DATASHEET - DILER-31(220V50/60HZ)



Contactor relay, 220 V 50/60 Hz, N/O = Normally open: 3 N/O, N/C = Normally closed: 1 NC, Screw terminals, AC operation



Part no. Catalog No. Alternate Catalog No.

DILER-31(220V50/60HZ) 021665 log XTRM10A31A0

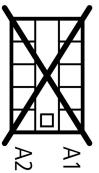
Similar to illustration

Delivery program

Product range			DILER Mini-contactors
Application			Contactor relays
Description			with interlocked opposing contacts
Connection technique			Screw terminals
Rated operational current			
Conventional free air thermal current, 1 pole			
Open			
at 50 °C	$I_{th} = I_e$	А	10
AC-15			
220 V 230 V 240 V	I _e	А	6
380 V 400 V 415 V	I _e	А	3
Contacts			
N/O = Normally open			3 N/O
N/C = Normally closed			1 NC
Contact sequence			$\begin{array}{c} A^{1} \\ A^{1} \\ A^{2} \\$
Code number and version of combination			
Distinctive number			31E
For use with			DILE
Actuating voltage			220 V 50/60 Hz
Voltage AC/DC			AC operation
Instructions			Contact numbers to EN 50011 Coil terminal markings to EN 50005

Technical data

General			
Standards			IEC/EN 60947, EN 60947-5-1, VDE 0660, UL, CSA
Lifespan, mechanical			
AC operated	Operations	x 10 ⁶	10
Maximum operating frequency	Operations/h		9000
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Open		°C	-25 - +50
Enclosed		°C	- 25 - 40
Mounting position			
Mounting position			As required, except vertical with terminals A1/A2 at the bottom



			A1 A2
Mechanical shock resistance (IEC/EN 60068-2-27)			
Half-sinusoidal shock, 10 ms			
Basic unit with auxiliary contact module		g	
N/O contact		g	10
N/C contact		g	8
Degree of Protection			IP20
Altitude		m	Max. 2000
Weight			
AC operated		kg	0.17
Terminal capacities		mm ²	
Screw terminals			
Solid		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Flexible with ferrule		mm ²	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)
Solid or stranded		AWG	18 - 14 1 × (18 - 14) 2 × (18 - 14)
Stripping length		mm	8
Terminal screw			M3.5
Pozidriv screwdriver		Size	2
Standard screwdriver		mm	0.8 × 5.5 1 × 6
Max. tightening torque		Nm	1.2
Contacts			
Interlocked opposing contacts to ZH 1/457, including auxiliary contact module			Yes
Rated impulse withstand voltage	U _{imp}	V AC	6000
Overvoltage category/pollution degree			111/3
Rated insulation voltage	Ui	V AC	690
Rated operational voltage	U _e	V AC	600
Safe isolation to EN 61140			
between coil and auxiliary contacts		V AC	300
between the auxiliary contacts		V AC	300
Rated operational current		A	
Conventional free air thermal current, 1 pole			
Open			10
at 50 °C	I _{th} =I _e	A	10
AC-15			
220 V 230 V 240 V	l _e	A	6
380 V 400 V 415 V	l _e	A	3
500 V	l _e	A	1.5
DC current			
Notes			Switch-on and switch-off conditions based on DC-13, time constant as specified.
DC L/R ≦ 15 ms			
Contacts in series:		A	
1	24 V	A	2.5
2	60 V	A	2.5

