

## Eaton 199640

Eaton Moeller® series DILA Contactor relay,  
230 V 50/60 Hz, 2 N/O, 2 NC, Push in  
terminals, AC operation

<b>PRODUCT NAME</b>	Eaton Moeller® series DILA Control relay
<b>CATALOG NUMBER</b>	199640
<b>PRODUCT LENGTH/DEPTH</b>	75 mm
<b>PRODUCT HEIGHT</b>	68 mm
<b>PRODUCT WIDTH</b>	45 mm
<b>PRODUCT WEIGHT</b>	0.227 kg
<b>CERTIFICATIONS</b>	VDE 0660 EN 60947-5-1 IEC/EN 60947

<b>FEATURES</b>	Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module
<b>FITTED WITH:</b>	Positive operation contacts
<b>OPERATING FREQUENCY</b>	9000 Operations/h
<b>POLLUTION DEGREE</b>	3
<b>CLIMATIC PROOFING</b>	Damp heat, constant, to IEC 60068-2-78
	Damp heat, cyclic, to IEC 60068-2-30
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	60 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	25 °C
<b>AMBIENT STORAGE TEMPERATURE - MAX</b>	80 °C
<b>AMBIENT STORAGE TEMPERATURE - MIN</b>	40 °C
<b>NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)</b>	0
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>	2
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS, DELAYED SWITCHING)</b>	0
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>	2
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS, LEADING)</b>	0
<b>NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)</b>	2
<b>NUMBER OF CONTACTS (NORMALLY OPEN)</b>	2

<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">eaton-control-relay-declaration-of-conformity-uk251205en.pdf</a>
<b>MCAD MODEL</b>	<a href="#">eaton-iec-contactors-mcad-3d-models-dil-m7-15-pi.stp</a>
	<a href="#">dil_m7_15_pi.dwg</a>
	<a href="#">eaton-contactors-dimensions-007.eps</a>

<b>CONTACTS)</b>	
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>	230 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>	230 V
<b>CONNECTION TO SMARTWIRE-DT</b>	No
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	6000 V AC
<b>CONNECTION</b>	Push in terminals
<b>APPLICATION</b>	Contactors relays
<b>PRODUCT CATEGORY</b>	DILA relays
<b>PROTECTION</b>	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
<b>VOLTAGE TYPE OF OPERATING VOLTAGE</b>	AC/DC
<b>RATED SWITCH CURRENT</b>	16 A
<b>OPERATING VOLTAGE AT AC, 50 HZ - MIN</b>	17 V
<b>OPERATING VOLTAGE AT AC, 50 HZ - MAX</b>	500 V
<b>OPERATING VOLTAGE AT AC, 60 HZ - MIN</b>	17 V
<b>OPERATING VOLTAGE AT AC, 60 HZ - MAX</b>	500 V
<b>OPERATING VOLTAGE AT DC - MIN</b>	24 VDC
<b>OPERATING VOLTAGE AT DC - MAX</b>	220 VDC
<b>SCREWDRIVER SIZE</b>	3.0 x 0.5 mm, Terminal screw
<b>VOLTAGE TYPE</b>	AC
<b>CODE NUMBER</b>	22E
<b>DEGREE OF PROTECTION</b>	IP20
<b>OVERVOLTAGE CATEGORY</b>	III
<b>CONTROL CIRCUIT RELIABILITY</b>	$\lambda < 5 \times 10^{-7}$ (1 failure at 2,000,000 operations for $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA) $\lambda < 5 \times 1/10^7$ (1 failure at 2,000,000 operations for

