	
												1	1	
												2	–	
												1 ¹⁾	1 ¹⁾	
4-pole								10				–	4	
												1	3	
												2	2	
												3	1	
												4	–	
											2 ¹⁾	2 ¹⁾		

Notes:

¹⁾ 1 early-make contact, 1 late-break contact

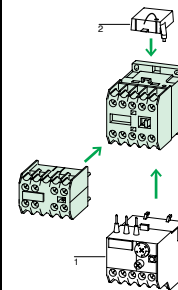
UL / CSA / IEC / CE

DIL Contactors

Basic Devices, Modules

Combination options	AC operated		DC operated	
	Type Article No.	List Price see price list	Type Article No.	List Price see price list
	Coil voltages shown in (...) For other coil voltages, → page 03/064		Coil voltages shown in (...) For other coil voltages, → page 03/064	
● –	DILEM-10(120V60HZ) 051783		DILEM-10-G(24VDC) 010213	
– ●	DILEM-01(120V60HZ) 051792		DILEM-01-G(24VDC) 010343	
● –	DILEM-4(120V60HZ) 051801		DILEM4-G(24VDC) 012701	
● –	02DILEM 010064		02DILEM 010064	
● –	11DILEM 010080		11DILEM 010080	
● –	22DILEM 010112		22DILEM 010112	
● ●	02DILE 010240		02DILE 010240	
● ●	11DILE 010224		11DILE 010224	
● ●	20DILE 010208		20DILE 010208	
● ●	11DDILE ¹⁾ 049824		11DDILE ¹⁾ 049824	
● ●	04DILE 010256		04DILE 010256	
● ●	13DILE 002397		13DILE 002397	
● ●	22DILE 010288		22DILE 010288	
● ●	31DILE 048912		31DILE 048912	
● ●	40DILE 010304		40DILE 010304	
● ●	22DDILE ¹⁾ 049823		22DDILE ¹⁾ 049823	

Notes:



Accessories	Page
1 Overload relay	04/004
2 Suppressor	03/053
Other operating voltages	03/064
Accessories	03/053

Miniature contactors with positively driven contacts. Not in the case of early-make or late-break contacts.
The DC operated contactors are supplied as standard with a diode/resistor combination surge suppressor.
Coil power consumption: 2,6 W

Contactors contacts to EN 50 012
Auxiliary contact module contact:
...DIL EM to EN 50 012
...DIL E to EN 50 005
Contacts to EN 50 012 should be given preference.

DIL Contactors

Basic Devices, Modules

UL / CSA / IEC / CE

	Rating data								General purpose continuous current open/enclosed	IEC/EN 60 947 Max. 3-phase motor ratings (kW)	Standard auxiliary contacts	Terminal markings			
	UL/CSA max. Horsepower rating 50/60 Hz				3 phase										
	1 phase 115 V HP	200 V HP	230 V HP	50/60 Hz	200 V HP	230 V HP	460 V HP	575 V HP							
Basic devices															
3-pole	1/2	1	1 1/2	3	3	5	7 1/2	20/18	2,2	4	5,5	—	—		
	1	2	2	3	3	7 1/2	10	20/18	3	5,5	7,5	—	—		
	2	2	3	7 1/2	7 1/2	10	15	35/31	4	7,5	11	—	—		
	2	3	5	7 1/2	10	15	20	35/31	5,5	11	15	—	—		
	3	5	5	10	10	20	25	55/50	7,5	15	18,5	—	—		
	3	5	7 1/2	10	15	25	30	55/50	11	18,5	22	—	—		
	3	7 1/2	10	15	20	40	40	90/81	15	22	30	—	—		
	5	10	15	20	25	50	50	90/81	18,5	30	37	—	—		
4-pole	1/2	1	1 1/2	3	3	5	7 1/2	20/18	2,2	4	5,5	—	—		
Auxiliary contact modules															
Side mounting									10		1	1			
									10		1 ²⁾	1 ²⁾			
									15		1	—			
											—	1			
											1	1			
Top mounting											1	1			
											2	2			
											3	1			
											2 ²⁾	2 ²⁾			

Notes

- ¹⁾ Do not reverse directly
²⁾ 1 early-make contact, 1 late-break contact
³⁾ Do not combine a DIL(A)M-G with a DILM820-XH1...