320VA6Control circuit reliabilityFailure rateAaControl circuit reliabilityFailure rateControl circuit reliabilityMaximum overcurrent protective deviceAFA20V 200 V240 VVKAA20V 200 V240 VVKAA380 V 400 V115 VKKAA380 VKKAAA380 VKKKAAA CoperatoKKKAAA CoperatoKKKAAA CoperatoKKKAAA CoperatoKKKAAA Coperato Kind KinderKKAAAA Coperato Kind KinderKKKAAA Coperato Kind KinderKKKAAA Coperato Kind Kind	2	110 V	А	15
Index lendingFame a b a sequence of the seque	3			1.5
Shir-Function Shir-Fun				
Maximum orcurrant protective deviceIndexPice MA220 V 230 V 240 V6444300 V 400 V 15 V7646500 V6766500 V6766500 V7676500 V7676600 persted7777Magnet systems77	Control circuit reliability	Failure rate	λ	<10 ⁻⁸ , < one failure at 100 million operations (at U _e = 24 V DC, U _{min} = 17 V, I _{min} = 5.4 mA)
220 V230 V240 V415 VPKZM04380 V400 V415 V66Shet-cirult protection maximum fuseFKZM04500 VA figle6500 VA figle10Current-tect loss at lyK10Current-tect loss at lyKNA coperatedMNSingle-voltage cell S040 K2Pick-upNA coperatedMNSingle-voltage cell S040 K2Pick-upNDual-frequency cell S040 K2Pick-upNA coperated M2NNA coperated M2NNPick-UpNNA coperated N2 </td <td>Short-circuit rating without welding</td> <td></td> <td></td> <td></td>	Short-circuit rating without welding			
380 Vo Va 15 VPK2M0	Maximum overcurrent protective device			
Sour-circuit protection maximum fuseImage: sour sour sour sour sour sour sour sour	220 V 230 V 240 V		PKZM0	4
ion<	380 V 400 V 415 V		PKZM0	4
50VA fast Current heat loss at landA fast Current heat loss at landA fast Current heat loss at landA fast 	Short-circuit protection maximum fuse			
Current heal loss at la Image: set la <t< td=""><td>500 V</td><td></td><td>A gG/gL</td><td>6</td></t<>	500 V		A gG/gL	6
AC operatedIAC operatedIAC operatedVelowAC operatedVelowNoteNote <td>500 V</td> <td></td> <td>A fast</td> <td>10</td>	500 V		A fast	10
Notepote learnice Image: systems Voltage tollarance Image: systems AC operated Image: systems AC operated Image: systems Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz Pick-up NLe Jual-frequency coil 50/60 Hz Pick-up NLe 08-1-1 AC operation Pick-up NLe 08-1-1 Dual-frequency coil 50/60 Hz Hold NLe Sage: Sag	Current heat loss at I _{th}			
Notage coll solva and coll voltage coll sol b4 and using coll solva and coll voltage coll voltage	AC operated		W	1.1
AC operated Pick-up x Up 8-11 Jual-frequency coil 50/60 Hz Pick-up x Up 85-1.1 Power consumption Pick-up x Up 1 AC operation Power consumption 54 3.3 Dual-frequency coil 50/60 Hz Sealing Va 3.3 Dual-frequency coil 50/60 Hz Sealing Va 3.3 duty factor Sealing Va 3.3 duty factor Sealing Va 3.3 AC operated losing delay Sealing Va 3.3 AC operated N/O contact opening delay Max Sealing Na 4.2 AC operated With auxiliary contact module Max. closing delay max 8.18 1.2 Rationard Cosing delay Max Sealing Max 1.2 Rationard Cosing delay Max Sealing Max 1.2 Rationard Cosing delay Max Sealing Sealing Sealing Rationard Cosing delay Max Sealing Sealing Sealing Paice Darie Max Sealing Sealing Sealing	Magnet systems			
Ningle-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 HzPick-upN Uc8a 1.1Dual-frequency coil 50,60 HzPick-upN Uc8b - 1.1A C operationHoldN M3.3Dual-frequency coil 50,60 HzHoldN M3.3Dual-frequency coil 50,60 HzSealingN M3.3duty tactorSealingN M3.3A C operated losing delaySealingN M1.4A C operated N/O contact opening delayN M1.41.4A C operated With auxiliary contact module Max. closing delayN M1.4Pilet DuryN M1.41.4Pilet DuryM MM M1.4Pilet DuryM MM M1.4A C operated N/O contact noodule Max. closing delayM MM MPilet DuryM MM MM MPilet DuryM MM MM MA C operated With auxiliary contact module Max. closing delayM MA C operated N/O contact noodule Max. closing delayM MM Miller Contact Topologic MaxM MPilet DuryM MPilet DuryM MA C operated Mith auxiliary contact module Max. closing delayM MMuller Contact Topologic MaxM MPilet DuryM MMuller Contact MaxM M	Voltage tolerance			