	U <sub>e</sub> = 24 V DC, U <sub>min</sub> = 17 V, I <sub>min</sub> = 5.4 mA)
<b>CONNECTION TYPE (AUXILIARY CIRCUIT)</b>	Push-in clamp connection
<b>DUTY FACTOR</b>	100 %
<b>LIFESPAN, MECHANICAL</b>	20,000,000 Operations (AC operated)
<b>MOUNTING METHOD</b>	DIN-rail/screw
<b>PICK-UP VOLTAGE</b>	0.85 - 1.1 V AC x U <sub>c</sub> 0.8 - 1.1 V AC x U <sub>c</sub> (voltage tolerance - dual frequency coil 50/60 Hz)
<b>SAFE ISOLATION</b>	400 V AC, Between coil and auxiliary contacts, According to EN 61140 400 V AC, Between auxiliary contacts, According to EN 61140
<b>POWER CONSUMPTION, PICK-UP, 60 HZ</b>	27 VA, AC, Dual-frequency coil at 60 Hz 25 VA, AC, Dual-frequency coil at 60 Hz
<b>POWER CONSUMPTION, SEALING, 60 HZ</b>	1.4 W, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub>  4.2 VA, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub>  3.3 VA, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub>
<b>TERMINAL CAPACITY (FLEXIBLE WITH UNISOLATED FERRULE)</b>	1 x (0.5 - 2.5) mm <sup>2</sup> 2 x (0.5 - 2.5) mm <sup>2</sup>
<b>TERMINAL CAPACITY (FLEXIBLE WITH ULTRASONIC WELDED CABLE END)</b>	1 x (0.5 - 2.5) mm <sup>2</sup> 2 x (0.5 - 2.5) mm <sup>2</sup>
<b>RATED OPERATIONAL CURRENT (IE)</b>	10 A at 60 V, DC L/R ≤ 15 ms (with 2 contacts in series) 2 A at 110 V, DC L/R ≤ 50 ms (with 3 contacts in series) 1 A at 220 V, DC L/R ≤ 50 ms (with 3 contacts in series) 5 A at 220 V, DC L/R ≤ 15 ms (with 3 contacts in series) 1 A at 220 V, DC L/R ≤ 15 ms (with 1 contact in series)

	4 A at 24 V, DC L/R $\leq$ 50 ms (with 3 contacts in series) 10 A at 24 V, DC L/R $\leq$ 15 ms (with 1 contact in series) 3 A at 110 V, DC L/R $\leq$ 15 ms (with 1 contact in series) 6 A at 60 V, DC L/R $\leq$ 15 ms (with 1 contact in series) 4 A at 60 V, DC L/R $\leq$ 50 ms (with 3 contacts in series) 6 A at 110 V, DC L/R $\leq$ 15 ms (with 3 contacts in series) 16 A
<b>TERMINAL CAPACITY (FLEXIBLE)</b>	1 x (0.5 - 2.5) mm <sup>2</sup> 2 x (0.5 - 2.5) mm <sup>2</sup>
	3.3 VA, Dual-frequency coil in a cold state and 1.0 x Us
<b>POWER CONSUMPTION, SEALING, 50 HZ</b>	1.4 W, Dual-frequency coil in a cold state and 1.0 x Us  4.2 VA, Dual-frequency coil in a cold state and 1.0 x Us
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b>	230 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b>	230 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>	0 V
<b>RATED INSULATION VOLTAGE (UI)</b>	690 V
<b>RATED OPERATIONAL CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V</b>	4 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V</b>	4 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-15, 500 V</b>	1.5 A
<b>RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX</b>	690 V

<b>STRIPPING LENGTH (MAIN CABLE)</b>	10 mm
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX</b>	21 ms
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN</b>	15 ms
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX</b>	18 ms
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN</b>	9 ms
<b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>	2 x (0.5 - 1.5) mm <sup>2</sup> 1 x (0.5 - 2.5) mm <sup>2</sup>
<b>SHOCK RESISTANCE</b>	7 g, N/O auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half- sinusoidal shock 10 ms 5 g, N/C auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half- sinusoidal shock 10 ms
<b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>	20 - 14
<b>SHORT-CIRCUIT PROTECTION RATING WITHOUT WELDING</b>	10 A gG/gL, 500 V, Max. Fuse, Contacts
<b>TERMINAL CAPACITY (SOLID)</b>	1 x (0.5 - 2.5) mm <sup>2</sup> 2 x (0.5 - 2.5) mm <sup>2</sup>

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
:



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