DATASHEET - DILET70-A



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



Part no. DILET70-A Catalog No. 048893

Alternate Catalog XTMT6A60H70B

No.

EL-Nummer 4133285

(Norway)

Delivery program

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 potentiometer connection (10 k Ω) Adjustable timing functions
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

deliefal			
Standards			Standard IEC/EN 61812 VDE 0435
Lifespan, mechanical			
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

Cytum	Ambient temperature			
Personand Pers			۰C	-20 - 160
Months activates above restrates (PECFR (MIX82 - 27)) A required above restrates (PECFR (MIX82 - 27)) A required above restrates (PECFR (MIX82 - 27)) A required above restrates (PECFR (MIX82 - 27)) B g 4 A required above restrates (PECFR (MIX82 - 27)) A required above restrates				
Methanical biotic Paramided Fronce Par			C	
Half-crusted al hock, 20 ms 6 ms 7 ms <t< td=""><td></td><td></td><td></td><td>As required</td></t<>				As required
Make costact Degree of protections Degree of protections Possible of Protections Poss			a	
Degree of protection Terminals Page				A
Terminals			y	•
Note				IP20
Terminal capacities Solid Solid Flexibile with ferrule Flexibile with ferrule Flexibile with ferrule Total transfer Solid or stranded Total transfer Total transfer Total transfer Total transfer Total transfer Total department violage Up VAC Solid Total department violage Total department violage VAC Solid Total department violage Total depar			ka	
Solid strained	· ·		-	0.03
Fiscibile with ferrule				
Solid or stranded	Solid		mm ²	
Contacts Use of Marce Insulates withstand voltage VAC 6000 Rated insulates voltage Use VAC 600 Rated operational voltage Use VAC 600 Safe solation voltage Use VAC 40 Safe solation to FIRSTAQ VAC 20 between the auxiliary contacts VAC 20 between the auxiliary contacts VAC 20 between the auxiliary contacts VAC 20 Making capacity AC-15 cos = 0.3 400 V AC 4 AC-15 cos = 0.3 320 V AC AC OC-11 UR-3 ons AC AC Breaking capacity AC AC CC-15 cos = 0.3 200 V AC AC AC-15 cos = 0.3 320 V AC AC AC-15 cos = 0.3 200 V AC AC AC-15 cos = 0.3 320 V AC AC AC-15 cos = 0.3 400 V AC AC AC-15 cos = 0.3 400 V AC AC AC-15 cos = 0.3 520 V AC AC AC-16 cos = 0.3 520 V	Flexible with ferrule		mm ²	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)
Rated impulse withstand voltage U _{mp} V AC 6000 Overvoltage catagory/pollution degree U _m V AC 000 Rated insulation voltage U _m V AC 440 Safe isolation to EN 61140 V AC 250 between coil and auxiliary contacts V AC 250 between the auxiliary contacts V AC 250 AC-14 cos φ = 0.3 400 V A 4 AC-15 cos φ = 0.3 220 V A 50 DC-11 LR - 40 ms N 3 3 Breaking capacity A 3 3 AC-14 cos φ = 0.3 400 V A 3 3 AC-14 cos φ = 0.3 220 V A A 3 AC-14 cos φ = 0.3 220 V A A 3 AC-14 cos φ = 0.3 220 V A A 3 AC-14 cos φ = 0.3 220 V A A 3 AC-14 cos φ = 0.3 220 V A A 3 AC-14 cos φ = 0.3 220 V A A 3 AC-14 cos φ = 0.0 220 V A	Solid or stranded		AWG	1 x (18 - 14)
