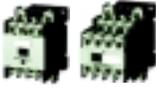
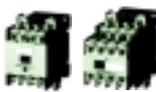
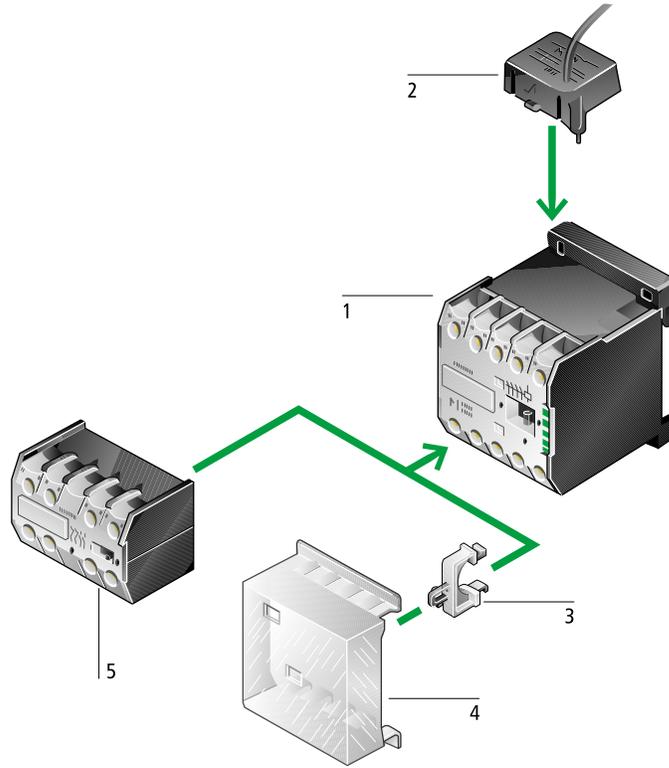
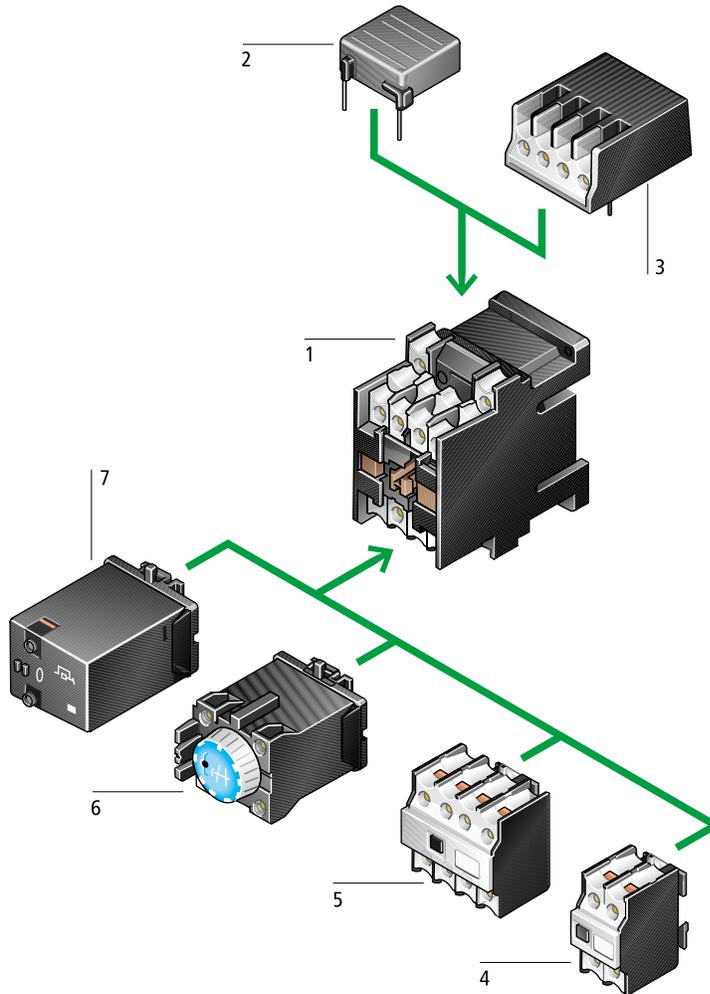


		Overview	2/2
AC Operated		DIL ER Control Relays Basic Relays Auxiliary Contact Modules	2/4
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DIL ER



DIL R



DIL ER**1 Basic Device** – Page 2/4

World-wide approvals: UL, CSA, IEC/EN 60 947, CE
 AC & DC operated versions
 Maximum number of contacts: 8
 Pilot Duty: A 600/P 300
 Positively driven contacts to ZH 1/457 (N.O. & N.C. Contacts cannot ever be simultaneously closed)
 Modular system of accessories and contacts
 DIN Rail or panel mounted
 Finger-safe design
 Captive, self-lifting screw clamp terminals

2 Accessories – Page 2/18

Integrated surge suppressors in all DC models
 Varistor type surge suppressor for AC models

3, 4 Transparent Cover – Page 2/19

Snap fitting onto device
 Can be sealed to prevent tampering

5 Auxiliary Contact Modules – Page 2/4

Available in 2 and 4 pole versions
 Pilot Duty: A 600/P 300
 Positively driven contacts to ZH 1/457 (N.O. & N.C. contacts cannot ever be simultaneously closed)
 Overlapping contacts
 Finger-safe design
 Captive, self-lifting screw clamp terminals

DIL R**1 Basic Device** – Page 2/6

World-wide approvals: UL, CSA, IEC/EN 60 947, CE
 AC & DC operated versions
 Coils available in special voltages
 Maximum number of contacts: 8
 Pilot duty: A 600/P 300
 Positively driven contacts to ZH 1/457 (N.O. & N.C. contacts cannot ever be simultaneously closed)
 Modular system of accessories and contacts
 DIN Rail or panel mounted
 Finger-safe design
 Captive, self-lifting screw clamp terminals

2 Surge Suppressors – Page 2/18

Various types available:
 RC filters, Varistors, Diodes
 Custom plug-fit into coil terminals

3 Interface Module – Page 2/18

Used to energize coils from low level 24 V DC power source
 With or without built-in surge suppressor
 Custom plug-fit into coil terminals
 Individually mounted module available

4, 5 Auxiliary Contact Modules – Page 2/6

Available in 2 and 4 pole versions
 Pilot duty: A 600/P 300
 Positively driven contacts to ZH 1/457 (N.O. & N.C. contacts cannot ever be simultaneously closed)
 Overlapping contacts
 Finger-safe design
 Captive, self-lifting screw clamp terminals

6 Pneumatic Timer Module – Page 2/6

Available in ON-delay and OFF-delay versions
 1 N.O. & 1 N.C. timed contacts
 Each with 2 timing ranges, convertible from:
 0.2 – 30 sec. to 20 – 180 sec.

7 Mechanical Latching Module – Page 2/6

To maintain energized position of contacts in the event of a power loss to the relay coil

1	2	3	4	5	6	7	8
	Number of Contacts N.O. = Normally Open N.C. = Normally Closed	IEC Rated operational current I _o at AC-15 220 V 230 V 240 V	UL/CSA Pilot Duty Rating	Connection Diagram	Contact Code Number (Refer to explanation on next page)	Type A.C. Operated Coil	Price
	N.O. N.C. A					Specify Coil Voltage from page 2/21 when ordering (...)	\$

Basic Relay, with positively driven contacts¹⁾



4	0	6	A 600 P 300		40 E - -	DIL ER 40 (...)
3	1				- 31 E -	DIL ER 31 (...)
2	2				- - 22 E	DIL ER 22 (...)

Auxiliary Contact Module with positively driven contacts¹⁾



2 pole	0	2	4	A 600 P 300		42 E 33 24	02 DIL E
	1	1				51 E 42 33	11 DIL E
	2	0				60 E 51 42	20 DIL E
	1	1				51 42 33	11 D DIL E
4 pole	0	4				44 E 35 26	04 DIL E
	1	3				53 E 44 35	13 DIL E
	2	2				62 E 53 44	22 DIL E
	3	1				71 E 62 53	31 DIL E
	4	0				80 E 71 62	40 DIL E
	2	2				62 53 44	22 D DIL E

EM = Early Make - Denoted to the left of the contact.
LB = Late Break - Denoted to the left of the contact.

1) Positively driven contacts (ZH 1/457 Specification): Standard N.O. & N.C. contacts can never be simultaneously closed. By definition, overlapping contacts, i.e. EM (Early Make) and LB (Late Break) cannot be positively driven.

