

Multi-function relay, 1W, 0.05-60h, with potentiometer connection, 24-240VAC/DC



Part no. DILET70-A
Article no. 048893
Catalog No. XTMT6A60H70B

Delivery programme

Product range			DILET timing relays
Basic function			Timer relays
Function			Multi-functional On-delayed Off-delayed Fleeting contact on energization Fleeting contact on de-energization Flashing, pulse initiating On- and Off-delayed Pulse forming Pulse generating
			with connection for potentiometer
Number of changeover contacts			1
Time range			0.05 s - 60 h
Time range			0.15 - 3 s 0.5 - 10 s 3 - 60 s 0,15 - 3 min 0.5 - 10 min 3 - 60 min 0.15 - 3 h 0.5 - 10 h 3 - 60 h
Rated operational current			
AC-11			
230 V	I _e	Α	3
380 V 400 V 415 V	I _e	Α	3
AC-15			
220 V 230 V 240 V	I _e	Α	3
Voltage range	U_LN	V	24 - 240 V AC, 50/60 Hz 24 - 240 V DC
Width		mm	45



Terminal marking according to EN 50042



Technical data

General

Lifespan, mechanicalVDE 0435AC operatedOperations x 10630DC operatedOperations x 10630Climatic proofingVDE 0455Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30Ambient temperature°C-20 - +60Enclosed°C-20 - +45	General			
AC operated Operations x 10 ⁶ 30 DC operated Operations x 10 ⁶ 30 Climatic proofing Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 Ambient temperature °C Open Enclosed °C - 20 - + 60 - 20 - + 45	Standards			
DC operated Operations x 106 Climatic proofing Ambient temperature Open Open CC Open CC Open CC CC Open CC CC CC CC CC CC CC CC CC	Lifespan, mechanical			
Climatic proofing Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 Ambient temperature °C Open °C -20 - + 60 Enclosed °C -20 - + 45	AC operated	Operations	x 10 ⁶	30
Ambient temperature °C Open °C -20 - +60 Enclosed °C -20 - +45	DC operated	Operations	x 10 ⁶	30
Open °C - 20 - + 60 Enclosed °C - 20 - + 45	Climatic proofing			
Enclosed °C - 20 - +45	Ambient temperature		°C	
	Open		°C	- 20 - + 60
Mounting position As required	Enclosed		°C	- 20 - + 45
	Mounting position			As required