Overvioltage category/pollution degrace U, W AC VAC 000 Rated deperational voltage U, W AC 44 44 Sale isolation to EN 61140 W AC 25 25 between coil and auxiliary contacts V AC 25 20 Making capacity V AC 25 20 AC-14 cos \(\pi \) 0.3 40V A 3 3 AC-15 cos \(\pi \) 0.3 40V A 3 3 AC-16 cos \(\pi \) 0.3 40V A 3 3 AC-16 cos \(\pi \) 0.3 40V A 3 3 AC-16 cos \(\pi \) 0.3 40V A 3 3 AC-14 dons A 3 3 AC-14 dons A 3 3 AC-14 dons A 4 4 AC-15 cos \(\pi \) 0.3 24V A 3 4 AC-14 A 4 4 AC-15 cos \(\pi \) 0.3 24V A 3 4 AC-15 cos \(\pi \) 200 24V A 3 4 AC-15 co				
Rated operational voltage U _I V AC 40 Sate solation to EN 8140 V AC 40 between coil and auxiliary contacts V AC 250 between the coilian da auxiliary contacts V AC 250 between the coilian da auxiliary contacts V AC 250 between the coiling contacts V AC 250 Making capacity V AC 48 AC-14 cos e = 0.3 400 V A 5 AC-15 cos e = 0.3 220 V A 3 AC-14 cos e = 0.3 440 V A 3 AC-15 cos e = 0.3 220 V A 3 AC-16 cos e = 0.3 220 V A 3 AC-16 cos e = 0.3 220 V A 3 AC-15 cos e = 0.3 220 V B A 3 AC-14 cos e = 0.3 440 V A 3 3 AC-14 cos e = 0.3 220 V B A 3 AC-15 cos e = 0.3 220 V B A 3 AC-14 cos e = 0.3 220 V B A 3 AC-15 cos e = 0.3 220 V B		U _{imp}	V AC	
Rated operational voltage U _e V AC 40 Safe isolation to EN 61140 V AC 250 between coil and auxilary contacts V AC 250 Making capacity V AC 20 AC-14 cos e = 0.3 400 V A 4 AC-15 cos e = 0.3 220 V A 50 DC-11 LP-40 ms A 3 Reseking capacity A 3 AC-15 cos e = 0.3 220 V A 3 AC-16 cos e = 0.3 220 V A 3 AC-18 cos e = 0.3 220 V B A AC-19 cos e = 0.3 220 V B A AC-19 cos e = 0.3 220 V B A AC-14 cos e = 0.3 220 V B A AC-14 cos e = 0.3 220 V B A AC-14 cos e = 0.3 220 V B A AC-14 cos e = 0.3 220 V B A AC-14 cos e = 0.3 220 V B B AC-14 cos e = 0.3 220 V B B AC-14 cos e = 0.3 220 V B B AC-14 cos e = 0.3 220 V				
Safe isolation to EN 61140 VAC 259 between coil and auxiliary contacts VAC 259 Making capacity A 8 48 AC-15 cos q = 0.3 220 V A 90 1.1 DC-11 L/R - 40 ms X 1 3 3 Breaking capacity A 3 3 3 AC-15 cos q = 0.3 220 V A 3 3 3 AC-15 cos q = 0.3 220 V A 3 3 3 DC-11 L/R - 40 ms I 2 A 3 3 1.1 Rated operational current I 2 A 3 3 1.1 AC-15 cos q = 0.3 220 V A 3 3 1.1 Rated operational current I 2 A 3 3 1.1 AC-14 449 V I 2 A 3 3 1.1 440 V J 2 A 4 3 3 1.1 AC-15 Cos Q 200 V 240 V I 2 A 3 3 1.1 DC-11 L/R - 40 ms I 2 A 3 3 1.1 AC-15 Cos Q 200 V 240 V I 2 A 3 3 1.1 AC-15 Cos Q 200 V 240 V I 2 A 4 5 1.1 A 10 Cos Q 200 V 240 V I 2 A 5 5 1.1 A 10 Cos Q 200 V 240 V I 2 A 5 5 <t< td=""><td></td><td></td><td>V AC</td><td>600</td></t<>			V AC	600
between coil and auxiliary contacts V AC 250 between the auxiliary contacts V AC 259 Making capacity AC -14 cos φ = 0.3 400 V A 48 AC-15 cos φ = 0.3 220 V A C -15 cos φ = 0.3 220 V A C -15 cos φ = 0.3 220 V A C -14 cos φ = 0.3 440 V A C -15 cos φ = 0.3 220 V	Rated operational voltage	U _e	V AC	440
between the auxiliary contacts V AC 250 Making capacity 4 48 AC-14 cos φ = 0.3 220 V AC 50 DC-11 L/R - 40 ms x l _u 1.1 Breaking capacity A 3 AC-14 cos φ = 0.3 220 V A 3 AC-15 cos φ = 0.3 220 V A 3 Breaking capacity A 3 AC-15 cos φ = 0.3 220 V A 3 Bread operational current I _u A 3 AC-14 Ad-14 A A 4 440 V I _u A 3 A AC-15 corrections A 3 A DC-11 AC-15 A 3 A AC-15 corrections I _u A 3 A DC-11 AC-15 corrections A 3 A DC-11 AC-15 corrections A 3 A DC-11 AC-15 corrections A 1.2 A Conv. thermal current <td>Safe isolation to EN 61140</td> <td></td> <td></td> <td></td>	Safe isolation to EN 61140			