9	10	11	12	13
Connection Diagram	Contact Code Number (Refer to explanation below)	Type D.C. Operated Coil Specify Coil Voltage from page 2/21 when ordering (...)	Price \$	Remarks
	40 E - -	DIL ER 40-G (...)	See Price List	Auxiliary contact modules (up to four contacts) clip on top of the DIL ER . See columns 6 and 10 for possible relay and auxiliary contact combinations. D.C. Coils: Supplied standard with a resistor-diode combination surge suppressor. Coil power consumption: 2.6 Watts
	- 31 E -	DIL ER 31-G (...)	See Price List	
	- - 22 E	DIL ER 22-G (...)	See Price List	
	42 E 33 -	02 DIL E	See Price List	<p>1. Surge Suppressor (varistor type) page 2/18 Accessories page 2/18</p>
	51 E 42 -	11 DIL E	See Price List	
	60 E 51 -	20 DIL E	See Price List	
	51 42 -	11 D DIL E	See Price List	
	44 E 35 -	04 DIL E	See Price List	
	53 E 44 -	13 DIL E	See Price List	
	62 E 53 -	22 DIL E	See Price List	
	71 E 62 -	31 DIL E	See Price List	
	80 E 71 -	40 DIL E	See Price List	
	62 53 -	22 D DIL E	See Price List	

Contact Code Number

The Contact Code Number found in columns 6 and 10 provides useful information of the relay. It refers to the total number of N.O. contacts (1st digit) and N.C. contacts (2nd digit) found on the device. Adding both digits will result in the total number of contacts. Example:
DIL ER-40 + 04 DIL E = 4 N.O. + 4 N.C. contacts, for a total of 8 contacts.

Some contact combinations are preferred when used in configurations conforming to European Norms (EN Standards). These are denoted by the letter 'E' in the Contact Code Number and are in accordance with DIN EN 50011. All other combinations without the letter 'E' are in accordance with DIN EN 50005. In the example above, the combination of **DIL ER-40 + 04 DIL E** yields a relay with Type E configuration (44E), as indicated in columns 6 and 10.

EM = Early Make - Denoted to the left of the contact.
 LB = Late Break - Denoted to the left of the contact.

AC Operated Industrial Control Relays, Auxiliary Contact Modules, Pneumatic Timer Modules, Mechanical Latch Module

UL / CSA / IEC / CE

Industrial Control Relays

2

1	2	3	4	5	6	7	8
	No. of Contacts N.O. = Normally Open N.C. = Normally Closed N.O. N.C. A	IEC Rated operational current I _o at AC-15 220 V, 230 V, 240 V	UL/CSA Pilot Duty Rating	Connection Diagram	Contact Code Number (Refer to explanation on next page)	Type A.C. Operated Coil Specify Coil Voltage from page 2/21 when ordering (...)	Price \$

Basic Relay, with positively driven contacts ¹⁾



4	0	6	A 600 P 300		40 E	-	-	DIL R 40 (...)	See Price List
3	1				-	31 E	-	DIL R 31 (...)	See Price List
2	2				-	-	22 E	DIL R 22 (...)	See Price List

Auxiliary Contact Module, with positively driven contacts ¹⁾

2 pole



0	2	6	A 600 P 300		42 E	33	24	02 DIL	See Price List
1	1				51 E	42	33	11 DIL	See Price List
2	0				60 E	51	42	20 DIL	See Price List

4 pole



0	4				44 E	35	26	04 DIL	See Price List
1	3				53 E	44	35	13 DIL	See Price List
2	2				62 E	53	44	22 DIL	See Price List
3	1				71 E	62	53	31 DIL	See Price List
4	0				80 E	71	62	40 DIL	See Price List

Pneumatic Timer Module convertible 0.2...30 s and 20...180 s

For use with all base DIL R relays and DIL 00M...DIL 2AM contactors



1	1	4	A 300		51	42	33	TPE 11 DIL	See Price List
1	1				51	42	33	TPD 11 DIL	See Price List

Mechanical Latching Module

For use with all base DIL R relays and DIL 00(A)M contactors



					40 E	31 E	22 E	V DIL (...)	See Price List
--	--	--	--	--	------	------	------	-------------	----------------

9	10	11	12	13
Connection Diagram	Contact Code Number (Refer to explanation below)	Type D.C. Operated Coil Specify Coil Voltage from page 2/21 when ordering (...)	Price \$	Remarks
	40 E - -	DIL R 40-G (...)	See Price List	The DIL R 40(-G) is supplied without a front plate H DIL 00M to facilitate mounting of auxiliary contact modules in Type E configurations to DIN EN 50 011. See box below for explanation of Contact Code Numbers. DIL R 31(-G) and DIL R 22(-G) are supplied with a front plate. The front plate can be easily removed to add auxiliary contact modules. See columns 6 and 10 for possible relay and auxiliary contact combinations.
	- 31 E -	DIL R 31-G (...)	See Price List	
	- - 22 E	DIL R 22-G (...)	See Price List	
	42 E 33 24	02 DIL	See Price List	<p>1. Interface Module page 2/18 Accessories page 2/18</p>
	51 E 42 33	11 DIL	See Price List	
	60 E 51 42	20 DIL	See Price List	
	44 E 35 26	04 DIL	See Price List	
	53 E 44 35	13 DIL	See Price List	
	62 E 53 44	22 DIL	See Price List	
	71 E 62 53	31 DIL	See Price List	
	80 E 71 62	40 DIL	See Price List	
	51 42 33	TPE 11 DIL	See Price List	
	51 42 33	TPD 11 DIL	See Price List	
	40 E 31 E 22 E	V-G DIL (...)	See Price List	Maximum impulse duration for DC energization: 200 ms

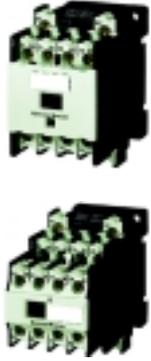
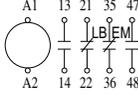
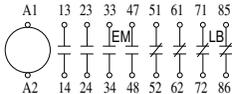
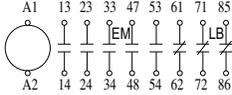
Contact Code Number

The Contact Code Number found in columns 6 and 10 provides useful information on the relay. It refers to the total number of N.O. contacts (1st digit) and N.C. contacts (2nd digit) found on the device. Adding both digits will result in the total number of contacts. Example:
DIL ER-40 + 04 DIL E = 4 N.O. + 4 N.C. contacts, for a total of 8 contacts.
 Some contact combinations are preferred when used in configurations conforming to European Norms (EN Standards). These are denoted by the letter 'E' in the Contact Code Number and are in accordance with DIN EN 50 011. All other combinations without the letter 'E' are in accordance with DIN EN 50 005. In the example above, the combination of **DIL ER-40 + 04 DIL E** yields a relay with Type E configuration (44E), as indicated in columns 6 and 10.

1) Positively driven contacts (ZH 1/457 Specification): Standard N.O. & N.C. contacts can never be simultaneously closed.
 By definition, overlapping contacts, i.e. EM (Early Make) and LB (Late Break) cannot be positively driven.

1	2	3	4	5	6	7	8
	No. of Contacts N.O. = Normally Open N.C. = Normally Closed	IEC Rated operational current I _e at AC-15 220 V 230 V 240 V	UL/CSA Pilot Duty Rating	Connection Diagram	Contact Code Number (Refer to explanation below)	Type A.C. Operated Coil Specify Coil Voltage from page 2/21 when ordering (...)	Price \$
	N.O. N.C. A						

Relays with one Early-Make contact and one Late-Break contact

	2	2	6	A 600 P 300		22	DIL R 22D (...)	See Price List
	4	4				44	DIL R 44D (...)	See Price List
	5	3				53	DIL R 53D (...)	See Price List

EM = Early Make - Denoted to the left of the contact.
LB = Late Break - Denoted to the left of the contact.

Contact Code Number

The Contact Code Number found in columns 6 and 10 provides useful information of the relay. It refers to the total number of N.O. contacts (1st digit) and N.C. contacts (2nd digit) found on the device. Adding both digits will result in the total number of contacts. Example:
DIL ER-40 + 04 DIL E = 4 N.O. + 4 N.C. contacts, for a total of 8 contacts.
 Some contact combinations are preferred when used in configurations conforming to European Norms (EN Standards). These are denoted by the letter 'E' in the Contact Code Number and are in accordance with DIN EN 50011. All other combinations without the letter 'E' are in accordance with DIN EN 50005. In the example above, the combination of **DIL ER-40 + 04 DIL E** yields a relay with Type E configuration (44E), as indicated in columns 6 and 10.

9	10	11	12	13
Connection Diagram	Contact Code Number	Type D.C. Operated Coil	Price	Remarks
	(Refer to explanation below)	Specify Coil Voltage from page 2/21 when ordering (...)	\$	
	22	DIL R 22D-G (...)	See Price List	<p>1. Interface Module page 2/18</p> <p>Accessories page 2/18</p>
	44	DIL R 44D-G (...)		
	53	DIL R 53D-G (...)		

EM = Early Make - Denoted to the left of the contact.
 LB = Late Break - Denoted to the left of the contact.

Contact Code Number

The Contact Code Number found in columns 6 and 10 provides useful information of the relay. It refers to the total number of N.O. contacts (1st digit) and N.C. contacts (2nd digit) found on the device. Adding both digits will result in the total number of contacts. Example:
DIL ER-40 + 04 DIL E = 4 N.O. + 4 N.C. contacts, for a total of 8 contacts.

Some contact combinations are preferred when used in configurations conforming to European Norms (EN Standards). These are denoted by the letter 'E' in the Contact Code Number and are in accordance with DIN EN 50011. All other combinations without the letter 'E' are in accordance with DIN EN 50005. In the example above, the combination of **DIL ER-40 + 04 DIL E** yields a relay with Type E configuration (44E), as indicated in columns 6 and 10.

