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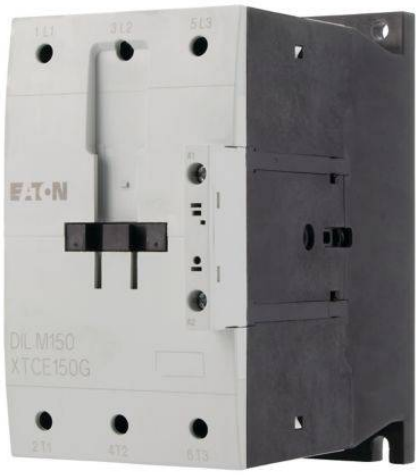
Contactor, 3-pole 75kW

Cat Number: DILM150(RAC440)



Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 75 kW, RAC 440: 380 - 440 V 50/60 Hz, AC operation, Screw terminals

Technical Specifications:
Product Length/Depth | 160 mm
Product Height | 170 mm
Product Width | 90 mm
Product Weight | 2.25 kg
Compliances | CE Marked
Certifications | IEC 60947-4-1
CSA Std. C22.2 No. 14-05
UL 508
EN 60947-4-1
VDE
UL 60947-4-1
UL File No.: E29096
UL Category Control No.: NLDX
CSA Class No.: 2411-03, 3211-04

UL
CE
VDE 0660
CSA-C22.2 No. 60947-4-1-14
CSA
IEC/EN 60947
CSA File No.: 012528
IEC/EN 60947-4-1
Catalog Notes | Contacts according to EN 50012
Fitted with: | Suppressor circuit in actuating electronics
Number Of Poles | Three-pole
Application | Contactors for Motors
Frame size | FS4
Lifespan, mechanical | 10,000,000 Operations (AC operated)
Operating frequency | 3600 mechanical Operations/h (AC operated)
Overvoltage category | III
Pollution degree | 3
Product category | Contactors
Protection | Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
Rated impulse withstand voltage (Uimp) | 8000 V AC
Residual current | 1 mA (with actuation of A1 - A2 by the electronics with "0" signal)
Resistance per pole | 0.6 mΩ
Suitable for | Also motors with efficiency class IE3
Utilization category | AC-3: Normal AC induction motors: starting, switch off during running
AC-1: Non-inductive or slightly inductive loads, resistance furnaces
AC-4: Normal AC induction motors: starting, plugging, reversing, inching
Voltage type | AC
Shock resistance | 10 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
10 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted,

Half-sinusoidal shock 10 ms
7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms
5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms
Ambient operating temperature - min | -25 °C
Ambient operating temperature - max | 60 °C
Ambient operating temperature (enclosed) - min | 25 °C
Ambient operating temperature (enclosed) - max | 40 °C
Ambient storage temperature - min | 40 °C
Ambient storage temperature - max | 80 °C
Climatic proofing | Damp heat, constant, to IEC 60068-2-78
Damp heat, cyclic, to IEC 60068-2-30
Emitted interference | According to EN 60947-1
Interference immunity | According to EN 60947-1
Terminal capacity (copper band) | 2 x (6 x 16 x 0.8) mm (Number of segments x width x thickness), Main cables
Terminal capacity (flexible with ferrule) | 1 x (10 - 95) mm², Main cables
2 x (0.75 - 2.5) mm², Control circuit cables
1 x (0.75 - 2.5) mm², Control circuit cables
2 x (10 - 70) mm², Main cables
Terminal capacity (solid) | 2 x (0.75 - 2.5) mm², Control circuit cables
1 x (0.75 - 4) mm², Control circuit cables
Terminal capacity (solid/stranded AWG) | Single 8…3/0, double 8…2/0, Main cables
18 - 14, Control circuit cables
Terminal capacity (stranded) | 2 x (16 - 70) mm², Main cables
1 x (16 - 95) mm², Main cables
Stripping length (main cable) | 24 mm
Stripping length (control circuit cable) | 10 mm
Screw size | M3.5, Terminal screw, Control circuit cables
5 mm AF, Hexagon socket-head spanner, Terminal screw, Main cables
M10, Terminal screw, Main cables
Screwdriver size | 0.8 x 5.5/1 x 6 mm, Terminal screw, Control circuit cables, Standard screwdriver
2, Terminal screw, Control circuit cables, Pozidriv screwdriver