Making capacity A 48 AC-14 cos φ = 0.3 20 V A 50 DC-11 UR - 40 ms x l _e 1.1 Breaking capacity A 3 AC-14 cos φ = 0.3 220 V A 3 AC-15 cos φ = 0.3 220 V A 3 DC-11 UR - 40 ms x l _e 1.1 Rated operational current l _e X l _e AC-14 440 V l _e A AC-15 220 V 230 V 240 V l _e A 3 DC-11 Note A 3 A LR max. 15 ms A A 1.5 A LR max. 50 ms A 1.5 A 1.2 Conv. tharmal current I _{th} A 6 A Short-circuit rating without welding Max fuse, make contacts A g6/yL 6 A Max fuse, make contacts A g6/yL A g6/yL 6 A Max fuse, make contacts A g6/yL A g6/yL A A A B	between coil and auxiliary contacts		V AC	250
AC-14 cos φ = 0.3 20 V A 48 AC-15 cos φ = 0.3 220 V A 50 Breaking capacity X l _θ 1.1 AC-14 cos φ = 0.3 220 V A 3 DC-11 LR-4 dms X l _θ 1.1 Reted operational current I _θ A 3 AC-14 d40 V I _θ A 3 4-15 d40 V I _θ A 3 220 V 230 V 240 V I _θ A 3 DC-11 Note A 3 A LR max. 15 ms A A 1.5 24 V I _θ A 1.5 LR max. 50 ms A 1.2 2 Conv. thermal current I _θ A 1.2 4 Short-circuit rating without welding When supplied directly from mains or transformer > 1000 VA 6 Max. fuse, make contacts A g6/yL 6 Max fuse, break contacts A g6/yL 6 Max fuse, break contacts B g6/yL 6 Max fuse, break contacts B g6/yL 6 Max fuse, break contacts B g6/yL	between the auxiliary contacts		V AC	250
AC-15 cos \(\pi \) = 0.3 220 V DC-11 L/R - 40 ms Breaking capacity AC-14 cos \(\pi \) = 0.3 220 V DC-11 L/R - 40 ms AC-15 cos \(\pi \) = 0.3 220 V DC-11 L/R - 40 ms Rated operational current AC-14 440 V AC-15 220 V 230 V 240 V DC-11 Note L/R max. 15 ms AC-15 L/R max. 50 ms Conv. thermal current Note Max. fuse, make contacts Max. fuse, make contacts Max. fuse, make contacts Max. fuse, break contacts AgG/gL AGC V 42 - 240	Making capacity			
DC-11 L/R - 40 ms x I₀ 1.1 Breaking capacity A 3 AC-14 cos φ = 0.3 220 V A 3 DC-11 L/R - 40 ms I₀ X I₀ 1.1 Rated operational current I₀ A 3 AC-14 To T	AC-14 $\cos \varphi = 0.3400 \text{ V}$		Α	48
Breaking capacity AC-14 cos φ = 0.3 440 V AC-15 cos φ = 0.3 220 V AC-14 cos φ = 0.3 cos φ = 0.3 220 V AC-14 cos φ = 0.3 cos φ = 0.3 220 V AC-14 cos φ = 0.3 cos φ = 0.3 220 V AC-14 cos φ = 0.3 cos φ = 0.3 220 V AC-14 cos φ = 0.3 cos φ = 0.3 220 V AC-14 cos φ = 0.3 cos φ = 0.3 220 V AC-14 cos φ = 0.3 cos φ	AC-15 $\cos \varphi = 0.3220 \text{ V}$		Α	50
AC-14 cos q = 0.3 440 V AC-15 cos q = 0.3 220 V DC-11 L/R - 40 ms Reted operational current AC-14 440 V AC-15 220 V 230 V 240 V DC-11 Note L/R max. 15 ms 24 V L/R max. 50 ms Corr. thermal current Note Corr. thermal current Note AR A B A B A B A B A B A B A B	DC-11 L/R - 40 ms		x I _e	1.1
AC-15 cos q = 0.3 220 V DC-11 L/R - 40 ms Rated operational current AC-14 440 V AC-15 220 V 230 V 240 V DC-11 Note L/R max. 15 ms AC-14 24 V L/R max. 50 ms Conv. thermal current Note Max fuse, make contacts Max fuse, make contacts Max fuse, break contacts Max fuse, break contacts Max fuse, break contacts Max fuse, break contacts Rated operational voltage AC AC-14 440 V AC-14 AC-15 AC-15 AC-15 AC-16 AC-16 AC-17 AC-18 AC-19 AC-19 AC-19 AC-19 AC-19 AC-19 AC-19 AC-19 AC-10 AC-10	Breaking capacity			
DC-11 L/R - 40 ms	AC-14 $\cos \phi = 0.3440 \text{ V}$		Α	3
Rated operational current Ie A AC14 440 V Ie A 3 AC-15	AC-15 $\cos \phi = 0.3 \ 220 \ V$		Α	3
AC14 440 V	DC-11 L/R - 40 ms		x I _e	1.1
AC-15	Rated operational current	l _e	Α	