1	2	3	4	
<p>Introducing the new easy easy to program.....Ladder diagram programmed, built in LCD screen and keys easy to mount.....35 mm DIN rail mount, 45 mm wide (4 units) easy to maintain.....No batteries!</p>		Type	Price	
<p>Ladder Logic Control Relay 24 V DC supply voltage Eight digital inputs, 24 V DC or Six digital and two analog inputs Four Relay outputs, 240 V AC, 8.0 A LCD screen displays 4 Ladder rungs Cursor and control keys 120 contact flash program memory Password protection Power flow indication Includes Timers and Counters</p>			<p>EASY 412-DC-R</p>	<p>See Price List</p>
<p>Ladder Logic Control Relay 24 V DC supply voltage Eight digital inputs, 24 V DC or six digital and two analog inputs Four Relay outputs, 240 V AC, 8.0 A Real Time Clock LCD screen displays 4 Ladder rungs Cursor and control keys 120 contact flash program memory Password protection Power flow indication Includes Timers and Counters</p>			<p>EASY 412-DC-RC</p>	<p>See Price List</p>
<p>Ladder Logic Control Relay 115 - 230 V AC supply voltage Eight digital inputs, 120 V AC Four Relay outputs, 240 V AC, 8.0 A LCD screen displays 4 Ladder rungs Cursor and control keys 120 contact flash program memory Password protection Power flow indication Includes Timers and Counters</p>		<p>EASY 412-AC-R</p>	<p>See Price List</p>	
<p>Ladder Logic Control Relay 115 - 230 V AC supply voltage Eight digital inputs, 120 V AC Four Relay outputs, 240 V AC, 8.0 A Real Time Clock LCD screen displays 4 Ladder rungs Cursor and control keys 120 contact flash program memory Password protection Power flow indication Includes Timers and Counters</p>		<p>EASY 412-AC-RC</p>	<p>See Price List</p>	
<p>easy programming software Windows based programming software for the easy. Ladder diagram programming and printing</p>		<p>EASY SOFT</p>	<p>See Price List</p>	
<p>easy programming cable Programming cable for connecting the easy 412... to a PC serial I/O port. Length: 2 meters</p>		<p>EASY-PC-CAB</p>	<p>See Price List</p>	
<p>easy memory module Flash memory module for backing-up and copying of programs from/to the easy 412</p>		<p>EASY-M-8K</p>	<p>See Price List</p>	

Step Up To Ladder Logic Plus with the revolutionary **easy 412** Programmable Relay

- ✓ 8 Inputs
- ✓ 4 Relay Outputs
- ✓ 4 Line LCD Display
- ✓ Ladder Diagram Display
- ✓ **NO** Programming Software Required
- ✓ Analog Inputs¹⁾
- ✓ Real Time Clock²⁾
- ✓ Dynamic "Power Flow" Display
- ✓ 120/230 V AC and 24 V DC Models

For control applications requiring relays, timers, counters, real time clock and analog comparators, the "easy 412" offers a compact (2.8" wide x 3.5" high x 2" deep) simple, low cost alternative to hard-wired and conventional PLC solutions.

Constructing a circuit diagram is done by using only 4 buttons and a cursor control located on the "easy 412" itself. There is no need for any separate software, cables or hardware. Plus, the circuit is "wired" by "drawing" the ladder diagram on the integral 4 line display (no need to learn a special logic language). Internal relays (markers) allow interlocking functions and storage of intermediate data.

Exporting? No problem! "easy 412" menu selections are available in 5 languages and is UL, CSA and CE approved.

Dynamic current flow display and password protection mean quick and safe troubleshooting.

The "easy 412" can be panel-mounted by means of a standard 35 mm DIN rail or 3 screws.

The ladder diagram program is stored in the "easy 412" EEPROM memory, eliminating the need for any backup batteries. A separate memory module is available for program backup or program distribution to multiple units.

Controlling HVAC systems? Counting vehicles entering a parking lot? Timing display or security lighting and alarms? Adding a conveyor? Have a small relay-based machine control? Applications previously thought to be "too simple" to warrant the expense of a PLC can now benefit from the "easy 412"!

SIMPLY easy

UL CSA CE



EASYSOFT Programming Software:

Although the "easy 412" can be quickly programmed using the unit's integral LCD display and buttons and cursor control, for those who want to do the programming separately, a Windows 95-based software is available. This software displays more lines of program and can be used to "easy TEST" the circuit operation by means of a visual, software-based simulation (simply click on the inputs and watch the outputs respond). The software requires a serial cable (**EASY-PC-CAB**) for transfer of program.

Technical Data

	EASY 412-AC-R(C)	EASY 412-DC-R(C)
Inputs	8	8
I1-I6:	0.25 mA @ 120 V AC 0.50 mA @ 230 V AC	3.2 mA @ 24 V DC
I7-I8:	4.0 mA @ 120 V AC	2.2 mA @ 24 V DC 6.0 mA @ 230 V AC
	(selectable debounce filter)	
2 Inputs used as analog inputs	—	0-10 V
Power supply	115/230 V AC (97-264 V AC)	24 V DC (20.4-28.8 V DC)
Outputs	4 relay 3 A @ 250 V AC, AC15 inductive load 1 A @ 24 V DC, DC13 inductive load 8 A @ 230 V AC resistive load)	4 relay

Terminals Screw clamp for #20-14 AWG

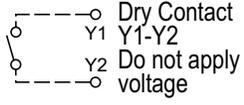
Ambient temperature:

Operating: 0 to +55 °C

Storage: -40 to +70 °C

Program memory: 120 contacts (41 lines)

1) DC versions only
2) RC versions only

1	2	3	4	5	6	7	8
	IEC Rated operational current I_e at AC-15 220 V 230 V 240 V	UL/CSA Pilot Duty Rating	Time Range	Connection Diagram Note: 	Function Number (Refer to Column 9)	Type	Price
	A				\$		

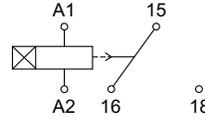
Timing Relays, ON-Delay



3

B 300

1.5...30 s



11

DIL ET 11-30-A

See Price List See Price List

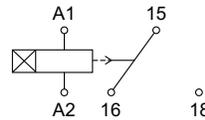
Timing Relays, ON-Delay with 10 Timing Ranges



3

B 300

0.05...1 s
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



11

DIL ET 11-M-A

Multi-function Timing Relays

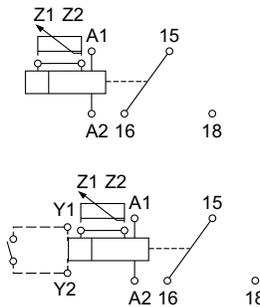
10 Timing Ranges;
Suitable for Connection to Potentiometer **RR-10** (see page 2/20)



3

B 300

0.05...1 s
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



11, 21, 42, 81

DIL ET 70-A

12, 16, 22, 82

One Device for All Voltage Ratings!

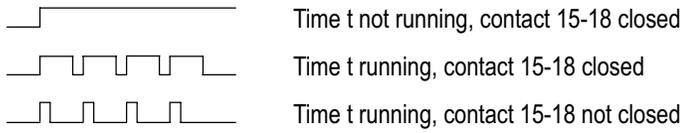
The **DIL ET** timers operate reliably when actuated by AC and DC voltage levels in the range indicated in the table below. There is no need to specify 'coil' voltages or stock coils.

Input Voltage Rating

Type	Input Voltage Rating (Nominal Values)		Input Voltage Tolerance Range	
	V DC	V AC	V DC min max	V AC min max
DIL ET 11-30-A DIL ET 11-M-A DIL ET 70-A	24...240	24...240 (50/60 Hz)	16.8...288	20.4...264

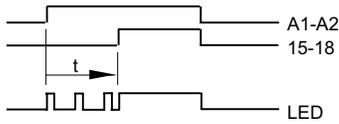
Function Description

LED Indication



Remarks

ON-DELAY (11)



Allowable Cable lengths:

Connection to Y1/Y2, Z1/Z2

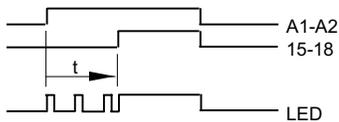
Unshielded Conductors AWG 14...18 250 meters

Conductors in same conduit or cable channel as 50/60 Hz power conductors 50 meters

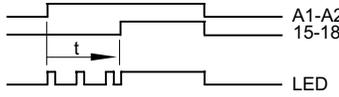
Accessories:

- Tamper-proof cover page 2/19
- Potentiometer for remote setting page 2/19

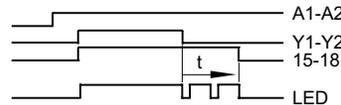
ON-DELAY (11)



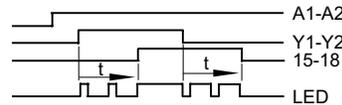
ON-DELAY (11)



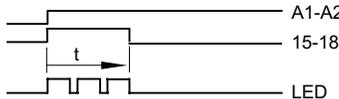
OFF-DELAY (12)



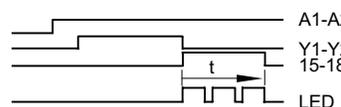
ON- and OFF-DELAY (16)