Polai-frequency oil 50/60 HzPick-upx Uc85-11Polai-frequency oil 50/60 HzHoldNaSalinaDuai-frequency oil 50/60 HzHoldNaSalinaDuai-frequency oil 50/60 HzSalinaNaSalinaduly factorSalinaNaSalinaduly factorSalinaNaSalinaduly factorNaSalinaNaAC operated N/0 contact opening delayNa1421AC operated N/0 contact opening delayNaSalinaAC operated N/0 contact opening delayNaSalinaPilot DuryNaSalinaAC operated SalinaNaSalinaPilot DuryNaSalinaAC operated N/0 contact opening delayNaSalinaAC operated SalinaNaSalinaPilot DuryNaSalinaAC operated NaNaSalinaAC	AC operated			
Power consumption	Single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Pick-up	x U _c	0.8 - 1.1
AC operated Index	Dual-frequency coil 50/60 Hz	Pick-up	x U _c	0.85 - 1.1
Dual-frequency coil 50/60 Hz Hold VA 5/3 Dual-frequency coil 50/60 Hz Sealing VA 5/3 Dual-frequency coil 50/60 Hz Sealing VA 5/3 duty factor Sealing VA 5/3 duty factor Sealing VA 5/3 AC operated losing delay Sealing ND 10 AC operated N/D contact opening delay ND 8-18 10 AC operated N/D contact opening delay ND 8-18 10 AC operated N/D contact opening delay ND 8-18 10 AC operated N/D contact opening delay ND 8-18 10 AC operated N/D contact opening delay ND 9 10 10 AC operated Searce ND 10 10 10 10 AC operated ND 10 10 10 10 10 AC operated ND 10 10 10 10 10 AC operated ND 10 10 10	Power consumption			
Pual-frequency coil 50/60 Hz Sealing W	AC operation			
duty fact % PG 10 duty factor % PG 10 Changeover time at 100 % Us (recommended value) ms 14 - 21 A Coperated Cosing delay ms 8 - 18 A Coperated N/D contact opening delay ms 8 - 18 A Coperated With auxiliary contact module Max. closing delay ms 8 - 18 Ratting data for approved types ms 9 - 18 Ratting data for approved types ms 9 - 18 Ratting data for approved types ms 9 - 18 Pilot Duty Max A600 Max A Coperated Max 9 - 18 9 - 18 A Coperated Use Max 9 - 18 10 - 18 A Coperated No Max 9 - 18 10 - 18 A Coperated No Max 9 - 18 10 - 18 A Coperated No Max 9 - 18 10 - 18 A Coperated No A - 18 10 - 18 10 - 18 A Coperated No Max 9 - 18 10 - 18 10 - 18 A Coperated No Max 9 - 18 10 - 18 10 - 18 10 - 18 10 -	Dual-frequency coil 50/60 Hz	Hold	VA	
Change over time at 100 % Ug (recommended value) Image: Margin of	Dual-frequency coil 50/60 Hz	Sealing	W	
AC operated closing delayImage: Marget AC operated N/O contact opening delayImage: Marget AC operated With auxiliary contact module Max. closing delayImage: Marget AC operated With auxiliary contact module Max. closing delayImage: Marget AC operated StrategyImaget AC operated Strategy <th< td=""><td>duty factor</td><td></td><td>% DF</td><td>100</td></th<>	duty factor		% DF	100
AC operated N/O contact opening delay ms 8 - 18 AC operated With auxiliary contact module Max. closing delay ms 45 Rating data for approved types	Changeover time at 100 $\%~\text{U}_{S}$ (recommended value)			
AC operated With auxiliary contact module Max. closing delay ms 45 Rating data for approved types Retering to a second types Retering to a second types Auxiliary contacts Image: Second types Image: Second types Alooperated Image: Second types Image: Second types AC operated Image: Second types Image: Second types General Use Image: Second types Image: Second types AC Image: Second types Image: Second types Image: Second	AC operated closing delay		ms	14 - 21
Aviliary contacts Image: second s	AC operated N/O contact opening delay		ms	8 - 18
Auxiliary contactsImage: Base of the sector of	AC operated With auxiliary contact module Max. closing delay		ms	45
Pilot DutyImage: Pilot DutyImage: Pilot DutyImage: Pilot DutyA600AC operatedP300P300General UseImage: Pilot DutyImage: Pilot DutyACImage: Pilot DutyImage: Pilot DutyACImage: Pilot DutyImage: Pilot DutyDCImage: Pilot DutyImage: Pilot DutyDCImage: Pilot DutyImage: Pilot Duty	Rating data for approved types			
AC operatedAC operate	Auxiliary contacts			
DC operatedP300General UseIACVACACDCACDCV<	-			
General UseImage: Constraint of the second seco	AC operated			A600
ACV600ACA10DCV250	DC operated			P300
AC A 10 DC V 250	General Use			
DC V 250	AC		V	600
	AC		А	10
DC A 0.5	DC		V	250
	DC		А	0.5