AC-15 220 V 230 V 240 V DC-11 Note L/R max. 15 ms A 24 V L/R max. 50 ms Conv. thermal current Short-circuit rating without welding Note Max. fuse, make contacts Max. fuse, make contacts Max. fuse, break contacts A gG/gL 6 Car. fuse fuse, fuse	AC14			
DC-11 Note L/R max. 15 ms A L/R max. 50 ms L/R max. 50 ms Love thermal current Short-circuit rating without welding Note Max. fuse, make contacts Max. fuse, break contacts Max. fuse, or each contacts May. fuse, or each contacts	440 V	l _e	Α	3
DC-11 Note L/R max. 15 ms A 24 V L/R max. 50 ms Conv. thermal current Short-circuit rating without welding Note Max. fuse, make contacts Max. fuse, break contacts May. fuse, break contacts A gG/gL A gG/gL 6 May. fuse, break contacts A gG/gL A gG/g	AC-15			
Note L/R max. 15 ms A 24 V L/R max. 50 ms A 1.2 Conv. thermal current Lh A 6 When supplied directly from mains or transformer > 1000 VA Max. fuse, make contacts Max. fuse, break contacts A gG/gL A	220 V 230 V 240 V	le	Α	3
L/R max. 15 ms 24 V 1e A 1.5 L/R max. 50 ms A 1.2 Conv. thermal current Ith A 6 Short-circuit rating without welding Note Max. fuse, make contacts Max. fuse, break contacts A gG/gL A g	DC-11			
L/R max. 15 ms 24 V 1e A 1.5 L/R max. 50 ms A 1.2 Conv. thermal current Ith A 6 Short-circuit rating without welding Note Max. fuse, make contacts Max. fuse, break contacts A gG/gL A g	Note			Making and breaking conditions to DC13, time constant as stated
L/R max. 50 ms A 1.2 Conv. thermal current Ith A 6 Short-circuit rating without welding Note When supplied directly from mains or transformer > 1000 VA Max. fuse, make contacts A gG/gL Max. fuse, break contacts A gG/gL A gG/gL A gG/gL A gG/gL A gG/gL A gG/gL 4 gG/gL	L/R max. 15 ms		Α	
L/R max. 50 ms A 1.2 Conv. thermal current Short-circuit rating without welding Note Max. fuse, make contacts Max. fuse, break contacts A gG/gL	24 V	I _e	Α	1.5
Conv. thermal current Ith A 6 Short-circuit rating without welding Note When supplied directly from mains or transformer > 1000 VA Max. fuse, make contacts A gG/gL Max. fuse, break contacts A gG/gL Magnet systems Rated operational voltage Ue V 24 - 240	L/R max. 50 ms		Α	1.2
Short-circuit rating without welding Note Max. fuse, make contacts May. fuse, break contacts Magnet systems Rated operational voltage AC When supplied directly from mains or transformer > 1000 VA 6 6 6 4 gG/gL 6 4 gG/gL 6 24 - 240	Conv. thermal current	I _{th}	Α	6
Note When supplied directly from mains or transformer > 1000 VA Max. fuse, make contacts A gG/gL Max. fuse, break contacts A gG/gL Magnet systems Rated operational voltage Ue V 24 - 240	Short-circuit rating without welding			
Max. fuse, make contacts Max. fuse, break contacts A gG/gL A gG/gL 6 Magnet systems Rated operational voltage AC 24 - 240				When supplied directly from mains or transformer > 1000 VA
Max. fuse, break contacts A gG/gL Magnet systems Rated operational voltage AC Ue V 24 - 240			A gG/qL	
Magnet systems Rated operational voltage AC Ue V 24 - 240				
Rated operational voltage AC V 24 - 240			, ,	
		U _e	V	
	AC			24 - 240
DC 24 - 240	DC			24 - 240
Power consumption	Power consumption			
Pick-up AC VA 2			VA	2
Sealing AC VA 2			VA	2
Pick-up DC W 1.8			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