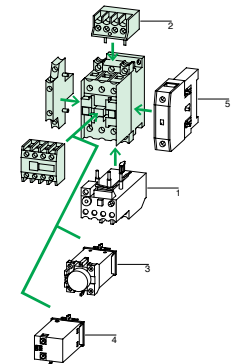
UL / CSA / IEC / CE

DIL Contactors

Basic Devices, Modules

Combination options	AC operation		DC operation	
	Type Article No.	List Price see price list	Type Article No.	List Price see price list
	Coil voltages shown in (...) For other coil voltages, → page 03/065		Coil voltages shown in (...) For other coil voltages, → page 03/065	
● —	DIL00M(120V60HZ) 060477		DIL00M-G(24VDC) 048587	
● —	DIL00AM(120V60HZ) 061222		DIL00AM-G(24VDC) 048567	
— ● ³⁾	DIL0M(120V60HZ) 061254		DIL0M-G(24VDC)³⁾ 048597	
— ● ³⁾	DIL0AM(120V60HZ) 061262		DIL0AM-G(24VDC)³⁾ 048592	
— ●	DIL1M(120V60HZ) 061270		DIL1M-G(24VDC) 048605	
— ●	DIL1AM(120V60HZ) 061427		DIL1AM-G(24VDC) 048602	
— ●	DIL2M(120V60HZ) 046563		DIL2M-G(24VDC) 048615	
— ●	DIL2AM(120V60HZ) 046571		DIL2AM-G(24VDC) 048610	
● —	DIL00M4(120V60HZ) 046926		DIL00M4-G(24VDC) 063171	
— ●	DILM820-XH11-SI 208281		DILM820-XH11-SI 208281	
— ●	DILM820-XH11V-SI²⁾ 208283		DILM820-XH11V-SI²⁾ 208283	
— ●	10SDILM 089080		10SDILM 089080	
— ●	01SDILM 001930		01SDILM 001930	
— ●	11SDILM 024626		11SDILM 024626	
● ●	11DILM 017507		11DILM 017507	
● ●	22DILM 019880		22DILM 019880	
● ●	31DILM 022253		31DILM 022253	
● ●	22DDILM²⁾ 026999		22DDILM²⁾ 026999	

Notes



Accessories	Page
1 Overload relay	04/004
2 Interface module or suppressor module	03/059
3 Pneumatic timer module	03/053
4 Mechanical latching module	03/057
5 Additional 4th pole (DIL0M(-G) to DIL2AM(-G))	03/057
Additional auxiliary contact modules	02/010
Accessories	03/053
Other operating voltages	03/065
	03/066

DILM820-XH1... auxiliary contacts cannot be combined with auxiliary contact module...SDILM






Auxiliary contacts for side mounting can be combined with auxiliary contacts for top mounting up to a maximum of 5 contacts.

Maximum of one side-mounting auxiliary contact module on either side.

DIL Contactors

Basic Devices, Modules

UL / CSA / IEC / CE

	Rating data							General purpose continuous current open/enclosed	IEC/EN 60 947 Max. 3-phase motor ratings (kW)	Standard auxiliary contacts		Terminal markings		
	UL/CSA max. Horsepower rating 50/60 Hz			3 phase						A	N.O. = normally open N.C. = normally closed		N.O.	N.C.
	1 phase	230 V		200 V	230 V	460 V	575 V							
	HP	HP	HP	HP	HP	HP	HP							
Basic devices		7 1/2	15	15	25	30	60	75	100/90	22	37	55	37	
		10	25	25	40	50	100	125	160/144	37	55	90	55	
Auxiliary contact modules														
Side mounting									16		1	1		

Notes

1) 1 early-make contact, 1 late-break contact

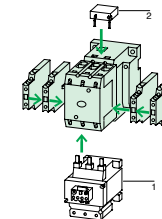
UL / CSA / IEC / CE

DIL Contactors

Basic Devices, Modules

Combination options	AC operation		DC operation	
	Type Article No.	List Price see price list	Type Article No.	List Price see price list
	Coil voltages shown in (...) For other coil voltages, → page 03/066		Coil voltages shown in (...) For other coil voltages, → page 03/066	
●	DIL3M80(120V60HZ) 209691		DIL3M80(24VDC) 209709	
●	DIL4M115(120V60HZ) 209750		DIL4M115(24VDC) 209765	
●	DILM820-XH11-SI 208281		DILM820-XH11-SI 208281	
●	DILM820-XH11V-SI ¹⁾ 208283		DILM820-XH11V-SI ¹⁾ 208283	
●	DILM820-XH11-SA 208282		DILM820-XH11-SA 208282	

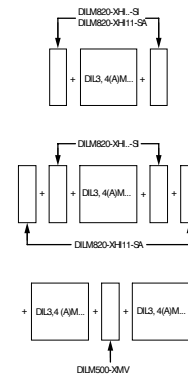
Notes



Accessories

Accessories	Page
1 Overload relay	04/004
2 Suppressor	03/053
Accessories	03/053

Auxiliary contact mounting options:



The contactors can be snap-mounted onto a 75mm top-hat rail to EN 50 023.
DC operated contactors are supplied as standard with a varistor surge suppressor.
Up to 8 auxiliary contacts possible, but only up to 4 N.C. contacts or 4 N.O. contacts.
No auxiliary contacts can be mounted between the mechanical interlock and the contactor

DIL Contactors

Units complete with auxiliary contacts

UL / CSA / IEC / CE

Rating data UL/CSA max. Horsepower rating 50/60 Hz				General purpose continuous current open/ enclosed				IEC/EN 60 947 Max. 3-phase motor ratings (kW)				Terminal markings Circuit diagram							
1 phase			3 phase			AC-3			Terminal markings			Circuit diagram							
115 V	200 V	230 V	200 V	230 V	460 V	575 V	220 V	380 V	660 V	230 V	400 V	690 V	kW	kW	kW	A1	A2	A3	A4
HP	HP	HP	HP	HP	HP	HP	kW	kW	kW	kW	kW	kW	kW	kW	A1	A2	A3	A4	
1/2	1	1 1/2	3	3	5	7 1/2	20/18	2,2	4	5,5									
1/2	1	1 1/2	3	3	5	7 1/2	20/18	2,2	4	5,5									
1/2	1	1 1/2	3	3	5	7 1/2	20/18	2,2	4	5,5									
1/2	1	1 1/2	3	3	5	7 1/2	20/18	2,2	4	5,5									
1	2	2	3	3	7 1/2	10	20/18	3	5,5	7,5									
1	2	2	3	3	7 1/2	10	20/18	3	5,5	7,5									
1	2	2	3	3	7 1/2	10	20/18	3	5,5	7,5									
1	2	2	3	3	7 1/2	10	20/18	3	5,5	7,5									
2	2	3	7 1/2	7 1/2	10	15	35/31	4	7,5	11									
2	2	3	7 1/2	7 1/2	10	15	35/31	4	7,5	11									
2	3	5	7 1/2	10	15	20	35/31	5,5	11	15									
2	3	5	7 1/2	10	15	20	35/31	5,5	11	15									
3	5	5	10	10	20	25	55/50	7,5	15	18,5									
3	5	7 1/2	10	15	25	30	55/50	11	18,5	22									
3	7 1/2	10	15	20	40	40	90/81	15	22	30									
5	10	15	20	25	50	50	90/81	18,5	30	37									

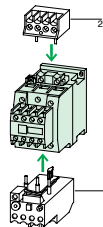
DIL Contactors

Units complete with auxiliary contacts

UL / CSA / IEC / CE

AC operation		DC operation	
Type	List Price	Type	List Price
Article No.	see price list	Article No.	see price list
Coil voltages shown in (...) For other coil voltages, → pages 03/067, 068		Coil voltages shown in (...) For other coil voltages, → pages 03/067, 068	
DIL00M-10(120V60HZ) 046643		DIL00M-G-10(24VDC) 048670	
DIL00M-01(120V60HZ) 046651		DIL00M-G-01(24VDC) 048665	
DIL00M/11(120V60HZ) 046659		DIL00M-G/11(24VDC) 048675	
DIL00M/22(120V60HZ) 046667		DIL00M-G/22(24VDC) 048680	
DIL00AM-10(120V60HZ) 046675		DIL00AM-G-10(24VDC) 048650	
DIL00AM-01(120V60HZ) 046683		DIL00AM-G-01(24VDC) 048645	
DIL00AM/11(120V60HZ) 046691		DIL00AM-G/11(24VDC) 048655	
DIL00AM/22(120V60HZ) 046699		DIL00AM-G/22(24VDC) 048660	
DIL0M/11(120V60HZ) 046707		DIL0M-G/11(24VDC) 048686	
DIL0M/22(120V60HZ) 046715		DIL0M-G/22(24VDC) 048953	
DIL0AM/11(120V60HZ) 046753		DIL0AM-G/11(24VDC) 049000	
DIL0AM/22(120V60HZ) 046761		DIL0AM-G/22(24VDC) 049997	
DIL1M/22(120V60HZ) 046769		DIL1M-G/22(24VDC) 051692	
DIL1AM/22(120V60HZ) 046777		DIL1AM-G/22(24VDC) 050858	
DIL2M/22(120V60HZ) 046785		DIL2M-G/22(24VDC) 051702	
DIL2AM/22(120V60HZ) 046793		DIL2AM-G/22(24VDC) 051697	

Notes



Accessories















Accessories	Page
1 Overload relay	04/004
2 Interface module or Suppressor	03/040 03/053
Other operating voltages	03/067 03/068

