

Part no. ETR4-69-A
Catalog No. 031891
Alternate Catalog No. XTTR6A100H69B
EL-Nummer (Norway) 4133309

Delivery program

Product range				ETR4 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
				Adjustable timing functions
Number of changeover contacts				1
Time range				0.05 s - 100 h
Time range				0.05 - 1 s 0.15 - 3 s 0.5 - 10 s 1.5 - 30 s 5 - 100 s 15 - 300 s 1.5 - 30 min 15 - 300 min 1.5 - 30 h 5 - 100 h
Rated operational current				
AC-14				
300 V	I_e	A		3
380 V 400 V 415 V	I_e	A		3
				Value applies starting with release 001.
AC-15				
220 V 230 V 240 V	I_e	A		3
300 V	I_e	A		3
380 V 400 V 415 V	I_e	A		3
				Value applies starting with release 001.
Voltage range	U_{LN}	V		24 - 240 V AC, 50/60 Hz 24 - 240 V DC
Width		mm		22.5

Technical data

General

Standards				Standard IEC/EN 61812 VDE 0435
Lifespan, mechanical				
AC operated	Operations	$\times 10^6$		30
DC operated	Operations	$\times 10^6$		30
Climatic proofing				Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature				
Ambient temperature, storage		°C		- 45 - + 85
Open		°C		-25 - +60
Enclosed		°C		- 25 - + 45
Mounting position				As required
Mechanical shock resistance (IEC/EN 60068-2-27)				

Half-sinusoidal shock, 20 ms		g	
Make contact		g	4
Degree of protection			
Terminals			IP20
Weight		kg	0.1
Terminal capacities		mm ²	
Solid		mm ²	1 x (0.5 - 2.5) 2 x (0.5 - 1.5)
Flexible with ferrule		mm ²	1 x (0.5 - 2.5) 2 x (0.5 - 1.5)
Solid or stranded		AWG	1 x (20 - 14)

Contacts

Rated impulse withstand voltage	U_{imp}	V AC	4000
Rated impulse withstand voltage	U_{imp}	V AC	6000
			Value applies starting with release 001.
Overvoltage category/pollution degree			III/2
Rated insulation voltage	U_i	V AC	400
Rated insulation voltage	U_i	V AC	600
			Value applies starting with release 001.
Rated operational voltage	U_e	V AC	300
Rated operational voltage	U_e	V AC	440
			Value applies starting with release 001.
Safe isolation to EN 61140			
between coil and auxiliary contacts		V AC	250
between the auxiliary contacts		V AC	250
Making capacity			
AC-14 $\cos \varphi = 0.3$ 400 V		A	48
AC-15 $\cos \varphi = 0.3$ 220 V		A	50
DC-11 L/R - 40 ms		x I_e	1.1
Breaking capacity			
AC-14 $\cos \varphi = 0.3$ 440 V		A	3
AC-15 $\cos \varphi = 0.3$ 220 V		A	3
DC-11 L/R - 40 ms		x I_e	1.1
Rated operational current	I_e	A	
AC-14	I_e		
380 V 400 V 415 V	I_e	A	3
			Value applies starting with release 001.
AC--14			
440 V	I_e	A	3
AC-15			
220 V 230 V 240 V	I_e	A	3
DC-11			
Note			Making and breaking conditions to DC13, time constant as stated
L/R max. 15 ms		A	
24 V	I_e	A	1.5
L/R max. 50 ms		A	1.2
Conv. thermal current	I_{th}	A	6
Short-circuit rating without welding			
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
Max. overcurrent protective device, 220/230 V		Type	FAZ-B4/1-HI

Magnet systems

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	Ops/h	4000
Minimum command time		
AC	ms	50
DC	ms	30
Repetition accuracy (deviation)	%	≤ 0.5
Recovery time (after 100% time delay)	ms	70
Contact changeover time	t _u	ms 4

Electromagnetic compatibility (EMC)

Electrostatic discharge (ESD)		
applied standard		IEC/EN 61000-4-2
Air discharge	kV	8
Contact discharge	kV	6
Electromagnetic fields (RFI)		
applied standard		IEC/EN 61000-4-3
	V/m	80 - 1000 MHz: 10 1.4 - 2 GHz: 3 2.0 - 2.7 GHz: 1
Radio interference suppression		EN 55011, Class B (conducted) EN 55011, Class B (radiated)
Burst	kV	Supply cables: 2 Signal cables: 1 according to IEC/EN 61000-4-4
power pulses (Surge)		2 kV (symmetrical) 4 kV (asymmetrical) according to IEC/EN 61000-4-5
Immunity to line-conducted interference to (IEC/EN 61000-4-6)	V	10

Design verification as per IEC/EN 61439

Technical data for design verification		
Rated operational current for specified heat dissipation	I _n	A 6
Heat dissipation per pole, current-dependent	P _{vid}	W 1.4
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	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 8.0

Relays (EG000019) / Timer relay (EC001439)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Relay and socket / Timed relay (ecl@ss10.0.1-27-37-16-05 [AKF092013])		
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		No
Suitable as 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
Nominal current	A	3
Time range	s	0.05 - 360000
Number of outputs, undelayed, normally closed contact		0
Number of outputs, undelayed, normally open contact		0
Number of outputs, undelayed, change-over contact		0
Number of outputs, delayed, normally closed contact		0
Number of outputs, delayed, normally open contact		0
Number of outputs, delayed, change-over contact		0
Outputs, reversible delayed/undelayed		Yes
With semiconductor output		No
Suitable for DIN rail (top hat rail) mounting		Yes
Suitable for front mounting		No
Width	mm	23
Height	mm	83
Depth	mm	103