Design verification as per IEC/EN 61439

Design vermeation as per 120/214 01-05			
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
Operating ambient temperature min.		°C	-20
Operating ambient temperature max.		°C	60
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.

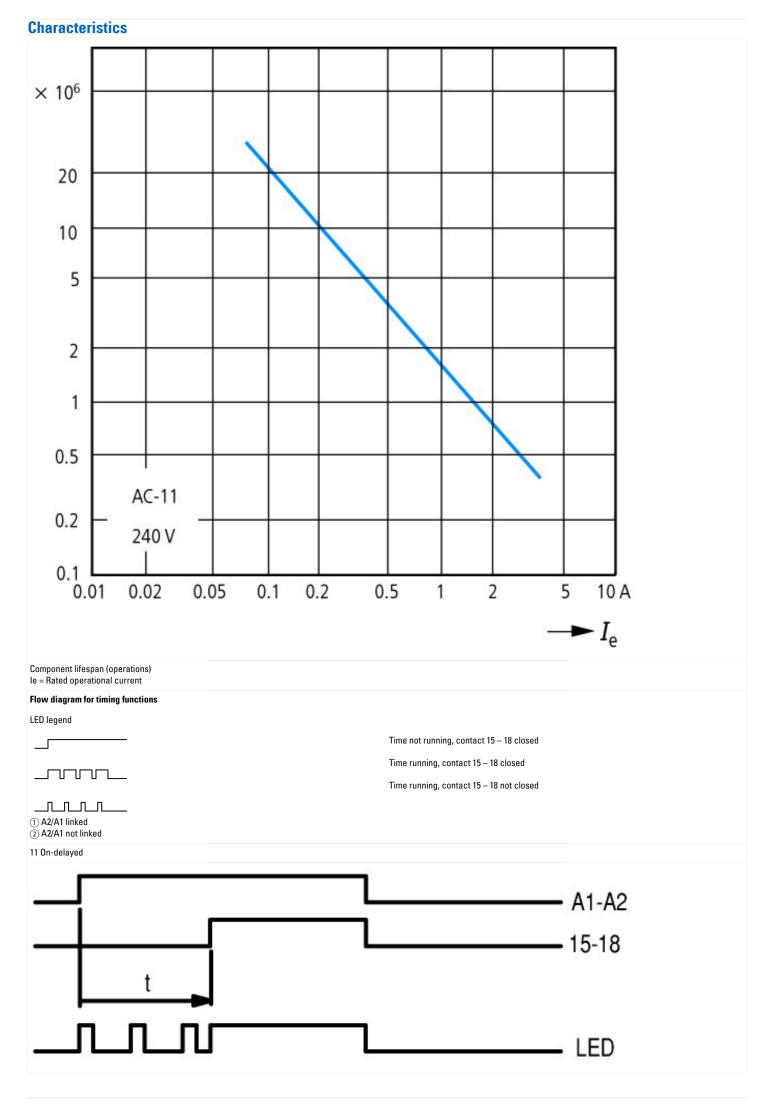
Technical data ETIM 6.0

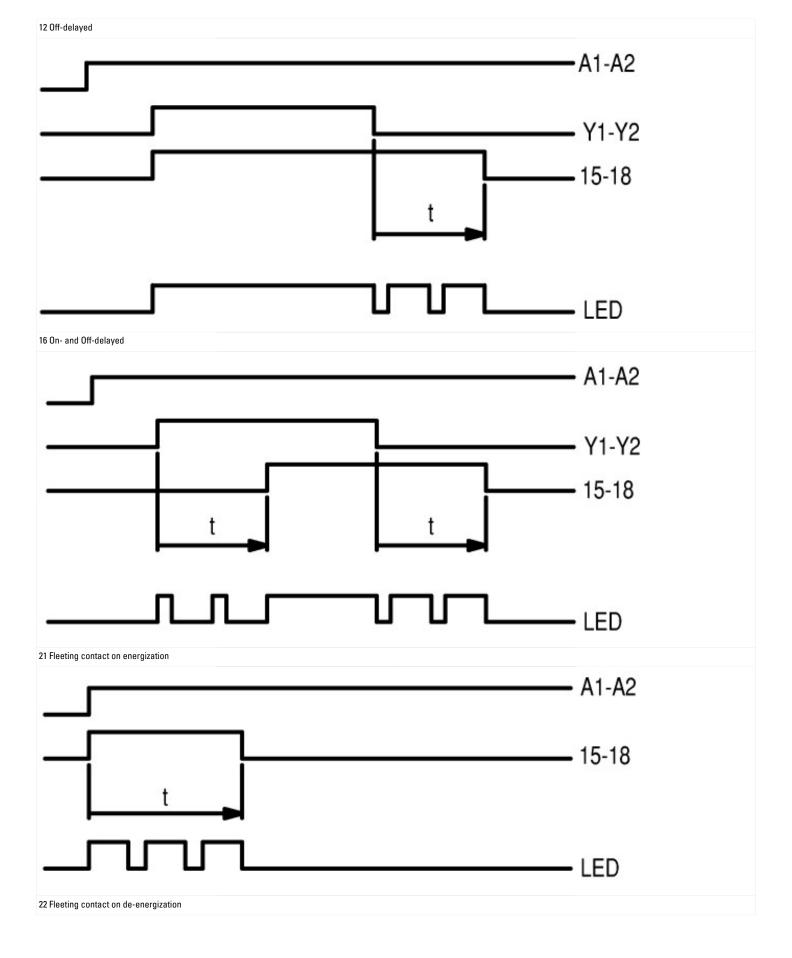
Tooliii da da E i iii o.o			
Relays (EG000019) / Timer relay (EC001439)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Relay and socket / Timed relay (ecl@ss8.1-27-37-16-05 [AKF092010])			