Terminal marking of coil to EN 50 005
Contacts to EN 50 005 and EN 50 012

DIL Contactors

Units complete with auxiliary contacts

UL / CSA / IEC / CE

	Rating data								General purpose continuous current open/enclosed	IEC/EN 60 947 Max. 3-phase motor ratings (kW) AC-3		
	UL/CSA max. Horsepower rating 50/60 Hz											
	1 phase			3 phase								
	115 V	200 V	230 V	200 V	230 V	460 V	575 V					
	HP	HP	HP	HP	HP	HP	HP	A	220 V 230 V kW	380 V 400 V kW	660 V 690 V kW	1000 V kW
	7 1/2	15	15	25	30	60	75	100/90	22	37	55	37
	10	25	25	40	50	100	125	160/144	37	55	90	55
	-	-	-	50	60	125	150	225 ²⁾	55	90	175	108
	-	-	-	60	75	150	200	250 ²⁾	70	110	215	108
	-	-	-	75	100	200	250	350 ²⁾	75	132	240	108
	-	-	-	100	125	250	300	350 ²⁾	90	160	286	132
	-	-	-	125	150	300	400	450 ²⁾	125	200	344	132
	-	-	-	150	200	400	500	550 ²⁾	155	250	344	132
	-	-	-	200	200	400	600	630 ²⁾	185	315	560	600
	-	-	-	200	250	500	600	700 ²⁾	205	355	630	600
	-	-	-	250	300	600	700	800 ²⁾	240	400	720	800
	-	-	-	290	350	700	860	850 ²⁾	260	450	750	800
Auxiliary contacts												
Right or left, internal									10			
												
Right or left, external									10			
												
Right or left, internal									10			
												

Notes:

- 1) 110 - 250 V AC/DC
2) 24 - 48 V DC
3) Consult Moeller Electric

DIL Contactors

Units complete with auxiliary contacts

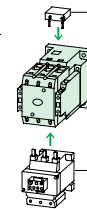
UL / CSA / IEC / CE

AC operation		DC operation	
Type	List Price	Type	List Price
Article No.	see price list	Article No.	see price list
Coil voltages shown in (...) For other coil voltages, → pages 03/068, 069		Coil voltages shown in (...) For other coil voltages, → pages 03/068, 069	
DIL3M80/22(120V60HZ) 209866		DIL3M80/22(24VDC) 209880	
DIL4M115/22(120V60HZ) 209920		DIL4M115/22(24VDC) 209934	
DILM185/22(RA250) ¹⁾ 208193		DILM185/22(RDC48) ²⁾ 208191	
DILM225/22(RA250) ¹⁾ 208197		DILM225/22(RDC48) ²⁾ 208195	
DILM250/22(RA250) ¹⁾ 208201		DILM250/22(RDC48) ²⁾ 208199	
DILM300/22(RA250) ¹⁾ 208205		DILM300/22(RDC48) ²⁾ 208203	
DILM400/22(RA250) ¹⁾ 208209		DILM400/22(RDC48) ²⁾ 208207	
DILM500/22(RA250) ¹⁾ 208213		DILM500/22(RDC48) ²⁾ 208211	
DILM580/22(RA250) ¹⁾ 208216		DILM580/22(RA250) ¹⁾ 208216	
DILM650/22(RA250) ¹⁾ 208219		DILM650/22(RA250) ¹⁾ 208219	
DILM750/22(RA250) ¹⁾ 208222		DILM750/22(RA250) ¹⁾ 208222	
DILM820/22(RA250) ¹⁾ 208225		DILM820/22(RA250) ¹⁾ 208225	
DILM820-XH11-SI 208281		DILM820-XH11-SI 208281	
DILM820-XH11-SA 208282		DILM820-XH11-SA 208282	
DILM820-XH11V-SI 208283		DILM820-XH11V-SI 208283	

Notes:

DIL3M80 to DIL4M145:

Accessories	Page
1 Overload relay	04/004
2 Suppressor	03/053
Accessories	03/053
Other operating voltages	03/068, 03/069



Terminal markings

Coil to EN 50 005
Contacts to EN 50 005 + EN 50 012

DIL3(A)M80/85 and DIL4(A)M115/145 can be snap-mounted onto 75mm top-hat rail to EN 50 023

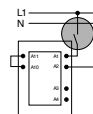
DC operated contactors DIL3M80 to DIL4M145 and all contactors DILM185 to DILM820 have an integral suppressor circuit.

When operating DILM580 to DILM820 with frequency inverter, the suppressor circuit on the load side must be removed.

DIL 3M80/22 to DILM820/22

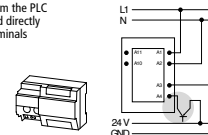
Operating options: DILM185-820 with electronically controlled magnet systems

Conventional:
A1/A2 have voltage applied,
as normal.