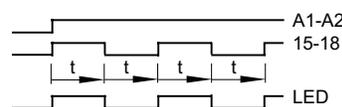
Fleeting contact on making (21)



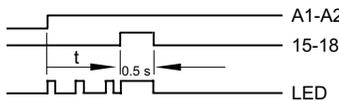
Fleeting contact on breaking (22)



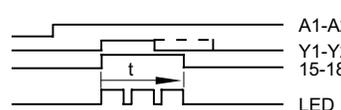
Repeat cycle (42)



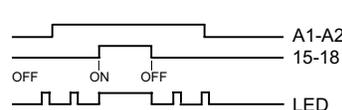
Pulse generating (81)



Pulse shaping (82)

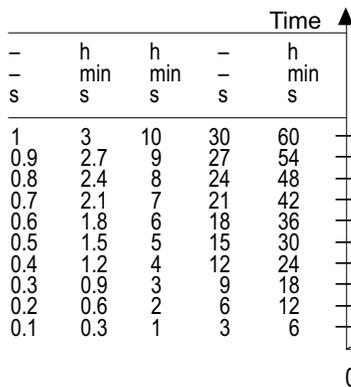


ON-OFF function



Timing Chart

(Approximate figures, not valid for potentiometer)



Example

(2 Ways)

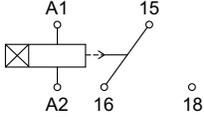
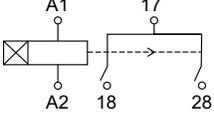
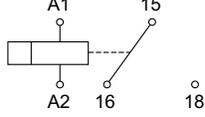
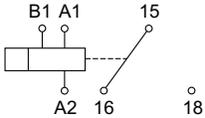
Using the Chart (locate point on diagonal line):

Timing range selected: 60 min.
Desired time: 42 min.
Required setting: 7

Calculating the setting:

$$\frac{\text{Desired time} \times 10}{\text{Timing range selected}} = \text{Required setting}$$

$$\frac{42 \text{ min.} \times 10}{60 \text{ min.}} = 7$$

1	2	3	4	5	6	7	8
	IEC Rated operational current I_e at AC-15 220 V 230 V 240 V A	UL/CSA Pilot Duty Rating	Time Range	Connection Diagram	Function Number (Refer to Column 9)	Type	Price
							\$
Timing Relay, ON-DELAY							
	3	B 300	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		11	ETR 4-11-A	See Price List
							See Price List
Timing Relay, for Star-Delta starters							
	3	B 300	3...60 s		51	ETR 4-51-A	See Price List
							See Price List
Timing Relay, with Multi-functions							
	3	B 300	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	 	11, 21, 42, 81 12, 16, 22, 82	ETR 4-69-A	See Price List
							See Price List

One Device for All Voltage Ratings!

The ETR 4 timers operate reliably when actuated by AC and DC voltage levels in the range indicated in the table below. There is no need to specify 'coil' voltages or stock coils.

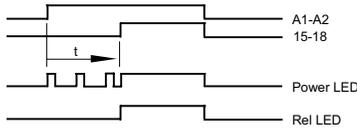
Input Voltage Rating

Type	Input Voltage Rating (Nominal Values)		Input Voltage Tolerance Range			
	V DC	V AC	V DC min	V DC max	V AC min	V AC max
ETR 4-11-A ETR 4-51-A ETR 4-69-A	24...240	24...240 (50/60 Hz)	16.8	288	20.4	264

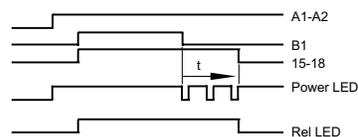
Function Description
LED Indication

Remarks

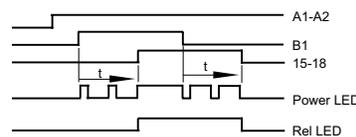
ON-DELAY (11)



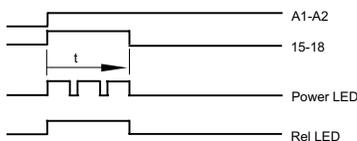
OFF-DELAY (12)



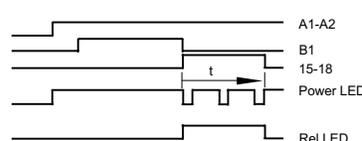
ON- and OFF-DELAY (16)



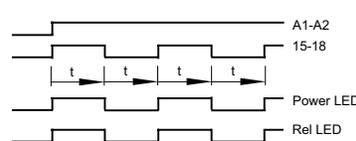
Fleeting contact on making (21)



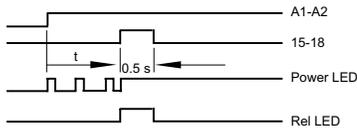
Fleeting contact on breaking (22)



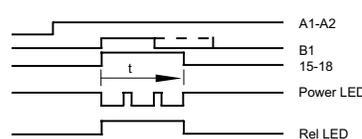
Repeat cycle (42)



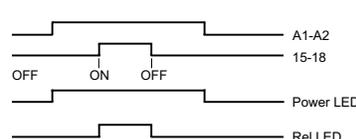
Pulse generating (81)



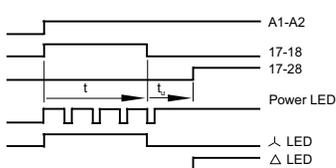
Pulse shaping (82)



ON-OFF function



Star-Delta (51)



Allowable Cable lengths:

Connection to B1, Z1 / Z2

Unshielded Conductors AWG 14...18 250 meters

Conductors in same conduit or cable channel as 50/60 Hz power conductors 50 meters

Accessories:

- Panel Mount Adapter page 2/20

The Entire Family of ETR 4 Timers Feature Many Advantages:

- Microprocessor controlled for high repeat accuracy
- Very high noise immunity, designed for industrial applications
- LED's to signal state of output contacts and running status
- Easy setting of timing ranges and functions
- Simple to install and wire
- One device covers all AC and DC voltages across a broad range: Simplifies and minimizes inventories.



1	2	3	4	5	6	7	8
	IEC Rated operational current I_e at AC-15 220 V 230 V 240 V	UL/CSA Pilot Duty Rating	Time Ranges	Connection Diagram	Function Number (Refer to column 9)	Type	Price
	A						

Multi-function Relay

With additional features:

- Two auxiliary contacts. Can be converted to one non-delayed contact and one timed contact.
- Suitable for connection to remote potentiometer.

2



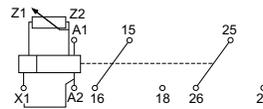
3

B 300

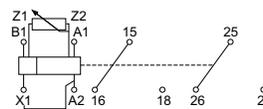
- 0.05 - 1 s
- 0.15 - 3 s
- 0.5 - 10 s
- 1.5 - 30 s
- 5 - 100 s
- 15 - 300 s
- 1.5 - 30 min
- 15 - 300 min
- 1.5 - 30 h
- 5 - 100 h

A2 / X1 Linked

- Two timed contacts



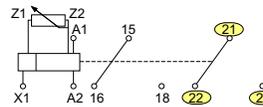
11, 21, 42, 81
ON - OFF



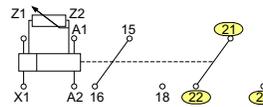
12, 16, 22, 82
ON - OFF

A2 / X1 Not Linked

- One non-delayed and one timed contact



11, 21, 42, 81
ON - OFF



12, 16, 22, 82
ON - OFF

ETR 4-70-A

See Price List See Price List

One Device for All Voltage Ratings!

The ETR 4 timers operate reliably when actuated by AC and DC voltage levels in the range indicated in the table below. There is no need to specify 'coil' voltages or stock coils.

Input Voltage Rating

Type	Input Voltage Rating (Nominal Values)		Input Voltage Tolerance Range			
	V DC	V AC	V DC min	V DC max	V AC min	V AC max
ETR 4-70-A	24...240	24...240 (50/60 Hz)	16.8	288	20.4	264

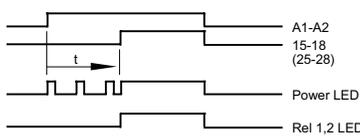
Function Number Description
LED Indication

Remarks

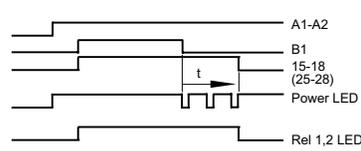
A2 / X1 Linked

- Two timed contacts

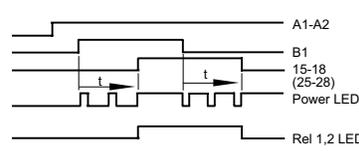
ON-DELAY (11)



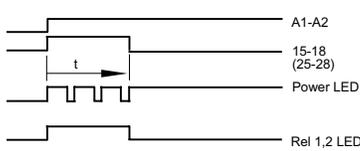
OFF-DELAY (12)



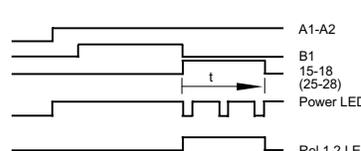
ON- and OFF-DELAY (16)