Tightening torque | 14 Nm, Screw terminals, Main cables
1.2 Nm, Screw terminals, Control circuit cables
Rated breaking capacity at 220/230 V | 1500 A
Rated breaking capacity at 380/400 V | 1500 A
Rated breaking capacity at 500 V | 1500 A
Rated breaking capacity at 660/690 V | 1200 A
Rated operational current (Ie) at AC-1, 380 V, 400 V, 415 V | 190 A
Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V | 150 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V | 150 A
Rated operational current (Ie) at AC-3, 440 V | 150 A
Rated operational current (Ie) at AC-3, 500 V | 150 A
Rated operational current (Ie) at AC-3, 660 V, 690 V | 100 A
Rated operational current (Ie) at AC-4, 220 V, 230 V, 240 V | 65 A
Rated operational current (Ie) at AC-4, 400 V | 65 A
Rated operational current (Ie) at AC-4, 500 V | 65 A
Rated operational current (Ie) at AC-4, 660 V, 690 V | 50 A
Rated operational current (Ie) at DC-1, 60 V | 160 A
Rated operational current (Ie) at DC-1, 110 V | 160 A
Rated operational current (Ie) at DC-1, 220 V | 90 A
Rated insulation voltage (Ui) | 690 V
Rated operational power at AC-3, 240 V, 50 Hz | 52 kW
Rated operational power at AC-3, 380/400 V, 50 Hz | 75 kW
Rated operational power at AC-3, 415 V, 50 Hz | 91 kW
Rated operational power at AC-4, 220/230 V, 50 Hz | 20 kW
Rated operational power at AC-4, 240 V, 50 Hz | 22 kW
Rated operational power at AC-4, 415 V, 50 Hz | 39 kW
Rated operational power at AC-4, 440 V, 50 Hz | 41 kW
Rated operational power at AC-4, 500 V, 50 Hz | 47 kW
Rated operational power at AC-4, 660/690 V, 50 Hz | 48 kW
Rated operational voltage (Ue) at AC - max | 690 V
Short-circuit current rating (basic rating) | 600 A, max. CB, SCCR (UL/CSA)
10 kA, SCCR (UL/CSA)
600 A, max. Fuse, SCCR (UL/CSA)
Short-circuit current rating (high fault at 480 V) | 65 kA, CB, SCCR (UL/CSA)
300/300 A, Class J, max. Fuse, SCCR (UL/CSA)

250 A, max. CB, SCCR (UL/CSA)
30/100 kA, Fuse, SCCR (UL/CSA)
Short-circuit current rating (high fault at 600 V) | 30/100 kA, Fuse, SCCR (UL/CSA)
300/600 A, Class J, max. Fuse, SCCR (UL/CSA)
350 A, max. CB, SCCR (UL/CSA)
30 kA, CB, SCCR (UL/CSA)
Short-circuit protection rating (type 1 coordination) at 400 V | 250 A gG/gL
Short-circuit protection rating (type 1 coordination) at 690 V | 250 A gG/gL
Short-circuit protection rating (type 2 coordination) at 400 V | 250 A gG/gL
Short-circuit protection rating (type 2 coordination) at 690 V | 250 A gG/gL
Conventional thermal current ith (1-pole, enclosed) | 360 A
Conventional thermal current ith (3-pole, enclosed) | 144 A
Conventional thermal current ith at 55°C (3-pole, open) | 170 A
Conventional thermal current ith of main contacts (1-pole, open) | 400 A
Switching capacity (main contacts, general use) | 225 A, Maximum motor rating (UL/CSA)
Arcing time | 15 ms
Switching time (AC operated, make contacts, closing delay) - min | 28 ms
Switching time (AC operated, make contacts, closing delay) - max | 33 ms
Switching time (AC operated, make contacts, opening delay) - min | 35 ms
Switching time (AC operated, make contacts, opening delay) - max | 41 ms
Drop-out voltage | AC operated: 0.6 - 0.25 x UC, AC operated
Duty factor | 100 %
Pick-up voltage | 0.8 - 1.15 V AC x Uc
Power consumption, pick-up, 50 Hz | 180 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
Power consumption, pick-up, 60 Hz | 170 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
Power consumption, sealing, 50 Hz | 3.1 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
2.3 W, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
Power consumption, sealing, 60 Hz | 2.3 W, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
3.1 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
Rated control supply voltage (Us) at AC, 50 Hz - min | 380 V
Rated control supply voltage (Us) at AC, 50 Hz - max | 440 V