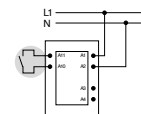
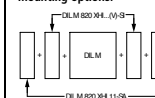


Direct from the PLC:

A 24V output from the PLC
can be connected directly
to the A3/A4 terminals

From low consumption
command devices:

Low-consumption command
devices such as printed
circuit board relays, control
circuit devices or position
switches can be connected
directly to A10/A11.

Auxiliary contact modules
mounting options:

Max. 8 auxiliary contacts possible







DILM820-XH11V-SI with 1 early-
make and 1 late-break contact.

No auxiliary contacts can be
mounted between the mechanical
interlock and the contactor.

DIL Contactors

Reversing Contactor Combinations

UL / CSA / IEC / CE



Rating data				IEC/EN 60 947			AC operation	
UL/CSA maximum Horsepower rating (HP) 50/60Hz				Max. 3-phase motor ratings (kW) 50/60 Hz				
3 phase				AC-3			Type	
200 V	230 V	460 V	575 V	220 V	380 V	660 V	Article No. Coil voltages shown in (...) For other coil voltages, → page 03/070	
HP	HP	HP	HP	kW	kW	kW		
Reversing contactors								
	2	3	5	5	2,2	4	4	DIULEM/21/MV(120V60HZ) 051846
	3	3	7 1/2	10	3	5,5	–	DIL00AM/11/MV(120V60HZ) 110199
	7 1/2	7 1/2	10	15	4	7,5	–	DIL0M/11/MV(120V60HZ) 110215
	7 1/2	10	15	20	5,5	11	–	DIL0AM/11/MV(120V60HZ) 110231
	10	15	25	30	11	18,5	–	DIL1AM/11/MV(120V60HZ) 110246
	20	25	50	50	18,5	30	–	DIL2AM/11/MV(120V60HZ) 110262
	25	30	60	75	22	37	55	DIL3M80/11/MV(120V60HZ) 110278
	40	50	100	125	37	55	90	DIL4M115/11/MV(120V60HZ) 110295

DIL Contactors

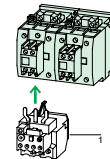
Reversing Contactor Combinations

UL / CSA / IEC / CE

Individual components of the combination

Contactor K1M	Contactor K2M	Spare auxiliary contacts		
		K1M	K2M	Mechanical interlock
Type	Type			
DILEM-10 + 11DILEM	DILEM-10 + 11DILEM			+
DIL00AM + 11DILM	DIL00AM + 11DILM	–	–	+
DIL0M + 11DILM	DIL0M + 11DILM	–	–	+
DIL0AM + 11DILM	DIL0AM + 11DILM	–	–	+
DIL1AM + 11DILM	DIL1AM + 11DILM	–	–	+
DIL2AM + 11DILM	DIL2AM + 11DILM	–	–	+
DIL3M80 + DILM820-XH11-SI	DIL3M80 + DILM820-XH11-SI	–	–	+
DIL4M115 + DILM820-XH11-SI	DIL4M115 + DILM820-XH11-SI	–	–	+

Notes:



Accessories	Page
1 Overload relay	04/004
Accessories	03/053
Other operating voltages	03/070

DIL Contactors

For DC Loads, AC and DC operated

UL / CSA / IEC / CE

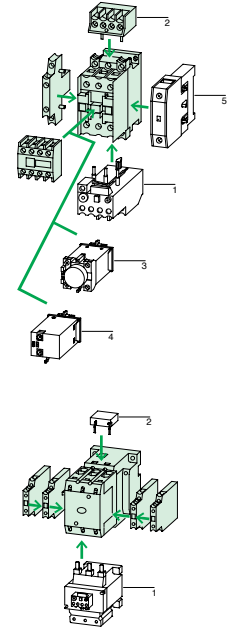
	Rating data UL/CSA max. DC Horsepower rating 3 pole		General purpose auxiliary contacts continuous current open/ enclosed	Standard auxiliary contacts N.O. = normally open N.C. = normally closed	Terminal markings Circuit diagram
	115 V HP	230 V HP	A	N.O. N.C.	
Basic devices					
	1	2	20/18	→ page 03/010	
	1 1/2	3	20/18		
	2	5	35/31		
	2	5	35/31		
	5	10	55/50		
	5	10	55/50		
	7 1/2	15	90/81		
	10	20	90/81		
	7 1/2	30	100/90	→ page 03/012	
	7 1/2	30	100/90		
	10	50	160/144		
	10	50	160/144		

