

Type: **DILM50(230V50HZ,240V60HZ)**

Article No.: **277830**



#### Ordering information

Rated operational current AC-3 400 V	$I_e$	A	50
Max. rating for three-phase motors, 50 – 60 Hz AC-3 230 V	$P$	kW	15.5
Max. rating for three-phase motors, 50 – 60 Hz AC-3 400 V	$P$	kW	22
Max. rating for three-phase motors, 50 – 60 Hz AC-3 690 V	$P$	kW	30
Max. rating for three-phase motors, 50 – 60 Hz AC-4 230 V	$P$	kW	6
Max. rating for three-phase motors, 50 – 60 Hz AC-4 400 V	$P$	kW	10
Max. rating for three-phase motors, 50 – 60 Hz AC-4 690 V	$P$	kW	14
Conventional thermal current $I_{th} = I_e$ AC-1 Open	$I_{th} = I_e$	A	60
For use with			DILM150-XHI(V).. DILM1000-XHI(V)..

#### General

Standards			IEC/EN 60947, VDE 0660, UL, CSA
Lifespan, mechanical			
AC operated	Operations	$\times 10^6$	10
DC operated	Operations	$\times 10^6$	10
Operating frequency, mechanical			
AC operated	Operations/h		5000
DC operated	Operations/h		5000
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclical, to IEC 60068-2-30
Ambient temperature			

Open		°C	-25/60
Enclosed		°C	-25/40
Storage		°C	-40/80
Mechanical shock resistance (IEC/EN 60068–2–27)			
Half-sinusoidal shock, 20 ms			
Main contacts			
Make contact	g	10	
Auxiliary contacts			
Make contact	g	7	
Break contact	g	5	
Protection type			IP00
Protection against direct contact when actuated from front (IEC 536)			Finger– and back-of-hand proof
Weight			
AC operated	kg	0,9	
DC operated	kg	1,1	
Terminal capacity Main cable			
Solid	mm <sup>2</sup>	1 × (2.5 – 16) 2 × (2.5 – 16)	
Flexible with ferrule	mm <sup>2</sup>	2 × (2.5 – 25) 1 × (2.5 – 35)	
Stranded	mm <sup>2</sup>	1 × (16 – 50) 2 × (16 – 35)	
Solid or stranded	AWG	12 – 2	
flat conductor	Number of segments × width × thickness	mm	2 × (6 × 9 × 0.8)
Anschlusssschraube Haupteile			M6
Tightening torque	Nm	3	
Terminal capacity Control circuit cables			
Solid	mm <sup>2</sup>	1 × (0.75 – 4) 1 × (0.75 – 4)	
Flexible with ferrule	mm <sup>2</sup>	1 × (0.75 – 2.5) 2 × (0.75 – 2.5)	
Solid or stranded	AWG	18 – 14	
Anschlusssschraube Hilfsleiter			M3.5
Tightening torque	Nm	1.2	
Tool			
Main cable			
Pozidriv screwdriver	Size	2	
Standard screwdriver	mm	0.8 × 5.5 1 × 6	
Control circuit cables			
Pozidriv screwdriver	Size	2	
Standard screwdriver	mm	0.8 × 5.5 1 × 6	
Terminal capacity Control circuit cables			
Solid	mm <sup>2</sup>	0.75 – 2.5	

Flexible		mm <sup>2</sup>	0.75 – 2.5
Flexible with ferrule		mm <sup>2</sup>	0.75 – 2.5
Solid or stranded		AWG	18 – 14
Tool			
Stripping length		mm	10
Screwdriver blade width		mm	3,5

### Main conducting paths

Rated impulse withstand voltage	$U_{imp}$	V AC	8000
Overvoltage category/pollution degree			III/3
Rated insulation voltage			
AC	$U_i$	V AC	690
Rated operational voltage	$U_e$	V AC	690
Safe isolation to VDE 0106 Part 101 and Part 101/A1			
between coil and contacts		V AC	440
between the contacts		V AC	440
Making capacity ( $\cos \phi$ to IEC/EN 60947) up to 690 V		A	700
Breaking capacity			
220/230 V		A	500
380/400 V		A	500
500 V		A	500
660/690 V		A	320
Component lifespan			
AC-3/AC-4			Tripping characteristics
Maximum operating frequency			
AC-1; 400 V	$I_e$	Ops/h	800
AC-3; 400 V	$I_e$	Ops/h	800
AC-4; 400 V	$I_e$	Ops/h	300
Short-circuit rating			
Short-circuit protection Maximum fuse			
Type "2" coordination			
400 V	gG/gL 500 V	A	80
690 V	gG/gL 690 V	A	63
Type "1" coordination			
400 V	gG/gL 500 V	A	160
690 V	gG/gL 690 V	A	80