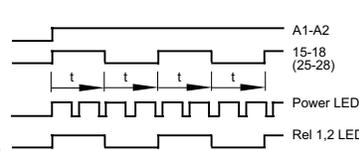
Fleeting contact on making (21)



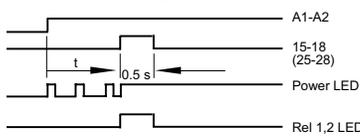
Fleeting contact on breaking (22)



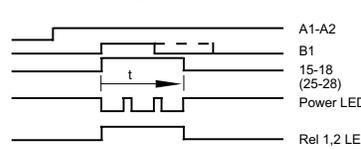
Repeat cycle (42)



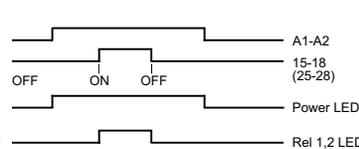
Pulse generating (81)



Pulse shaping (82)



ON-OFF function



Allowable Cable lengths:

Connection to B1, Z1 / Z2

Unshielded Conductors AWG 14...18 250 meters

Conductors in same conduit or cable channel as 50/60 Hz power conductors 50 meters

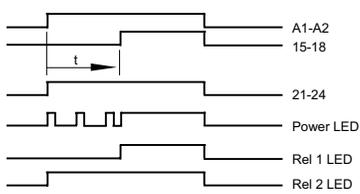
Accessories:

- Panel Mount Adapter page 2/20
- Potentiometer for remote setting page 2/20

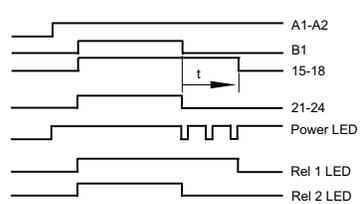
A2 / X1 Not Linked

- One non-delayed and one timed contact

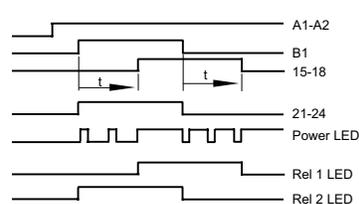
ON-DELAY (11)



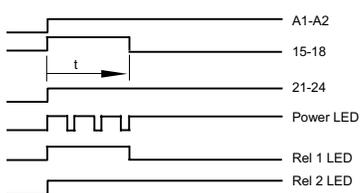
OFF-DELAY (12)



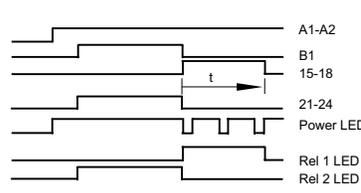
ON- and OFF-DELAY (16)



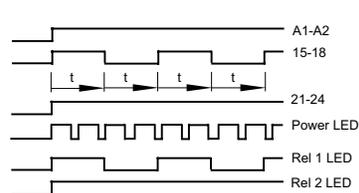
Fleeting contact on making (21)



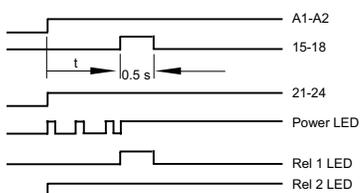
Fleeting contact on breaking (22)



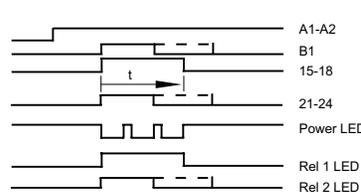
Repeat cycle (42)



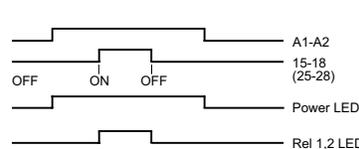
Pulse generating (81)

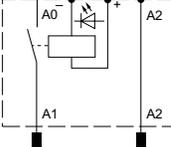
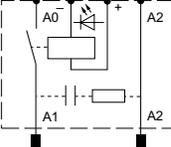
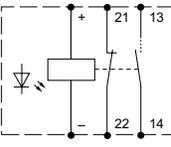
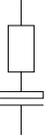
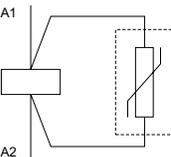
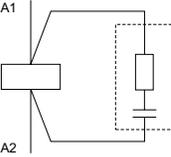
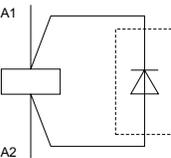


Pulse shaping (82)

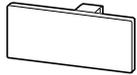
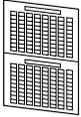
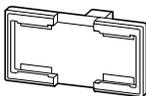
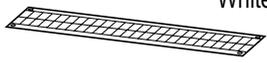


ON-OFF function



1	2	3	4	5	6	7	
	Ratings	Connection Diagram	For Use With	Type	Price	Remarks	
Interface Module, plug in							
	Actuating Voltage & Current: 24 V DC, 11 mA Output, Pilot Duty Rating: B 300 / R 300		DIL R...	VS 1 DIL	See Price List	For energizing of relays and contactors from low level 24 V DC inputs. The VS 1 and VS 2 plug directly into the DIL R coil terminals (and DIL...M contactors, see next chapter) whereas the ETS 4-VS 3 mounts separately on a DIN rail and is suitable for all relays and contactors. The VS 2 and ETS 4-VS 3 are equipped with surge suppressors. In cases where the rated coil current of a device exceeds 2 Amps, use a DIL ER-G as an interface relay.	
with built-in surge suppressor							
	Actuating Voltage & Current: 24 V DC, 11 mA Output, Pilot Duty Rating: B 300 / R 300		DIL R...	VS 2 DIL	See Price List		
separately mounted							
	Actuating Voltage & Current: 24 V DC, 25 mA Output, Pilot Duty Rating: B 300		All relays and contactors	ETS 4-VS 3	See Price List		
Drop-out Delay Mechanism							
	24 V DC		DIL E...	TD DIL E 24	See Price List	Lengthens the drop-out time of an electro-magnet. Suitable only for DIL ER(M) devices with DC magnet systems. Drop-out delay with auxiliary contacts: 100 ms, without: 130 ms	
Varistor Suppressors							
	24...48 V, 50...60 Hz 110...250 V, 50...60 Hz 380...415 V, 50...60 Hz		DIL E...	VG DIL E 48 VG DIL E 250 VG DIL E 415	See Price List	For AC devices only. DC devices have built-in surge suppressors.	
	12...24 V, 50...60 Hz 12...24 V DC		DIL R...	VGB DIL 24 VGB DIL 48 VGB DIL 250 VGB DIL 415	See Price List	Suitable for both AC and DC DIL R devices.	
RC Suppressors							
	24...48 V, 50...60 Hz 110...250 V, 50...60 Hz		DIL E...	RC DIL E 48 RC DIL E 250	See Price List	For DIL E and DIL R devices with AC coils.	
	24...48 V, 50...60 Hz 110...250 V, 50...60 Hz 380...415 V, 50...60 Hz		DIL R...	RC B DIL 48 RC B DIL 250 RC B DIL 415	See Price List		
Free-wheel Diode Suppressors							
	12...250 V DC		DIL R...	FD B DIL	See Price List	For DC operated devices. Longer drop out delay of coil should be taken into consideration.	

1	2	3	4	5
	For Use With	Type	Price	Remarks
			\$	
Couplers				
	Provides a mechanical link between groups of components to better secure them when mounted and wired together in an assembly.	DIL E... DIL ET...	V0 DIL E	No spacing between devices.
		DIL R... ETR 4	V0 DIL	No spacing between devices.
		DIL R... ETR 4	V5/15 DIL	5 mm device spacing 15 mm device spacing when using mechanical interlock
Mechanical Interlock				
		DIL E...	MV DIL E	To mechanically interlock two AC or DC operated devices mounted either horizontally or vertically. No spacing between devices. Mechanical life: 2.5 million operations. Additional auxiliary contact mounting is possible.
Parallel Bridge				
	For auxiliary contacts	DIL E... ...DIL E DIL R... ...DIL	BT 480	Not insulated Standard quantity: 100
Connection Tabs for Fast-on Connectors DIN 46 244				
	For auxiliary contacts and coil connections	DIL E... DIL ET... DIL R...	BT 483	Use connectors with insulated sleeves. Standard quantity: 100
Tamper-proof Cover				
	Transparent	DIL E... DIL ET...	H DIL E	Cover snap-fits onto the device and can be sealed to prevent tampering. IP 40 environmental rating. Cover may also be drilled to provide access to the DIL ET timer adjustment dial.
		TPE... TPD...	PL-DIL T	Cover is fastened via a screw. Sealable to prevent access.
Front Plate				
		DIL R... DIL 00(A)M...	H DIL 00M	Front plate serves as a cover for the basic relays and small DIL...M contactors (Sec. 3) and also provides a location for the component identification marking system.