DIL Contactors

For DC Loads, AC and DC operated

UL / CSA / IEC / CE

AC operation		DC operation	
Type Article No. Coil voltages shown in (...) For other coil voltages, → pages 03/065, 066	List Price see price list	Type Article No. Coil voltages shown in (...) For other coil voltages, → pages 03/065, 066	List Price see price list
DIL00M(120V60HZ) 060477		DIL00M-G(24VDC) 048587	
DIL00AM(120V60HZ) 061222		DIL00AM-G(24VDC) 048567	
DIL0M(120V60HZ) 061254		DIL0M-G(24VDC) 048597	
DIL0AM(120V60HZ) 061262		DIL0AM-G(24VDC) 048592	
DIL1M(120V60HZ) 061270		DIL1M-G(24VDC) 048605	
DIL1AM(120V60HZ) 061427		DIL1AM-G(24VDC) 048602	
DIL2M(120V60HZ) 046563		DIL2M-G(24VDC) 048615	
DIL2AM(120V60HZ) 046571		DIL2AM-G(24VDC) 048610	
DIL3M80(120V60HZ) 209691		DIL3M80(24VDC) 209709	
DIL3AM85(120V60HZ) 209723		DIL3AM85(24VDC) 209737	
DIL4M115(120V60HZ) 209750		DIL4M115(24VDC) 209765	
DIL4AM145(120V60HZ) 209778		DIL4AM145(24VDC) 209792	

Notes

Accessories	Page
1 Overload relay	04/004
2 Interface module or suppressor module	03/059 03/053
3 Pneumatic timer module	03/057
4 Mechanical latching module	03/057
5 Additional 4th pole from DIL0M(-G)	03/057
Additional auxiliary contact modules	02/010
Accessories	03/053
Other operating voltages	03/065 03/066

DILR and DILR Industrial Control Relays

Coil Voltages

UL / CSA / IEC / CE

 Industrial Control Relays,
Electronic Timing Relays

AC	DILR40-(...) Article No. 1)	DILR31-(...) Article No. 1)	DILR22-(...) Article No. 1)	DILR40-(...) Article No. 1)	DILR31-(...) Article No. 1)	DILR22-(...) Article No. 1)
Standard voltages	Price see price list	Price see price list	Price see price list	Price see price list	Price see price list	Price see price list
12V50Hz	066169	066170	066171	—	—	—
24V50Hz	010094	010251	010344	025066	029810	077267
48V50Hz	010190	010044	010201	055915	058286	091505
240V50Hz	010478	010300	010138	017947	022691	017943
24V60Hz	010110 3)	010267 3)	010497 3)	027439 3)	032183 3)	084386 3)
110V60Hz	010254	010172	010265	—	—	—
115V60Hz	010272	010204	010211	096255	010826	093878
208V60Hz	—	—	—	210275	210261	210257
600V60Hz	—	—	—	210276	210262	210258
42V50Hz, 48V60Hz	051755	051764	051773	043752	043764	043776
110V50Hz, 120V60Hz	051756 3)	051765 3)	051774 3)	043753 3)	043765 3)	043777 3)
190V50Hz, 220V60Hz	051757	051766	051775	043754	043766	043778
220V50Hz, 240V60Hz	051758	051767	051776	043755	043767	043779
230V50Hz, 240V60Hz	051759 3)	051768 3)	051777 3)	043756 3)	043768 3)	043780 3)
380V50Hz, 440V60Hz	051760	051769	051778	043757	043769	043781
400V50Hz, 440V60Hz	051761	051770	051779	043758	043770	043782
415V50Hz, 480V60Hz	051762 3)	051771 3)	051780 3)	043759 3)	043771 3)	043783 3)
24V50/60Hz	021924	021594	021704	022693	027437	058284
42V50/60Hz	033459	029869	029433	093304	044048	060657
110V50/60Hz	021961	021624	021871	091509	096253	065403
230V50/60Hz	052725	052509	052508	052762	052761	052726
Non-standard voltage other than the standard voltages listed above 2)	—	—	—	Price see price list	Price see price list	Price see price list
(...V50Hz) (12–600V)	—	—	—	100151	100106	100011
(...V60Hz) (12–600V)	—	—	—	100152	100107	100012
DC	DILR40-G(...) Article No. 1)	DILR31-G(...) Article No. 1)	DILR22-G(...) Article No. 1)	DILR40-G(...) Article No. 1)	DILR31-G(...) Article No. 1)	DILR22-G(...) Article No. 1)
Standard voltages	Price see price list	Price see price list	Price see price list	Price see price list	Price see price list	Price see price list
12V DC	079711 3)	079761 3)	060728 3)	—	—	—
24V DC	010223 3)	010157 3)	010042 3)	048537 3)	040832 3)	048526 3)
48V DC	010255	010205	010346	048538 3)	048533 3)	048527 3)
60V DC	010271	010221	010499	048539	048534	048528
110V DC	010287 3)	010253 3)	010043 3)	048535 3)	048530 3)	048529 3)
220V DC	010303	010269	010091	048536 3)	048531 3)	048525 3)
Non-standard voltages other than the standard voltages listed above 2)	—	—	—	Price see price list	Price see price list	Price see price list
(...VDC) (12–250V)	—	—	—	100153	100108	100013

