



I/O expansion, For use with easyE4, 12/24 V DC, 24 V AC, Inputs expansion (number) digital: 8, screw terminal



Part no. **EASY-E4-UC-16RE1**  
 Catalog No. **197218**

EL-Nummer **4500551**  
 (Norway)

**Delivery program**

Product range		Control relays easyE4
Subrange		easyE4 digital input/output enhancements
Basic function		easyE4 extensions
Description		Input/output extension for easyE4 control relay Expandable with the easyE4 series of digital input/output expansions with easy-E4-CONNECT1 connector (Item Y7-197225) Rated operating voltage 12V DC, 24V DC or 24V AC Digital inputs: 8 Digital outputs: 8 relays Screw terminals
<b>Inputs</b>		
Inputs expansion (number)		digital: 8
<b>Additional features</b>		
Display		with diagnostic LED
Software		EASYSOFT-SWLIC/easySoft 7
Supply voltage		12/24 V DC 24 V AC
For use with		easyE4

**Technical data**

**General**

Standards		EN 61000-6-2 EN 61000-6-3 IEC 60068-2-6 IEC 60068-2-27 IEC 60068-2-30 IEC/EN 61131-2 EN 61010 EN 50178
Approvals		
Approvals certificate		cULus CE
shipping classification		DNV GL
Dimensions (W x H x D)	mm	71.5 x 90 x 58
Weight	kg	0.229
Mounting		Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories)
Connection type		screw terminal

**Terminal capacities**

Screw terminals		
Solid	mm <sup>2</sup>	0.2 - 4
flexible	mm <sup>2</sup>	0.2 - 2.5
Solid or flexible conductor, with ferrule	mm <sup>2</sup>	0.2 - 2.5
Solid or stranded	AWG	22 - 12
Standard screwdriver	mm	0.8 x 3.5
Tightening torque	Nm	0.5 - 0.7
Stripping length	mm	6.5

## Climatic environmental conditions

Operating ambient temperature		°C	-25 to 55, cold as per IEC 60068-2-1, heat as per IEC 60068-2-2
Condensation			Take appropriate measures to prevent condensation
Storage	θ	°C	-40 - +70
relative humidity		%	in accordance with IEC 60068-2-30, IEC 60068-2-78 5 - 95
Air pressure (operation)		hPa	795 - 1080

## Ambient conditions, mechanical

Protection type (IEC/EN 60529, EN50178, VBG 4)			IP20
Vibrations		Hz	In accordance with IEC 60068-2-6 constant amplitude 0.15 mm: 10 - 57 constant acceleration 2 g: 57 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms		Impacts	18
Drop to IEC/EN 60068-2-31	Drop height	mm	50
Free fall, packaged (IEC/EN 60068-2-32)		m	0.3
Mounting position			Vertical or horizontal

## Electromagnetic compatibility (EMC)

Overvoltage category/pollution degree			III/2
Electrostatic discharge (ESD)			
applied standard			nach IEC/EN 61000-4-2
Air discharge		kV	8
Contact discharge		kV	6
Electromagnetic fields (RFI) to IEC EN 61000-4-3		V/m	0.08 - 1.0 GHz: 10 1.4 - 2 GHz: 3 2.0 - 2.7 GHz: 1
Radio interference suppression			EN 61000-6-3 Class B
Burst		kV	according to IEC/EN 61000-4-4 Supply cables: 2 Signal cables: 2
power pulses (Surge)			according to IEC/EN 61000-4-5 1 kV (supply cables, symmetrical) 2 kV (supply cables, asymmetrical)
Immunity to line-conducted interference to (IEC/EN 61000-4-6)		V	10

## Insulation resistance

Clearance in air and creepage distances			nach EN 50178, EN 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201
Insulation resistance			in accordance with EN 50178, EN 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201