1	2	3	4	5
	For Use With	Type	Price	Remarks
			\$	
Remote Potentiometer IP 54				
	DIL ET... ETR 4-70	RR-10	See Price List	10 kΩ linear 0.25 W max.
Mounting Clip				
	ETR 4...	CS-TE	See Price List	For panel mounting the ETR 4 relays.
Component Labelling System				
Clip-in Label Plate				
	8 x 10 mm	...DIL	KG 10 ¹⁾	Clip-in type label nameplate can be marked with felt-tip pen or adhesive labels.
	8 x 20 mm	...DIL E, DIL ER... ...DIL, DIL R...	KG 20 ¹⁾	
Label Plate with Mounting Stud				
	8 x 17.5 mm	DIL...	XGKS-Z	Clips onto 2 pole auxiliary contact modules. Standard quantity: 500 Clips onto 4 pole auxiliary contact modules and base relays. Standard quantity: 500 For use with Moeller equipment with the corresponding mounting hole. Standard quantity: 500
Adhesive Labels²⁾				
	7.5 x 17 mm	XGKS-Z KG 20	XGKE-GE	For inscription using laser printer, plotter, marker pen, photocopier Standard quantity: Pad of 25 sheets, 240 labels per sheet, perforated and self-adhesive, for use with label plates.
	Yellow (RAL 1018)			
Adapter with Mounting Stud				
	Light Grey (RAL 7035)	DIL...	XGKA-Z	Secures label type XGKS-T on Moeller equipment with corresponding mounting hole. Standard quantity: 250
Card of Label Plates²⁾				
	8 x 17.5 mm White	XGKS...	XGKS-T	Can be inscribed by marker pen or plotter by Phoenix Contact or others. Standard quantity: 10 cards. 40 labels per card.
Individual Coils				
	AC coils	DIL R...	J-DIL 00M (...)	See page 2/21 for available ratings
	DC coils	DIL R...	G-DIL 00M (...)	Specify coil voltage (...) when ordering.
			See Price List	Specify coil voltage (...) when ordering.

1) Must be ordered in standard quantity.
2) Consult Moeller Electric for inscription software.

	Single Voltage, Single Frequency	Single Voltage, Single Frequency	Single Voltage, Dual Frequency	Dual Voltage, Dual Frequency	
AC Coils	50 Hz	60 Hz	50/60 Hz	50 Hz, 60 Hz	DC Coils
Control Relays DIL ER					
Standard Coils	12 V 50 Hz 24 V 50 Hz 48 V 50 Hz 240 V 50 Hz	24 V 60 Hz 110 V 60 Hz 115 V 60 Hz	24 V 50/60 Hz 42 V 50/60 Hz 110 V 50/60 Hz 230 V 50/60 Hz	42 V 50 Hz, 48 V 60 Hz 110 V 50 Hz, 120 V 60 Hz 190 V 50 Hz, 220 V 60 Hz 220 V 50 Hz, 240 V 60 Hz 230 V 50 Hz, 240 V 60 Hz 380 V 50 Hz, 440 V 60 Hz 400 V 50 Hz, 440 V 60 Hz 415 V 50 Hz, 480 V 60 Hz	12 V DC 24 V DC 48 V DC 60 V DC 110 V DC 220 V DC
Industrial Control Relays DIL R					
Standard Coils	24 V 50 Hz 48 V 50 Hz 240 V 50 Hz	24 V 60 Hz 115 V 60 Hz 208 V 60 Hz	24 V 50/60 Hz 42 V 50/60 Hz 110 V 50/60 Hz 230 V 50/60 Hz	42 V 50 Hz, 48 V 60 Hz 110 V 50 Hz, 120 V 60 Hz ¹⁾ 190 V 50 Hz, 220 V 60 Hz 220 V 50 Hz, 240 V 60 Hz ¹⁾ 230 V 50 Hz, 240 V 60 Hz 380 V 50 Hz, 440 V 60 Hz 400 V 50 Hz, 440 V 60 Hz 415 V 50 Hz, 480 V 60 Hz ¹⁾	24 V DC 48 V DC 60 V DC 110 V DC 120 V DC 220 V DC 240 V DC
Special Coils	12...600 V 50 Hz or 12...600 V 60 Hz				12...250 V DC
V-DIL Mechanical Latching Module for DIL R Relays					
Standard Coils	24 V 50 Hz 48 V 50 Hz 240 V 50 Hz	24 V 60 Hz 115 V 60 Hz	24 V 50/60 Hz 42 V 50/60 Hz 110 V 50/60 Hz 230 V 50/60 Hz	42 V 50 Hz, 48 V 60 Hz 110 V 50 Hz, 120 V 60 Hz 190 V 50 Hz, 220 V 60 Hz 220 V 50 Hz, 240 V 60 Hz 230 V 50 Hz, 240 V 60 Hz	24 V DC 48 V DC 60 V DC 110 V DC 220 V DC
Special Coils	12...415 V 50 Hz or 12...415 V 60 Hz				12...250 V DC

Technical Data - Control Relays

Industrial Control Relays

2

					DIL ER, DIL ER-G	DIL R, ...DIL
General						
Specifications					UL / CSA, CE, IEC / EN 60 947, VDE 0660.....	
Mechanical lifespan	AC operated	Operations	x 10 ⁶		10	20
	DC operated	Operations	x 10 ⁶		20	20
Maximum switching frequency						
Mechanical			Ops./h		9000	7000
Climatic Proofing					Damp heat, constant, to DIN EN 60 068 Part 2-3 Damp heat, cyclic, to DIN EN 60 068 Part 2-30	
Ambient temperature	open	max./min.	°C		-25/+50	-25/+50
	enclosed	max./min.	°C		-25/+40	-25/+40
Mounting					As desired, except vertically with A1-A2 facing downward	As desired, except upside down
Impact resistance	Sinusoidal impulse 10 ms					
	Basic device	N.O./N.C. contacts	g		10/8	–
	Device with aux. contact module	N.O./N.C. contacts	g		10/8	–
	Sinusoidal impulse 20 ms					
Degree of protection	Basic device			N.O./N.C. contacts	g	–
	Device with aux. contact module			N.O./N.C. contacts	g	–
	Basic device			N.O./N.C. contacts	g	–
	Device with aux. contact module			N.O./N.C. contacts	g	–
IEC 529					IP 20	IP 20 (DIL R) IP 00 (... DIL)
Finger-safe, back of hand safe to VDE 0106, Part 100					Yes	Yes
Terminal Capacity			AWG		14...18	12...18
Electrical Ratings, IEC Data (60 947)						
Positively driven contacts to ZH 1/457, including contact modules					Yes	Yes
Rated Impulse Withstand voltage U _{imp}			V		6000	8000
Overvoltage Category / Pollution Degree					III / 3	III / 3
Rated Insulation Voltage U _i			V		690	690
Rated Operational Voltage U _e			V		600	500
Max. Short Circuit Protection without welding						
Fuseless		220 / 240 V		PKZM 0	4	4
		380 / 415 V		PKZM 0	4	2.4
Fuses		500 V	Characteristic gL	A	6	16
Rated Operational Current I _e						
AC-15		220 / 240 V		A	6(4) ¹⁾	6
		380 / 415 V		A	3(2) ¹⁾	4
		500 V		A	1.5	1.5
DC-13						
Above 110 V or L/R > 15 ms: Use RC suppressors in parallel with switching contacts.						
C = 1µF, R = 0.5 Ω in series						
L/R ≤ 15 ms: Ex. Coils, solenoids, DC motors						
Current Paths in series:						
		2	24 V	A	2.5	10
		2 (1)	60 V	A	2.5	10(6)
		3 (1)	110 V	A	1.5	6(3)
		3 (1)	220 V	A	0.5	5(1)
L/R ≤ 50 ms: Ex. Magnetic couplers, brakes						
Current Paths in series:						
		2	24 V	A	–	6
		2	60 V	A	–	6
		3 (1)	110 V	A	–	3(1.5)
		3 (1)	220 V	A	–	2(1)
Control Circuit Reliability @ U _e = 24 V 17 V / 5.4 mA)			Failure Rate		DIL ER, DIL R: Less than 1 failure for every 100 million operations	
Electrical Life @ U _e = 240 V						
AC-15						
DC-13						
L/R = 50 ms:				# of	150,000	
operations						
2 Contacts in series @ I _e = 0.5 A						
Electrical Ratings, UL/CSA Data						
Pilot Duty					A600, P300	A600, P300

1) Pertains to the ...**DIL E** auxiliary contact modules clipped onto base devices