Mail control	Mechanical shock resistance (IEC/EN 60068-2-27)			
Make critation Image: Production of Company of production Image: Production of Company of Production Image: Production of Company of Production of Company of			0	
Despite of protection Part				
Neminate Part Par			g	4
Promised capacitation	•			ID20
			len.	
Sellid ar atranside Flexible with fertide Bellid ar atranside Very VAD Sellid ar atranside Very VAD Very VAD VERY VAD VAD VAD VAD VAD VAD VAD VAD				0.03
Retable with formina			mm²	
Solid ar stranded	Solid		mm ²	
Marie disputes withstand withsage War	Flexible with ferrule		mm ²	
Reset impulses withstand vallage	Solid or stranded		AWG	1 x (18 - 14)
Overwinting a categoryisplicition degree U, VAB VAC Image: Category isplication degree U, VAB VAC 400 Safe isolation to EN 61140 VAC 20 <	Contacts			
Rated insulation voltage U ₁ V AC	Rated impulse withstand voltage	U _{imp}	V AC	6000
National voltage	Overvoltage category/pollution degree			111/2
Sarie salaution to EN 61140 between the auxiliary contacts	Rated insulation voltage	Ui	V AC	600
between to a uxiliary contacts	Rated operational voltage	U _e	V AC	440
Debtween the auxiliary centacts	Safe isolation to EN 61140			
Making capacity AC14 case = 0.3 490 V AC15 case = 0.3 220 V AC16 case = 0.3 490 V AC16 case = 0.3 490 V AC16 case = 0.3 440 V AC17 case = 0.3 440 V AC17 case = 0.3 440 V AC18 case = 0.3 440 V AC19	between coil and auxiliary contacts		V AC	250
AC-14 case = 0.3 480 V AC 15 case = 0.0 220 V AC 15 case = 0.0 220 V Brusking capacity AC 14 case = 0.3 480 V AC 15 case = 0.0 220 V AC	between the auxiliary contacts		V AC	250
A S S S S S S S S D D D D D D D D D	Making capacity			
DC-11 LR-40 ms	$AC\text{-}14\cos\phi=0.3\ 400\ V$		Α	48
Breaking capacity C-14 cos φ = 0.3 440 V A 3 AC-15 cos φ = 0.3 220 V A 3 DC-11 L/R - 40 ms x l _q 1.1 Rated operational current l _q A 3 AC-14 - - AU V - - - 4U V l _Q A 3 AC-15 - - - DC-11 V - - AC-15 - - - DC-11 - - - Mote - - - L/R max. 15 ms A 1.5 - 2 V L/R max. 50 ms A A 5 Conv. thermal current I _R A 6 - Note A A 9G/gL 6 - Max. fuse, make contacts A A 9G/gL 6 - Max. fuse, make contacts A A 9G/gL - - - - -	$AC-15\cos \varphi = 0.3\ 220\ V$		Α	50
AC-14 cos φ = 0.3 440 V	DC-11 L/R - 40 ms		x I _e	1.1
AC-IS cos q = 0.3 220 V DC-II L/R - 40 ms	Breaking capacity			
Note Name	AC-14 $\cos \phi = 0.3440 \text{ V}$		Α	3
AC-14 AC-15 220 V 230 V 240 V 40 V	AC-15 $\cos \varphi = 0.3220 \text{ V}$		Α	3
AC-14 440 V	DC-11 L/R - 40 ms		x I _e	1.1
AC-14 440 V	Rated operational current	l _e	Α	
AC-15 20 V 23 V 24 V V V	AC14			
AC-15 20 V 230 V 240 V 0	440 V	l _e	A	3
DC-11		C		
DC-11		l _o	Α	3
Note		-e		
L/R max. 15 ms A 1.5 24 V I/R max. 50 ms A 1.2 Conv. thermal current I/B max. 50 ms A 1.2 Conv. thermal current I/B max. 50 ms A 1.2 Short-circuit rating without welding When supplied directly from mains or transformer > 1000 VA Max. fuse, make contacts A gG/gL 6 Max. fuse, break contacts A gG/gL 6 Magnet systems V 2 AC V 24-240 DC VOItage tolerance X U _c 24-240 Voltage tolerance X U _c X U _c 24-240 Min. pick-up voltage, AC operated, max. X U _c 3.5 3.5 Pick-up voltage AC operated, max. X U _c 3.5 3.5 Pick-up voltage, DC operated, min. X U _c 3.1 3.1 Pick-up voltage, DC operated, min. X U _c 3.1 3.1 Max. pick-up voltage, DC operated, min. X U _c 3.1 3.1 Pick-up voltage, DC operated, min. X U _c 3.1				Making and breaking conditions to DC13 time constant as stated
24 V Ie A 1.5 L/R max. 50 ms A 1.2 Conv. thermal current Ith A 6 Short-circuit rating without welding When supplied directly from mains or transformer > 1000 VA Note When supplied directly from mains or transformer > 1000 VA Max. fuse, make contacts A gG/gL 6 Max. fuse, break contacts A gG/gL 6 Magnet systems V 4 Rated operational voltage Ve 24 - 240 DC 24 - 240 24 - 240 Voltage tolerance X U _c 24 - 240 Pick-up voltage X U _c 0.95 Min. pick-up voltage, AC operated X U _c 0.95 Pick-up voltage AC operated, max. X U _c 1.1 Pick-up voltage, DC operated, min. X U _c 0.7 Max. pick-up voltage, DC operated X U _c 1.1 Pick-up voltage, DC operated X U _c 1.1 Pick-up voltage, DC operated, min. X U _c 1.1 Max. pick-up voltage, DC operated X U _c </td <td></td> <td></td> <td>۸</td> <td>waxing and breaking conditions to bord, time constant as stated</td>			۸	waxing and breaking conditions to bord, time constant as stated