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	А	6
Heat dissipation per pole, current-dependent	P _{vid}	W	0.4
Equipment heat dissipation, current-dependent	P _{vid}	W	0
Static heat dissipation, non-current-dependent	P _{vs}	W	1.8
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	50
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties	
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.

Technical data ETIM 7.0

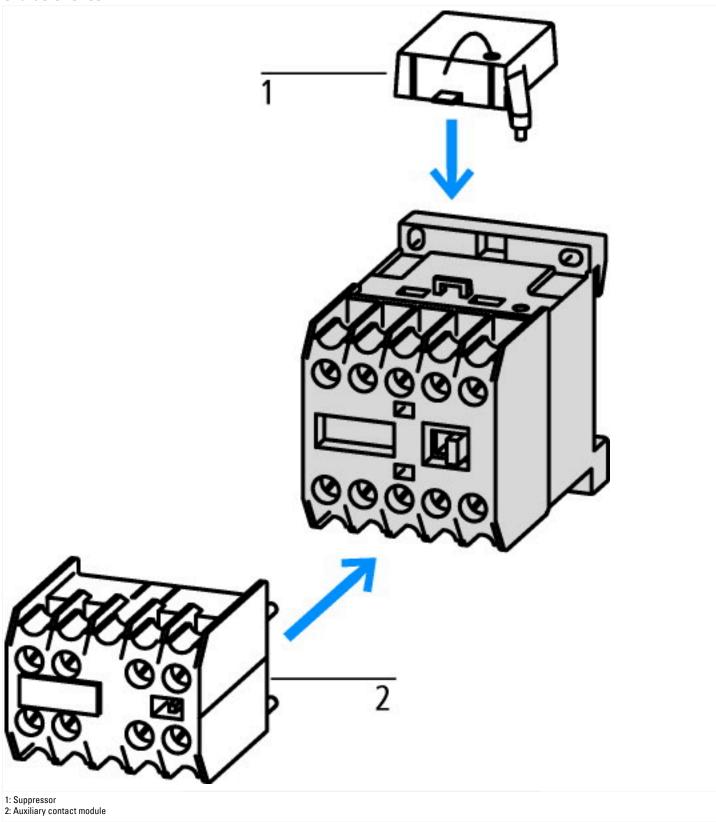
Low-voltage industrial components (EG000017) / Contactor relay (EC000196)

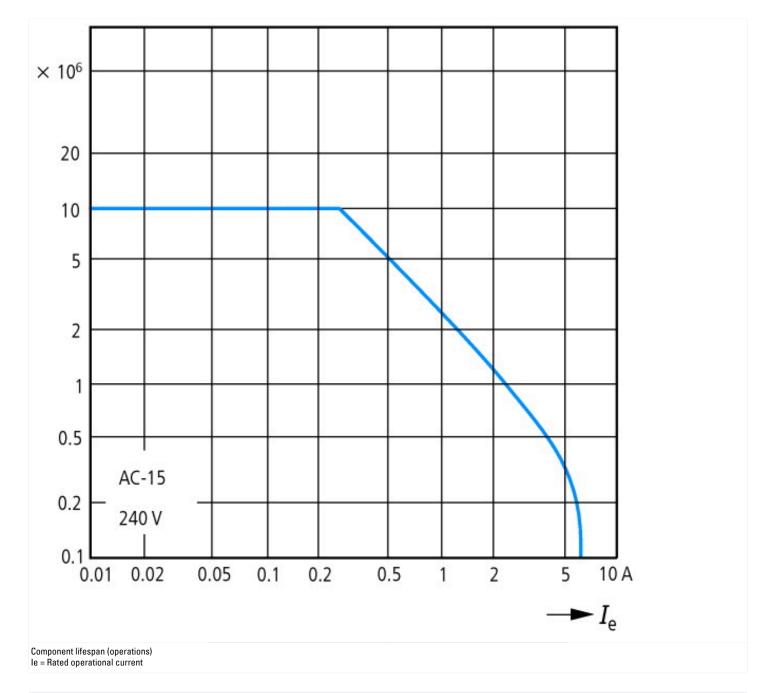
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Contactor relay (ecl@ss10.0.1-27-37-10-01 [AAB716014])