Notes

- 1) To obtain the article number for ordering, read under selected type and coil voltage from the table above
- 2) For non-standard voltages, state the coil voltage selected from the range (...-...V)
- 3) Relays with these coil voltages are normal stock items.

DIL R Complete Units, Mechanical Latching Module, Individual Coil
Coil Voltages

UL / CSA / IEC / CE

 Industrial Control Relays,
 Electronic Timing Relays

AC	DILR22D(...)	DILR44D(...)	DIL R 53D(...)	V DIL(...)	J-DIL 00 M(...)
	Article No. 1)	Article No. 1)	Article No. 1)	Article No. 1)	Article No. 1)
Standard voltages	Price see price list	Price see price list	Price see price list	Price see price list	Price see price list
24V50Hz	013207	072533	055923	053536	000079
48V50Hz	041683	010836	084399	055493	066603
240V50Hz	096261	066414	044058	053115	023809
24V60Hz	015580 3)	074906 3)	058296 3)	053659 3)	099744 3)
115V60Hz	084396	053549	032193	052241	043837
208V60Hz	100102 3)	210263 3)	210265 3)	100297	210267 3)
600V60Hz	210260 3)	210264 3)	210266 3)	–	210268 3)
42V50Hz, 48V60Hz	043788	043799	043810	043821	043829
110V50Hz, 120V60Hz	043789 3)	043800 3)	043811 3)	043822 3)	043830 3)
190V50Hz, 220V60Hz	043790	043801	043812	043823	043831
220V50Hz, 240V60Hz	043791	043802	043813	043824	043832
230V50Hz, 240V60Hz	043792 3)	043803 3)	043814 3)	043825 3)	043833 3)
380V50Hz, 440V60Hz	043793	043804	043815	–	043834
400V50Hz, 440V60Hz	043794	043805	043816	–	043835
415V50Hz, 480V60Hz	043795 3)	043806 3)	043817 3)	–	043836 3)
24V50/60Hz	010834	070160	048804	053217	002452
42V50/60Hz	027445	086771	070161	055218	011944
110V50/60Hz	079650	048803	027447	051165	085506
230V50/60Hz	052760	052838	052961	054487	051352
Non-standard voltages other than the standard voltages listed above 2)	Price see price list	Price see price list	Price see price list	Price see price list	Price see price list
(...V50Hz) (12–415V)	–	–	–	100295	–
(...V50Hz) (12–600V)	100100	100258	100261	–	101795
(...V60Hz) (12–415V)	–	–	–	100296	–
(...V60Hz) (12–600V)	100101	100259	100262	–	101796
DC	DILR22D-G(...)	DILR44D-G(...)	DILR53D-G(...)	V-GDIL(...)	G-DIL00M(...)
	Article No. 1)	Article No. 1)	Article No. 1)	Article No. 1)	Article No. 1)
Standard voltages	Price see price list	Price see price list	Price see price list	Price see price list	Price see price list
24VDC	048542 3)	048547 3)	048552 3)	048562 3)	048557 3)
48VDC	048543 3)	048548 3)	048553 3)	048563	048558 3)
60VDC	048544	048549	048554	048564	048559
110VDC	048540 3)	048545 3)	048550 3)	048560 3)	048555 3)
220VDC	048541 3)	048546 3)	048551 3)	048561 3)	048556 3)
Non-standard voltages other than the standard voltages listed above 2)	Price see price list	Price see price list	Price see price list	Price see price list	Price see price list
(...VDC) (12–250V)	100103	100260	100263	100293	101775

Notes

- 1) To obtain the article number for ordering, read under selected type and coil voltage from the table above
- 2) For non-standard voltages, state the coil voltage selected from the range (...V) shown
- 3) Relays with these coil voltages are normal stock items.