## Power supply

Rated operational voltage	U <sub>e</sub>	V	12/24 DC (-15/+20%) 24 AC (-15/+10%)
Permissible range	U <sub>e</sub>		10.2 - 28.8 V DC 20.4 - 26.4 V AC
Residual ripple		%	≤ 5
Protection against polarity reversal			yes
Frequency		Hz	50/60 (± 5%)
Input current			max. 200 mA at 12 V DC max. 125 mA at 24 V DC
Voltage dips		ms	≤ 20 ms at 24 V AC 10 ms at 24 V DC 1 ms at 12 V DC
Fuse		A	≥ 1A (T)
Heat dissipation at 24 V DC		W	3

## Digital inputs 12 V DC

Number			8
Potential isolation			from power supply: no between inputs: no from the outputs: yes to base unit: yes to expansion devices: yes
Rated operational voltage	U <sub>e</sub>	V DC	12
Input voltage		V DC	Condition 0: ≤ 5 (I1 - I8) Condition 1: ≥ 8 (I1 - I8)
Input current at signal 1		mA	1.75 mA (I1 - I8)
Deceleration time		ms	type 0.2 (0 -> 1) type 0.15 (1 -> 0)

Cable length		m	100 (unshielded)
<b>Digital inputs 24 V DC</b>			
Number			8
Potential isolation			from power supply: no between inputs: no from the outputs: yes to base unit: yes to expansion devices: yes
Rated operational voltage	$U_e$	V DC	24
Input voltage		V DC	Signal 0: $\leq 5$ (I1 - I8) Condition 1: $\geq 15$ (I1 - I8)
Input current at signal 1		mA	3.3 (I5 - I8)
Deceleration time		ms	type 0.1 (0 -> 1) type 0.2 (1 -> 0)
Cable length		m	100 (unshielded)

### Digital inputs 24 V AC

Number			8
Potential isolation			from power supply: no between inputs: no from the outputs: yes to base unit: yes to expansion devices: yes
Rated operational voltage	$U_e$	V AC	24
Input voltage (AC = sinusoidal)	$U_e$	V	Status 0: $\leq 5$ (I1 - I8) Condition 1: $\geq 14$ (I1 - I8)
Rated frequency		Hz	50/60
Input current at signal 1		mA	I5 - I8: 3.5 (at 24 VAC/DC)
Deceleration time		ms	type 25/21 (0 -> 1/1 -> 0, 50/60Hz)
Cable length		m	40 (unshielded)

### Relay outputs

Number			8
Outputs in groups of			1
Parallel switching of outputs for increased output			Not permitted
Protection of an output relay			B16 circuit breaker or 8 A (T) fuse
Potential isolation			Safe isolation according to EN 50178: 300 V AC Basic isolation: 600 V AC from power supply: yes From the inputs: yes between outputs: yes to expansion devices: yes
Contacts			
Conventional thermal current (10 A UL)		A	5
Recommended for load: 12 V AC/DC		mA	> 500
Rated impulse withstand voltage $U_{imp}$ of contact coil		kV	6
Rated operational voltage	$U_e$	V AC	240
Rated insulation voltage	$U_i$	V AC	240
Safe isolation according to EN 50178		V AC	300 between coil and contact 300 between two contacts
Making capacity			
AC--15, 250 V AC, 3 A (600 ops./h)	Operations		300000
DC-13, L/R $\leq 150$ ms, 24 V DC, 1 A (500 S/h)	Operations		200000
Breaking capacity			
AC-15, 250 V AC, 3 A (600 Ops./h)	Operations		300000
DC-13, L/R $\leq 150$ ms, 24 V DC, 1 A (500 S/h)	Operations		200000
Filament bulb load			
1000 W at 230/240 V AC	Operations		25000
500 W at 115/120 V AC	Operations		25000
Fluorescent lamp load			
Fluorescent lamp load 10 x 58 W at 230/240 V AC			
With upstream electrical device	Operations		25000
Uncompensated	Operations		25000
Fluorescent lamp load 1 x 58 W at 230/240 V AC, conventional, compensated	Operations		25000
Switching frequency			