Rated control supply voltage Us at AC 50HZ	V	220 - 220
Rated control supply voltage Us at AC 60HZ	V	220 - 220
Rated control supply voltage Us at DC	V	0 - 0
Voltage type for actuating		AC
Rated operation current le, 400 V	А	3
Connection type auxiliary circuit		Screw connection
Mounting method		DIN-rail/screw
Interface		No
Number of auxiliary contacts as normally closed contact		1
Number of auxiliary contacts as normally open contact		3
Number of auxiliary contacts as normally closed contact, delayed switching		0
Number of auxiliary contacts as normally open contact, leading		0
With LED indication		No
Number of auxiliary contacts as change-over contact		0
Manual operation possible		No

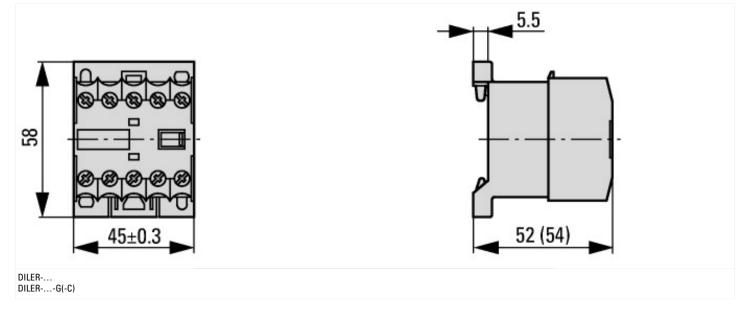
Approvals

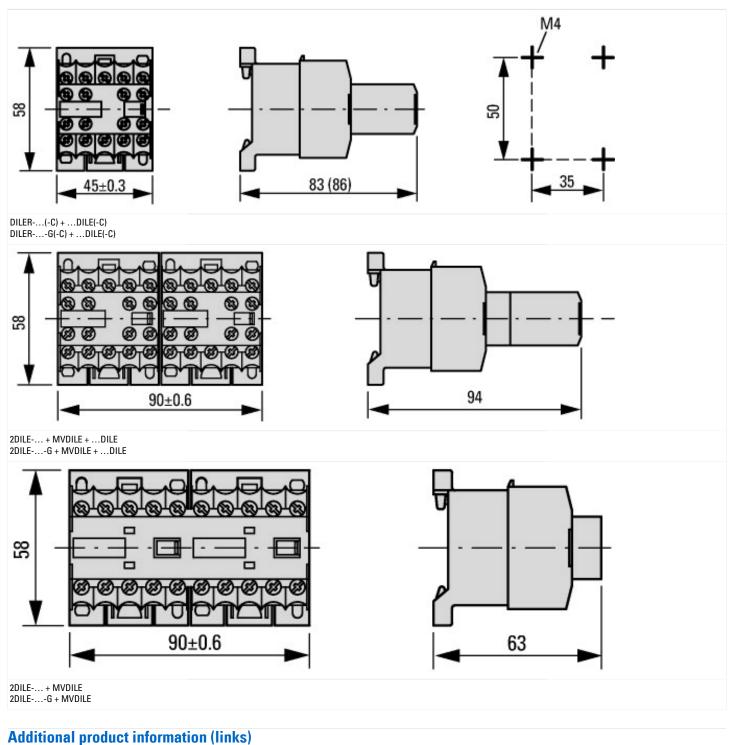
Product Standards	IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29184
UL Category Control No.	NKCR
CSA File No.	012528
CSA Class No.	3211-03
North America Certification	UL listed, CSA certified
Specially designed for North America	No





Dimensions





IL03407009Z (AWA2100-0882) Mini contactor relay

IL03407009Z (AWA2100-0882) Mini contactor https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407009Z2020_05.pdf relay