Screw connection			
Yes			
No			

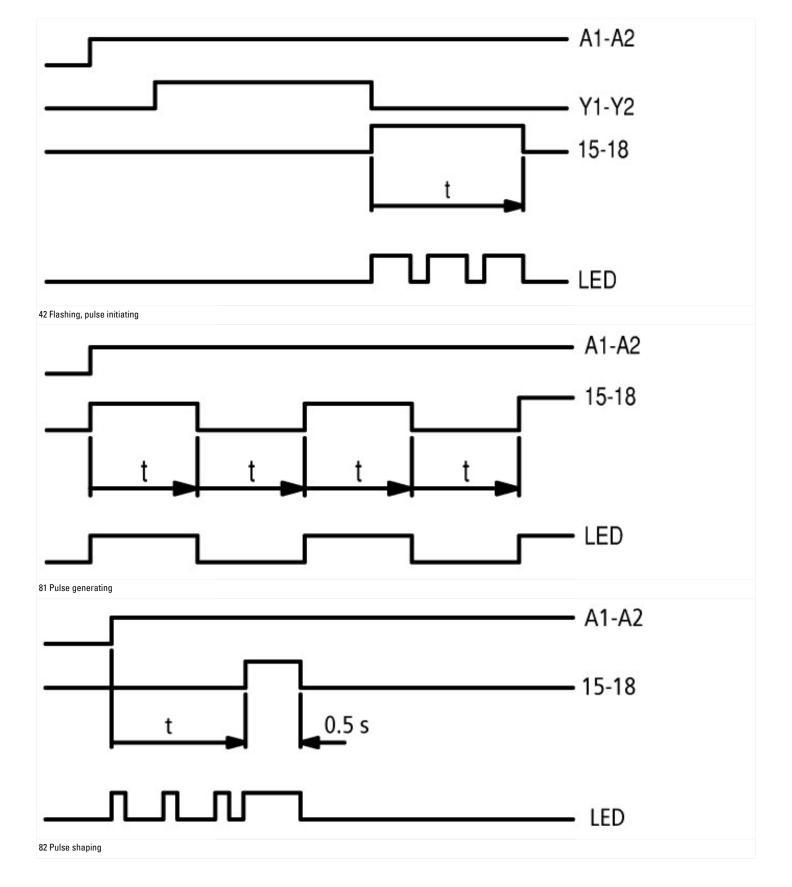
Function pulse shaping		Yes
Function flashing, starting with pause, fixed time		Yes
Function flashing, starting with pulse, fixed time		Yes
Clock function, starting with pause, variable		Yes
Clock function, starting with pulse, variable		Yes
With plug-in socket		No
Remote operation possible		Yes
Suitable only for remote control		No
Pluggable on auxiliary contact block		No
Rated control supply voltage Us at AC 50HZ	٧	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