L/R max. 50 ms Conv. thermal current Short-circuit rating without welding Note Note Max. fuse, make contacts Max. fuse, break contacts A g G/g L 6 A C A g G/g L 6 A C A g G/g L 6 A g G/g L 6 A c A g G/g L 6 A g G/				15
Conv. thermal current Short- circuit rating without welding Note Mote Max. fuse, make contacts Max. fuse, make contacts Max. fuse, break contacts Magnet systems Rated operational voltage DC Voltage tolerance Pick-up voltage Min. pick-up voltage, AC operated Pick-up voltage AC operated, min. Min. pick-up voltage DC operated, min. Max. pick-up voltage, DC operated Max. pic		¹e		
Short-circuit rating without welding Note Max. fuse, make contacts Max. fuse, break contacts Max. fuse, break contacts May fuse, break contacts Magnet systems Rated operational voltage AC DC AC DC Voltage tolerance Pick-up voltage Min. pick-up voltage, AC operated Min. pick-up voltage AC operated, min. Pick-up voltage DC operated, min. Max. pick-up voltage, DC operated	•			
Max. fuse, make contacts Max. fuse, break contacts Max. fuse, break contacts Max. fuse, break contacts Max. fuse, break contacts Max. fuse, break contacts Max. fuse, break contacts Max. fuse, break contacts Max. fuse, break contacts Max. fuse, break contacts Max. fuse, break contacts De Ve Ve Ve Ve Va-240 24-240 24-240 Voltage tolerance Pick-up voltage Min. pick-up voltage, AC operated Min. pick-up voltage, AC operated Min. pick-up voltage AC operated, max. Pick-up voltage DC operated, min. Vu Max. pick-up voltage, DC operated Vu Max. pick-up voltage, DC operated Vu Vu Vu Vu Vu Vu Vu Vu Vu V		1 _{th}	А	U
Max. fuse, make contacts A gG/gL 6 Max. fuse, break contacts A gG/gL 6 Magnet systems Rated operational voltage Ue V AC 24 - 240 24 - 240 DC 24 - 240 24 - 240 Voltage tolerance x Uc x Uc Pick-up voltage x Uc 0.85 Min. pick-up voltage, AC operated, max. x Uc 1.1 Pick-up voltage DC operated, min. x Uc 0.7 Max. pick-up voltage, DC operated x Uc 1.1 Power consumption x Uc 1.1				Will place at a constant
Magnet systems Rated operational voltage Velocational voltage Velocational voltage Velocational voltage Velocational voltage Velocational voltage Velocational voltage tolerance Velocational voltage tolerance Velocational voltage Velocational voltage Velocational Voltage tolerance Velocational voltage Velocational Ve			A 0/ 1	
Magnet systems Rated operational voltage				
Rated operational voltage AC AC DC Voltage tolerance Pick-up voltage Min. pick-up voltage AC operated, max. Pick-up voltage DC operated, min. Max. pick-up voltage, DC operated Max. pick-up voltage, DC operated Vue Vue Vue 4 - 240 24 - 240 24 - 240 25 - 24 - 240 26 - 24 - 240 27 - 24 - 240 28 - 24 - 240 29 - 24 - 240 20 - 24 - 240 20 - 25 - 25 - 25 - 25 - 25 - 25 - 25 -			A gG/gL	b
AC DC Voltage tolerance Voltage, AC operated Min. pick-up voltage, AC operated, max. Pick-up voltage DC operated, min. Was pick-up voltage, DC operated X U c X U c X U c X U c X U c X U c 1.1 X U c 1.1 X U c 1.1 Y U c 1.1		II.	V	
DC Voltage tolerance Pick-up voltage Min. pick-up voltage, AC operated Pick-up voltage AC operated, max. Pick-up voltage DC operated, min. Wax. pick-up voltage, DC operated X U c X U c 0.7 Max. pick-up voltage, DC operated X U c 1.1 Power consumption		O _e	·	24 - 240
Voltage tolerance $x U_c$ Pick-up voltage $x U_s$ Min. pick-up voltage, AC operated $x U_c$ Pick-up voltage AC operated, max. Pick-up voltage DC operated, min. VU_c Max. pick-up voltage, DC operated XU_c 1.1 Power consumption				
Pick-up voltage			vII	LT LTU
Min. pick-up voltage, AC operated x U c 0.85 Pick-up voltage AC operated, max. x U c 1.1 Pick-up voltage DC operated, min. x U c 0.7 Max. pick-up voltage, DC operated x U c 1.1 Power consumption				
Pick-up voltage AC operated, max. Pick-up voltage DC operated, min. X U _c 0.7 Max. pick-up voltage, DC operated X U _c 1.1 Power consumption				0.05
Pick-up voltage DC operated, min. $x U_c = 0.7$ Max. pick-up voltage, DC operated $x U_c = 1.1$ Power consumption				
Max. pick-up voltage, DC operated x U _c 1.1 Power consumption				1.1
Power consumption Power consumption	Pick-up voltage DC operated, min.		x U _c	0.7
	Max. pick-up voltage, DC operated		x U _c	1.1
Pick-up AC VA 2	Power consumption			
	Pick-up AC		VA	2