### AC

AC-1 duty			
conv. therm. current 3-pole 50 – 60 Hz			
open			
at 40 °C	$I_{th}$	A	70
at 50 °C	$I_{th}$	A	65
at 55 °C	$I_{th}$	A	63
at 60 °C	$I_{th}$	A	60
Enclosed	$I_{th}$	A	54

Conventional free air thermal current, 1-pole			
open	$I_{th}$	A	150
Enclosed	$I_{th}$	A	135
AC-3 duty			
Rated operational current AC-3 open, 50 – 60 Hz, 3-pole			
220/230 V	$I_e$	A	50
240 V	$I_e$	A	50
380/400 V	$I_e$	A	50
415 V	$I_e$	A	50
440V	$I_e$	A	50
500 V	$I_e$	A	50
660/690 V	$I_e$	A	32
Motor rating			
220/230 V	$P$	kW	15,5
240V	$P$	kW	17
380/400 V	$P$	kW	22
415 V	$P$	kW	30
440 V	$P$	kW	32
500 V	$P$	kW	36
660/690 V	$P$	kW	30
AC-4 duty			
Rated operational current AC-4 open, 50 – 60 Hz, 3-pole			
220/230 V	$I_e$	A	21
240 V	$I_e$	A	21
380/400 V	$I_e$	A	21
415 V	$I_e$	A	21
440 V	$I_e$	A	21
500 V	$I_e$	A	21
660/690 V	$I_e$	A	17
Motor rating			
220/230 V	$P$	kW	6
240 V	$P$	kW	6,5
380/400 V	$P$	kW	10
415 V	$P$	kW	11
440 V	$P$	kW	12
500 V	$P$	kW	13
660/690 V	$P$	kW	14
<b>DC</b>			
of three-phase capacitors open			
DC-1 operation			
60 V	$I_e$	A	60
110 V	$I_e$	A	50
220 V	$I_e$	A	45
440 V	$I_e$	A	2,9
DC-3 operation			

60 V	$I_e$	A	60
110 V	$I_e$	A	50
220 V	$I_e$	A	25
440 V	$I_e$	A	0,6
DC-5 operation			
60 V	$I_e$	A	60
110 V	$I_e$	A	50
220 V	$I_e$	A	25
440 V	$I_e$	A	0,6

#### Current heat loss (3-pole)

Current heat loss at $I_h$		W	16,2
Current heat loss at $I_e$ to AC-3/400 V		W	11,3
Impedance per pole		m&	1,5

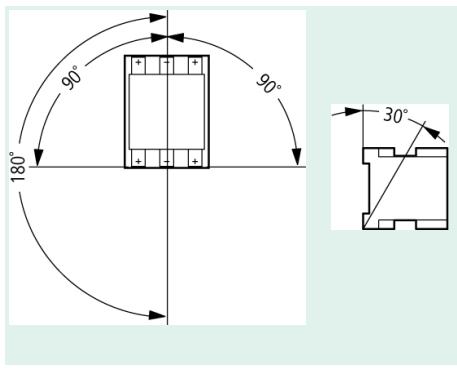
#### Magnet systems

Voltage tolerance			
AC operated			
AC operated	Pick-up	$\times U_c$	0,8 – 1,1
Drop-out voltage AC operated			
Drop-out voltage AC operated	Abfall	$\times U_c$	0,3 – 0,6
DC operated			
DC operated	Pick-up	$\times U_c$	0,7 – 1,2
DC operated			
DC operated	Abfall	$\times U_c$	0,15–0,6
Power consumption of the coil in a cold state and 1.0 $\times U_c$			
50 Hz	Pick-up	VA	130
50 Hz	Pick-up	W	80
50 Hz	Sealing	VA	14
50 Hz	Sealing	W	4
DC operated	Pick-up	W	24 at 24 V
DC operated	Sealing	W	0.5 at 24 V
Duty factor		% DF	100
Switching times at 100 % $U_c$ (approximate values)			
Main contacts			
AC operated			
Closing delay		ms	25
Opening delay		ms	25
DC operated			
Closing delay		ms	60
Opening delay		ms	20
Arcing time		ms	10

#### Electromagnetic compatibility (EMC)

Emitted interference			to EN 60947-1
Interference immunity			to EN 60947-1

## Mounting position, AC- and DC operated



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Moeller GmbH, Hein-Moeller-Str. 7-11, D-53115 Bonn  
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