Technical Data - Control Relays

Industrial Control Relays

2

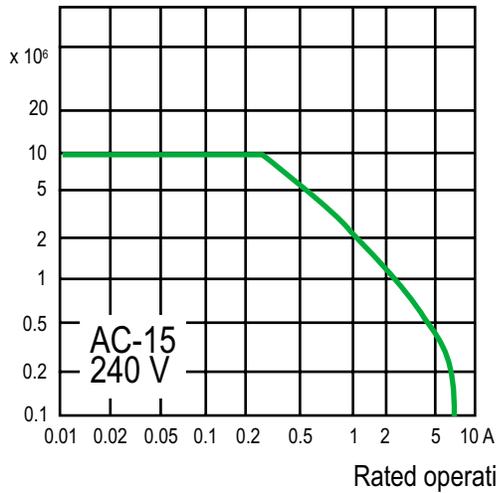
					TPE 11 DIL TPD 11 DIL	V DIL	VS 1 DIL VS 2 DIL	ETS 4-VS 3	
Electrical Ratings, IEC Data (60 947)									
Positively driven contacts to ZH 1/457, including contact modules									
Rated Impulse Withstand voltage U_{imp}					V	8000	8000	4000	6000
Overvoltage Category/Pollution Degree						III / 3	III / 3	III / 2	III / 3
Rated Insulation Voltage U_i					V	690	690	440	440
Rated Operational Voltage U_e					V	500	415	415	440
Max. Short Circuit Protection without welding									
Fuseless						220/240 V			
						380/415 V			
						500 V			
Fuses					Characteristic gL				
Rated Operational Current I_e					A	PKZM 0			
AC-15					A	PKZM 0			
AC-15					A	6	4 ¹⁾	4 ¹⁾	
DC-13					A	4	1.5	2	
DC-13					A	4	1	2	
Above 110 V or L/R > 15 ms: Use RC suppressors in parallel with switching contacts.									
C = 1µF, R = 0,5 Ω in series									
L/R ≤ 15 ms: Ex. Coils, solenoids, DC motors									
Current Paths in series:									
1					A	10	(1)	2.6	
2(1)					A	(6)	(1)	1.0	
3(1)					A	(3)	(1)	0.6	
3(1)					A	(1)	(1)	0.2	
L/R ≤ 50 ms: Ex. Magnetic couplers, brakes									
Current Paths in series:									
2(1)					A	(4)	(0.5)	2.0	
2(1)					A	(4)	(0.5)	0.6	
3(1)					A	(1)	(0.5)	0.08	
3(1)					A	(0.5)	(0.5)	(0.08)	
L/R ≤ 300 ms, Highly inductive DC loading									
Current Paths in series:									
1					A	–	0.2	0.6	
1					A	–	0.2	0.2	
1					A	–	0.2	0.08	
1					A	–	0.2	0.03	
Control Circuit Reliability @ $U_e = 24 V / 17 V / 5.4 mA$					Failure Rate	Less than 1 failure for every 100 million operations.....			
Electrical Life @ $U_e = 230 V / I_e = 0.1 A / 1.2 A$									
AC-15					# of operations	–	8/–	7/1	
DC-13					# of operations	–	0.85	–	
Electrical Ratings, UL/CSA Data									
Pilot Duty						A 300	–	B 300 / R 300	B 300
Magnet System									
Voltage Tolerance Band									
AC operated									
Single voltage coil 50 Hz and dual voltage coil 50 Hz, 60 Hz					Unlatching	$x U_c$	–	–	–
Dual Frequency Coil ...V, 50/60 Hz					Unlatching	$x U_c$	–	–	–
DC operated ¹⁾									
Pick-up					$x U_c$	–	–	75...125%	85...120%
Unlatching					$x U_c$	–	85...110%	–	–
Power Consumption									
AC operated									
Single voltage coil 50 Hz and dual voltage coil 50 Hz, 60 Hz					Inrush	VA/W	–	13/12	–
					Seal-in	VA/W	–	5/2	–
DC operated					Inrush = Seal-in	VA/W	–	26	0.27
Duty Factor									
						100%	100% AC	100%	100%
							200 ms DC		
Switching times of contact (Approximate values at 100% of U_c)									
DC operated					Closing Time	ms	–	–	6
					Opening Time	ms	–	–	7
Minimum Command time									
AC operated					Latching	ms	–	35	–
					Unlatching	ms	–	25	–
DC operated					Latching	ms	–	45	–
					Unlatching	ms	–	25	–

1) Fast Acting Fuses

					DIL ET-A	ETR 4-A	
General							
Specifications					UL / CSA, CE, IEC / EN 60 947, VDE 0435, IEC / EN 60 255.....		
Mechanical Lifespan							
	AC operated	Operations	x 10 ⁶	30	30		
	DC operated	Operations	x 10 ⁶	30	30		
Climatic Proofing					Damp heat, constant, to DIN EN 60 068 Part 2-3 Damp heat, cyclic, to DIN EN 60 068 Part 2-30		
Ambient Temperature							
	Open	Min/Max	°C	-20/+60	-25/+60		
	Enclosed	Min/Max	°C	-20/+45	-20/+45		
Mounting					As desired	As desired	
Impact resistance							
	Sinusoidal impulse 20 ms	N.O. Contact(s)	g	4	4		
Degree of Protection							
	Terminals (Finger-safe)			IP 20	IP 20		
Terminal Capacity					AWG		
				14...18	14...20		
Electrical Ratings, IEC Data (60 947)							
Rated Impulse Withstand voltage U _{imp}					V	6000	6000
Overvoltage Category/Pollution Degree						III / 2	III / 3
Rated Insulation Voltage U _i					V	600	600
Rated Operational Voltage U _e					V AC	440	440
Max. Short Circuit Protection without welding							
	Fuses	Characteristic gL	A	6	6		
Rated Operational Current I _e							
	AC-14	440 V	A	3	3		
	AC-15	220 V	A	3	3		
	DC-13						
Above 110 V or L/R > 15 ms: Use RC suppressors in parallel with switching contacts. C = 1µF, R = 0.5 Ω in series							
	L/R ≤ 15 ms: Ex. Coils, solenoids, DC motors		A	1.5	1.5		
	24 V						
	L/R ≤ 50 ms: Ex. Magnetic couplers, brakes		A	1.2	1.2		
	24 V						
Electrical Ratings, UL/CSA Data							
Pilot Duty					B 300	B 300	
Magnet System							
Voltage Tolerance Band							
	AC / DC operated			Page 2/12	Page 2/14, 2/16		
Power Consumption							
	AC operated - 50 Hz, 60 Hz	Inrush	VA	2	2		
		Seal-in	VA	2	2		
	DC operated	Inrush = Seal-in	W	1.8	1.8		
Duty Factor					100%	100%	
Maximum Switching Frequency					Ops./h	4000	4000
Minimum Command time							
	AC operated		ms	50	50		
	DC operated		ms	30	30		
Repeat Accuracy					%	0.1	0.1
Recovery time (after full expiration of time delay period)					ms	70	70

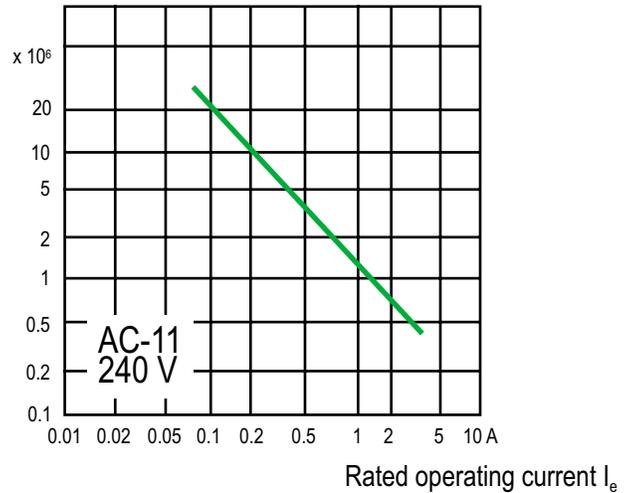
DIL ER (AC-15)

Component lifespan (cycles of operation)



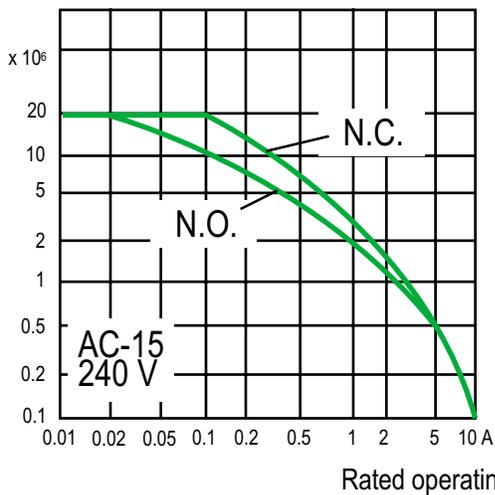
DIL ET (AC-11)

Component lifespan (cycles of operation)



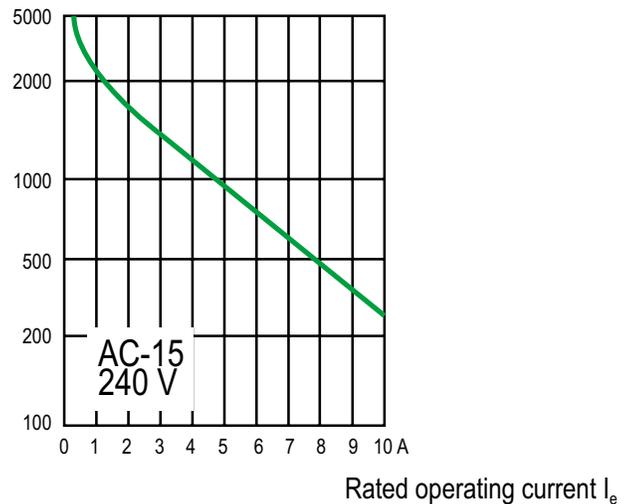
DIL R (AC-15)

Component lifespan (cycles of operation)