Sealing AC	VA	2
Pick-up DC	W	1.8
Sealing DC	W	1.8
Duty factor	% DF	100
Maximum operating frequency	0ps/h	4000
Minimum command time		
AC	ms	50
DC	ms	30
Repetition accuracy (deviation)	%	≦ _{0.5}
Recovery time (after 100% time delay)	ms	70

Data for design verification according to IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	6
Heat dissipation per pole, current-dependent	P _{vid}	W	0.9
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
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 switch gear must be observed. $\label{eq:constraint}$
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 5.0

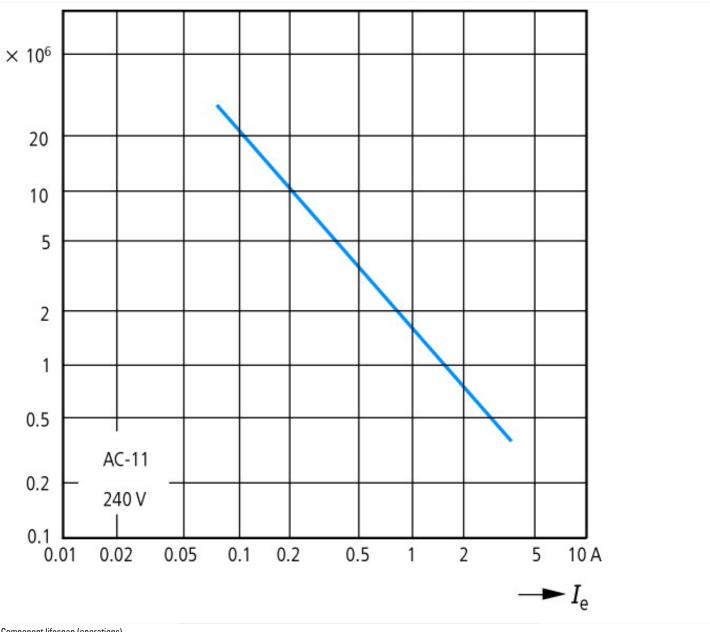
Relays (EG000019) / Timer relay (EC001439)				
Electric engineering, automation, process control engineering / Low-voltage switch technology / Relay and socket / Timed relay (ecl@ss8-27-37-16-05 [AKF092009])				
Type of electric connection	Screw connection			
Function delay-on energization	Yes			
Function delay on de-energization	Yes			
Function floating contact on energization	Yes			
Function floating contact on de-energization	Yes			

Function star-delta		No
Function pulse shaping		Yes
Function flashing, starting with pause, fixed time		Yes
Function flashing, starting with pulse, fixed time		Yes
Clock function, starting with pause, variable		Yes
Clock function, starting with pulse, variable		Yes
With plug-in socket		No
Remote operation possible		Yes
Suitable only for remote control		No
Pluggable on auxiliary contact block		No
Rated control supply voltage Us at AC 50HZ	V	24 - 240
Rated control supply voltage Us at AC 60HZ	V	24 - 240
Rated control supply voltage Us at DC	V	24 - 240
Voltage type for actuating		AC/DC
Time range	s	0.05 - 216000
Number of outputs, undelayed, normally closed contact		0
Number of outputs, undelayed, normally open contact		0
Number of outputs, undelayed, change-over contact		1
Number of outputs, delayed, normally closed contact		0
Number of outputs, delayed, normally open contact		0
Number of outputs, delayed, change-over contact		1
Outputs, reversible delayed/undelayed		Yes
With semiconductor output		No
Width	mm	45
Height	mm	58
Depth	mm	52

Approvals

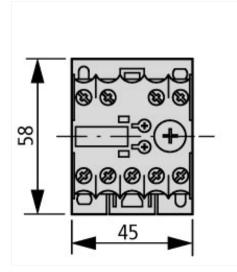
Product Standards	IEC/EN 61812-1; IEC/EN 60947-5-1; UL 508; CSA-22.2 No. 14-05; CE marking
UL File No.	E29184
UL Category Control No.	NKCR, NKCR7
CSA File No.	12528
CSA Class No.	3211-03
North America Certification	UL listed, CSA certified
Degree of Protection	IEC: IP20, UL/CSA Type: -

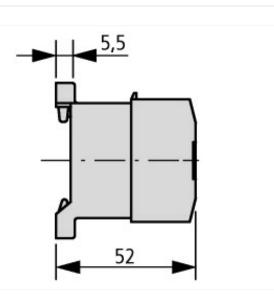


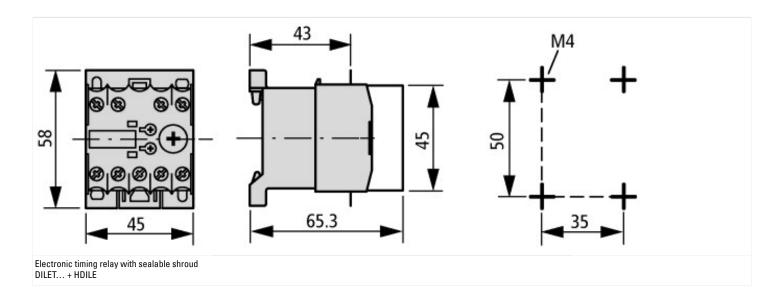


Component lifespan (operations) le = Rated operational current

Dimensions







Additional product information (links)

IL04910003Z (AWA2527-1587) Solid-state timing relay

IL04910003Z (AWA2527-1587) Solid-state timing ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL04910003Z2010_10.pdf relay