Rated control supply voltage (Us) at AC, 60 Hz - min | 380 V
Rated control supply voltage (Us) at AC, 60 Hz - max | 440 V
Rated control supply voltage (Us) at DC - min | 0 V
Rated control supply voltage (Us) at DC - max | 0 V
Assigned motor power at 115/120 V, 60 Hz, 1-phase | 10 HP
Assigned motor power at 200/208 V, 60 Hz, 3-phase | 50 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase | 30 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase | 60 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase | 125 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase | 125 HP
Connection | Screw terminals
Connection to SmartWire-DT | No
Number of auxiliary contacts (normally closed contacts) | 0
Number of auxiliary contacts (normally open contacts) | 0
Safe isolation | 690 V AC, Between the contacts, According to EN 61140
690 V AC, Between coil and contacts, According to EN 61140
Special purpose rating of ballast electrical discharge lamps | 160 A (480V 60Hz 3phase, 277V 60Hz 1phase)
160 A (600V 60Hz 3phase, 347V 60Hz 1phase)
Special purpose rating of definite purpose rating | 900 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)
150 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)
Special purpose rating of elevator control | 30 HP, 200 V 60 Hz 3-ph, (UL/CSA)
92 A, 200 V 60 Hz 3-ph, (UL/CSA)
75 HP, 480 V 60 Hz 3-ph, (UL/CSA)
100 HP, 600 V 60 Hz 3-ph, (UL/CSA)
99 A, 600 V 60 Hz 3-ph, (UL/CSA)
104 A, 240 V 60 Hz 3-ph, (UL/CSA)
40 HP, 240 V 60 Hz 3-ph, (UL/CSA)
96 A, 480 V 60 Hz 3-ph, (UL/CSA)
Special purpose rating of refrigeration control (CSA only) | 540 A, LRA 480 V 60 Hz 3phase; (CSA)
90 A, FLA 480 V 60 Hz 3phase; (CSA)
90 A, FLA 600 V 60 Hz 3phase; (CSA)
540 A, LRA 600 V 60 Hz 3phase; (CSA)

Special purpose rating of resistance air heating | 160 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)
160 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)
Special purpose rating of tungsten incandescent lamps | 160 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)
160 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)
Equipment heat dissipation, current-dependent Pvid | 32.1 W
Heat dissipation capacity Pdiss | 0 W
Rated operational current for specified heat dissipation (In) | 150 A
10.2.2 Corrosion resistance | Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures | Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat | Meets the product standard's requirements.
10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects | Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation | Meets the product standard's requirements.
10.2.5 Lifting | Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact | Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions | Meets the product standard's requirements.
10.3 Degree of protection of assemblies | Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances | Meets the product standard's requirements.
10.5 Protection against electric shock | Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components | Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections | Is the panel builder's responsibility.
10.8 Connections for external conductors | Is the panel builder's responsibility.
10.9.2 Power-frequency electric strength | Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage | Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material | Is the panel builder's responsibility.
10.10 Temperature rise | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating | Is the panel builder's responsibility. The specifications for the

switchgear must be observed.
10.12 Electromagnetic compatibility | Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.