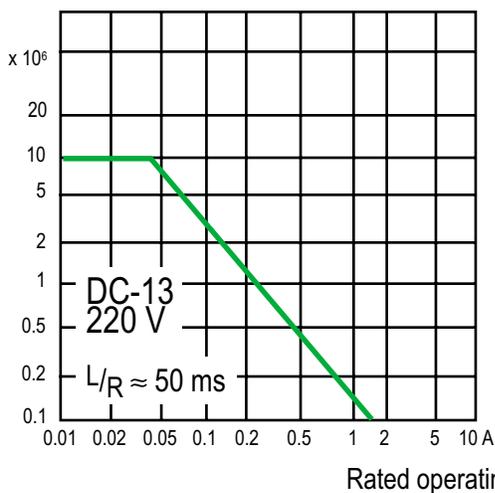
DIL R (AC-15)

Ops./h ↑ max. Operating frequency (Guide only)



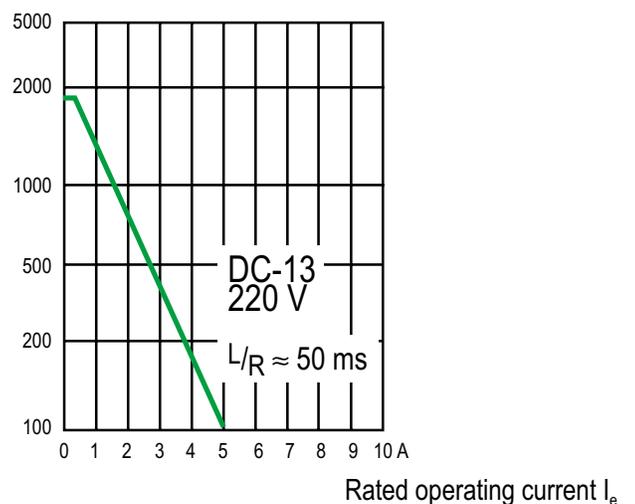
DIL R (DC-13)

Component lifespan (cycles of operation)



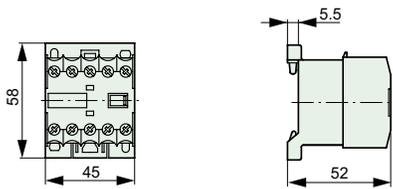
DIL R (DC-13)

Ops./h ↑ max. Operating frequency (Guide only)

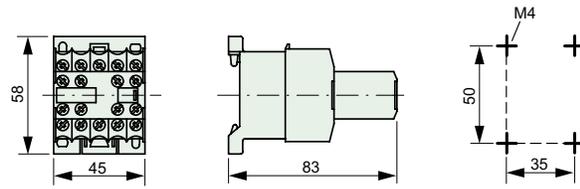


DIL ER Control Relays

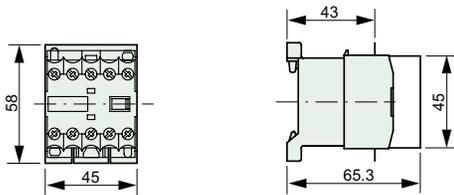
DIL ER...
DIL ER...G



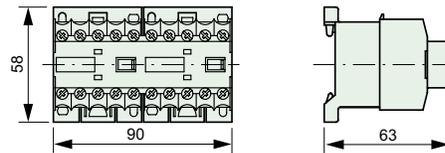
DIL ER... + ...DIL E
DIL ER...-G + ...DIL E
With auxiliary contact module



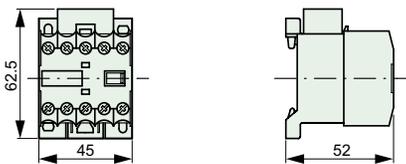
DIL ER... + H DIL E
DIL ER...-G + H DIL E
With transparent cover



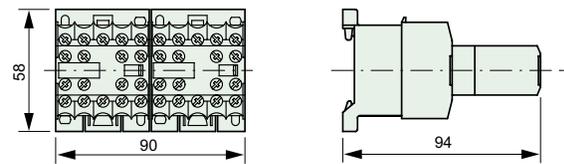
2 DIL ER... + MV DIL E
2 DIL ER...-G + MV DIL E
With mechanical interlock



DIL ER... + RC DIL E
DIL ER...-G + VG DIL E
With suppressor

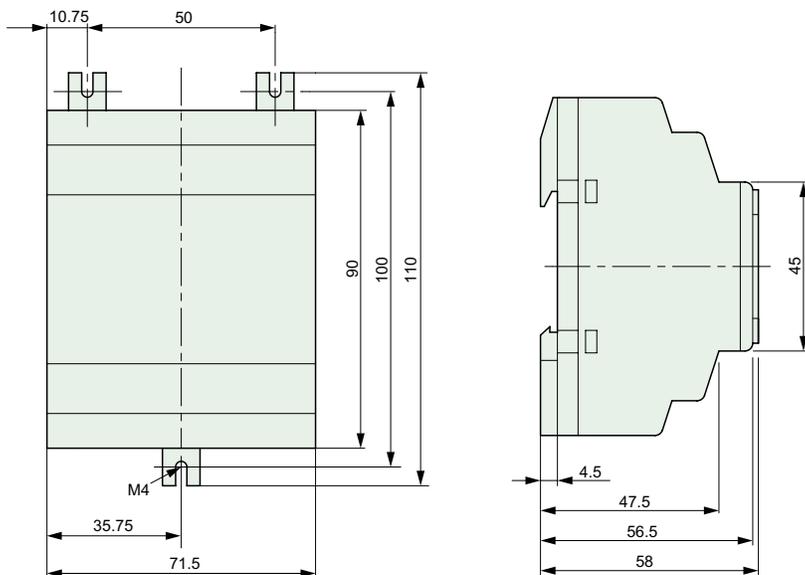


2 DIL ER... + MV DIL E + ...DIL E
2 DIL ER...-G + MV DIL E + ...DIL E
With mechanical interlock and auxiliary contact module



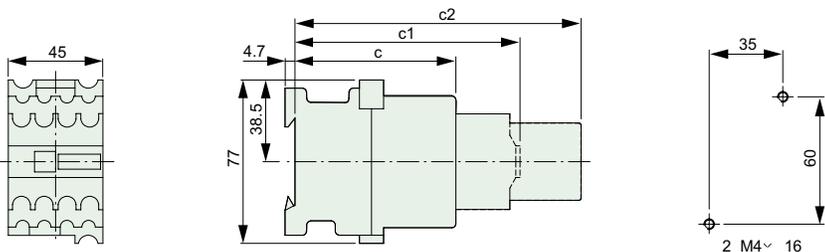
EASY Control Relay

EASY 412-DC-R
EASY 412-DC-RC
EASY 412-AC-R
EASY 412-AC-RC



DIL R Control Relays

DIL R 22(-G)	DIL R 22(-G)+...DIL	DIL R 22(-G)+TPE(TPD)11 DIL	DIL R 22(-G)+V(-G) DIL
DIL R 22D(-G)	DIL R 31(-G)+...DIL	DIL R 31(-G)+TPE(TPD)11 DIL	DIL R 31(-G)+V(-G) DIL
DIL R 31(-G)	DIL R 40(-G)+...DIL	DIL R 40(-G)+TPE(TPD)11 DIL	DIL R 40(-G)+V(-G) DIL
DIL R 40(-G)	DIL R 44D(-G)		
	DIL R 53D(-G)		



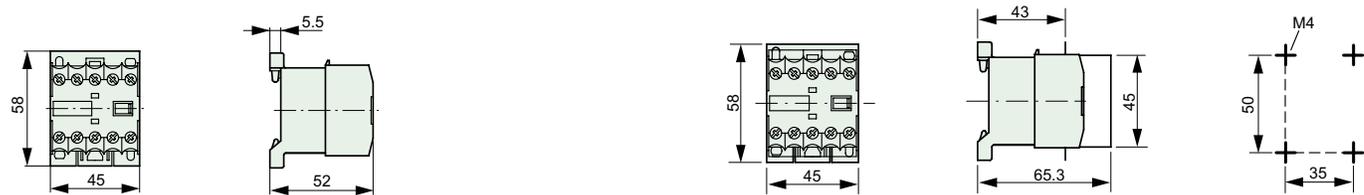
mm	DIL R 22 (-G)	DIL R 22+...DIL (-G)	DIL R 22+TPE(TPD)11 DIL (-G)	DIL R 22+V DIL (-G)
	DIL R 22D (-G)	DIL R 31+...DIL (-G)	DIL R 31+TPE(TPD)11 DIL (-G)	DIL R 31+V DIL (-G)
	DIL R 31 (-G)	DIL R 40+...DIL (-G)	DIL R 40+TPE(TPD)11 DIL (-G)	DIL R 40+V DIL (-G)
	DIL R 40 (-G)	DIL R 44D (-G)		
		DIL R 53D (-G)		
c (with H DIL)	76.5	(101.5)	-	-
c (without H DIL)	74	(99)	-	-
c1	-	-	107	(132)
c2	-	-	-	136
			(161)	137
				(162)

c1 = With ...DIL auxiliary contact module or DIL R...D(-G) complete unit
 c2 = With V(-G) DIL mechanical latching module or with TP...11 DIL pneumatic timer module

DIL ET Electronic Timing Relays

DIL ET...

DIL ET... + H DIL E
 With transparent cover



RR Remote Potentiometer

RR-10