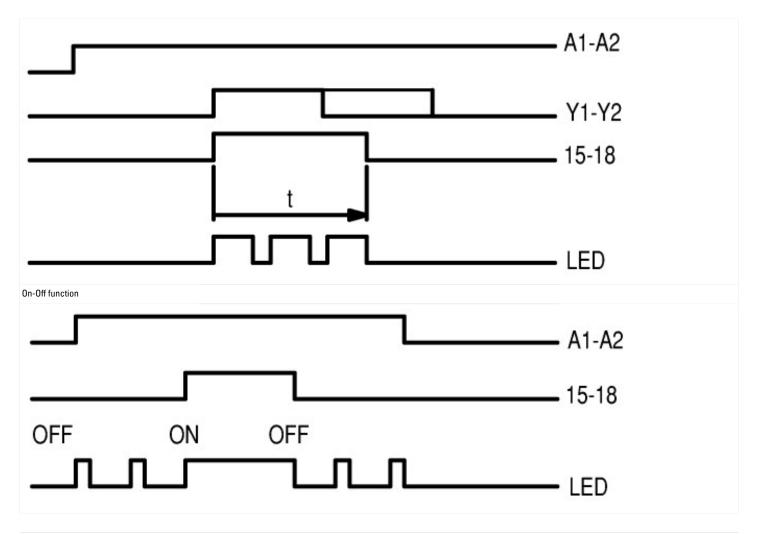
Approvals

Product Standards	IEC/EN 61812-1; IEC/EN 60947-5-1; UL 508; CSA-22.2 No. 14; 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: -

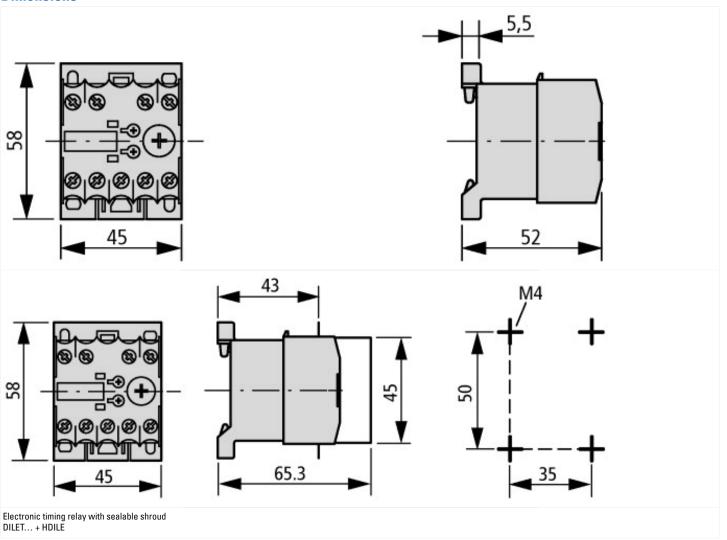








Dimensions



Additional product information (links)

IL04910003Z (AWA2527-1587) Solid-state timing relay

IL04910003Z (AWA2527-1587) Solid-state timing relay

IL04910003Z (AWA2527-1587) Solid-state timing https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL04910003Z2010_10.pdf