Magnetic Starters

Ordering Information

Selecting and completing the type number

Type numbers provide full, and in some cases, coded descriptions, of the standard devices to which they apply. The most frequently used starter type numbers are explained as follows:

Key to completion of type number

_____ / _____ / _____ / _____ (_____)	_____ / _____ / _____ / _____ (_____)	_____ / _____ / _____ / _____ (_____)	_____ / _____ / _____ / _____ (_____)	_____ / _____ / _____ / _____ (_____)	_____ / _____ / _____ / _____ (_____)
Starter type	Frame size	Auxiliary contacts	Overload relay	Enclosure	Coil voltage
<ul style="list-style-type: none"> -DIL = Non-reversing -DUL = Reversing -M = Combination -MW = Combination Reversing -ZS = Two Speed -AT = Autotransformer -SD = Star Delta -PW = Part Winding 	<ul style="list-style-type: none"> L DIL contactors are available in a variety of sizes to match the motor being started 	<ul style="list-style-type: none"> -10 = 1 N.O. - 0 N.C. -11 = 1 N.O. - 1 N.C. -20 = 2 N.O. - 0 N.C. -22 = 2 N.O. - 2 N.C. 	<ul style="list-style-type: none"> -Z00-... complete the part number by adding -Z1-... suffix code from -Z5-... the table on the opposite page -ZEV 	<ul style="list-style-type: none"> -/S = General Purpose, Type 1 -/SD = Dust and Drip Resistant, Type 12 -/DW = Outdoor Use, Type 3R -/I = Corrosion-resistant, Type 12, 13, Indoor 4X -no suffix = open type (no enclosure) 	<ul style="list-style-type: none"> L Standard coil voltage is 120V 60Hz. Other coil voltages in the range of 12V DC to 480V AC can be provided. Select required coil voltage from page 03/065

To order a magnetic starter, specify the following:

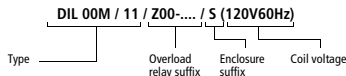
- Type number, consisting of starter type, frame size and auxiliary contacts
- Overload relay suffix (see selection table on the opposite page)
- Enclosure suffix
- Coil voltage
- Accessories

Magnetic Starters

Ordering Information

Ordering Example

Required is a full voltage, non-reversing, non-combination starter in a general purpose Type 1 enclosure and with a coil voltage of 120V 60Hz for a 10 HP motor at 460V AC, 3-phase.



Type

DIL Non-reversing, across-the-line starter

0M Contactor frame size (10 HP @ 460V AC, 3-phase).
Accessories are chosen according to contactor frame size.

/11 Auxiliary contacts: 1 N.O., 1 N.C.

/Z00- Type Z00 overload relay (motor current setting range suffix must be added)

Overload relay suffix

Z00- This part requires completion by adding a suffix code from the table below
For the 10 HP motor @ 460V AC, 3-phase, the motor full load current is 14 (if possible, actual nameplate rating should be used).
Select the appropriate overload setting range within the Z00- type listing below that includes the 14A motor FLC. This is **Z00-16** with an adjustable range of 10 to 16A. The suffix to be inserted into the starter catalog number is the maximum of the setting range, in this case **16**.

Enclosure Suffix

/S General purpose indoor, Type 1 (as shown on previous page)

Coil voltage

120V 60Hz Select the required coil voltage from the list shown on page 03/065 and 066.

Overload relay selection table

Adjustable setting range	Type	Suffix code	Adjustable setting range	Type	Suffix code	Adjustable setting range	Type	Suffix code
0.1 - 0.16	Z00-	0.16	6 - 10	Z1-	10	50 - 70	Z5-	70/FF250
0.16 - 0.24	Z00-	0.24	10 - 16	Z1-	16	70 - 100	Z5-	100/FF250
0.24 - 0.4	Z00-	0.4	16 - 24	Z1-	24	95 - 125	Z5-	125/FF250
0.4 - 0.6	Z00-	0.6	24 - 40	Z1-	40	120 - 160	Z5-	160/FF250
0.6 - 1.0	Z00-	1.0	40 - 57	Z1-	57	160 - 220	Z5-	220/FF250
1.0 - 1.6	Z00-	1.6	50 - 63	Z1-	63	200 - 250	Z5-	250/FF250
1.6 - 2.4	Z00-	2.4	63 - 75	Z1-	75			
2.4 - 4	Z00-	4				42 - 63	ZW7-	63
4 - 6	Z00-	6	25 - 35	Z5-	35/SK3	60 - 90	ZW7-	90
6 - 10	Z00-	10	35 - 50	Z5-	50/SK3(4)	85 - 125	ZW7-	125
10 - 16	Z00-	16	50 - 70	Z5-	70/SK3(4)	110 - 160	ZW7-	160
16 - 24	Z00-	24	70 - 100	Z5-	100/SK3(4)	160 - 240	ZW7-	240
			95 - 125	Z5-	120/SK4	190 - 290	ZW7-	290
			120 - 150	Z5-	150/SK4	270 - 400	ZW7-	400
						360 - 540	ZW7-	540