

# CHARX T1HCI12-1AC48-5,0M1 - Vehicle charging inlet



1379288

<https://www.phoenixcontact.com/us/products/1379288>

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CHARX connect universal, AC type 1, Vehicle charging inlet, 48 A , 250 V AC, Single wires, length: 5 m, locking actuator: 12 V, 4-pos., Front and rear mounting, M6, housing: black, for charging electric vehicles with alternating current (AC), IEC 62196-2, SAE J1772, A protective cap is supplied as standard for the AC contacts.

## Product description

Vehicle charging inlet for charging with alternating current (AC), compatible with type 1 AC vehicle charging connectors (EVSE), for installation in electric vehicles (EV).

## Your advantages

- Complete product range
- Uniform, space-saving dimensions for the installation space and the screw connection points of all Phoenix Contact vehicle charging inlets
- Developed and produced in accordance with the IATF 16949 automotive standard and ISO 9001
- Integrated interlock during charging
- Manual emergency release of the locking actuator
- Protected and sealed against dirt and water with a high degree of protection

## Commercial data

Item number	1379288
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	EM01
Product key	XWCAIA
GTIN	4063151748586
Weight per piece (excluding packing)	101 g
Customs tariff number	85444290
Country of origin	PL

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## Technical data

### Notes

General	A protective cap is supplied as standard for the AC contacts.
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### Product properties

Product type	Vehicle charging inlet
Product family	CHARX connect universal
Application	for charging electric vehicles with alternating current (AC) for installation in electric vehicles (EV)
Charging standard	AC type 1
Charging mode	Mode 2, 3
Customer variations	On request

### Electrical properties

Note on the connection method	Crimp connection, cannot be disconnected
Temperature monitoring	AC contacts: PTC chain (DIN EN 60738-1)

#### Charging power and current (AC charging (1-phase))

Type of charging current	AC single-phase
Charging current	48 A AC (1-phase)
Charging power	12 kW

#### Pin assignment (Leistungskontakte)

Number	3 (L1, N, PE)
Rated voltage	250 V AC
Rated current	48 A AC

#### Pin assignment (Signalkontakte)

Type of signal transmission	Pulse width modulation with modulated Powerline communication in accordance with ISO/IEC 15118 / DIN SPEC 70121
Number	2 (CP, CS)
Rated voltage	30 V AC
Rated current	2 A
Coding	2.7 k $\Omega$ (between PE and CS)
Insulation resistance	> 200 M $\Omega$

#### Locking actuator

Locking actuator	12 V, 4-pos. Top center position
Possible power supply range at the motor	9 V ... 16 V
Maximum voltage for locking detection	12 V
Typical motor current for locking	0.25 A
Reverse current of the motor	max. 1.5 A
Max. dwell time with reverse current	1 s

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Recommended adaptation time	600 ms
Pause time after entry or exit path	3 s
Service life insertion cycles	> 10000 load cycles
Lock recognition	available
Mechanical emergency release	available
Ambient temperature (operation)	-40 °C ... 80 °C

## Temperature sensors (PTC chain)

Sensor type	PTC chain
Standards/regulations	DIN EN 60738-1
Attachment point	Sensor for the AC contacts
Measuring range_resistance	790 $\Omega$ ... 1420 $\Omega$
Resistance	max. 1200 $\Omega$ $\pm$ 5 K
Recommended measured current	$\leq$ 1 mA ( $U_{\max}$ = 16 V DC)
Ambient temperature	-40 °C ... 130 °C (Operation)

## Dimensions

### Vehicle charging inlet

Width	90 mm
Height	90 mm
Depth	112.2 mm

### Bore dimensions

Width	73 mm
Height	73 mm
Depth	73 mm

## Material specifications

Color (Housing)	black (9005)
Color (Mating face)	black (9005)
Material (Housing)	Plastic
Material (Contact surface)	Silver

## Cable/line

Cable length	5 m
Cable type	Single wires

### Single-core wires for AC

Cable length	5 m
Cable structure	3 x 6 mm <sup>2</sup>
Single wire, material	Silicone
Single wire, color	OG
External cable diameter	13.80 mm $\pm$ 0.3 mm
Cable resistance	$\leq$ 3.2 $\Omega$ /km

### Single-core wires for locking actuator

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Cable length	1.5 m
Cable structure	4 x 0.5 mm <sup>2</sup>
Single wire, material	PVC
Single wire, color	BU/RD, BU/GN, BU/YE, BU/BN
External cable diameter	1.60 mm ±0.20 mm
Cable resistance	≤ 37.1 Ω/m

## Single-core wires for temperature sensors

Cable length	1 m
Cable structure	5 x 0,5 mm <sup>2</sup>
Single wire, color	BN/GY BN/YE/GN
External cable diameter	1.60 mm ±0.20 mm
Cable resistance	≤ 37.1 Ω/m

## Single-core wires for communication

Cable length	1 m
Cable structure	2 x 0.5 mm <sup>2</sup>
Single wire, material	PVC
Single wire, color	BK WH
External cable diameter	1.60 mm ±0.20 mm
Cable resistance	≤ 37.1 Ω/m

## Mechanical properties

### Mechanical data

Insertion/withdrawal cycles	> 10000
Insertion force	< 75 N
Withdrawal force	< 75 N

## Environmental and real-life conditions

### Ambient conditions

Degree of protection (Vehicle charging inlet)	IP55 (plugged in; when plugged in and ready to operate, the degree of protection is only ensued if both plug-in components are original products from Phoenix Contact or suitable standard-compliant products) IP67 (Inner area of vehicle charging inlet)
Ambient temperature (operation)	-40 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	4000 m (above sea level)

## Standards and regulations

### Standards

Standards/regulations	IEC 62196-2 SAE J1772
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## Mounting

Mounting type	Front and rear mounting (0 to 90 degree frontal inclination possible)
Mounting hole diameter	6.70 mm (ø)
Fixing screws	M6
Screws included in the scope of delivery	none

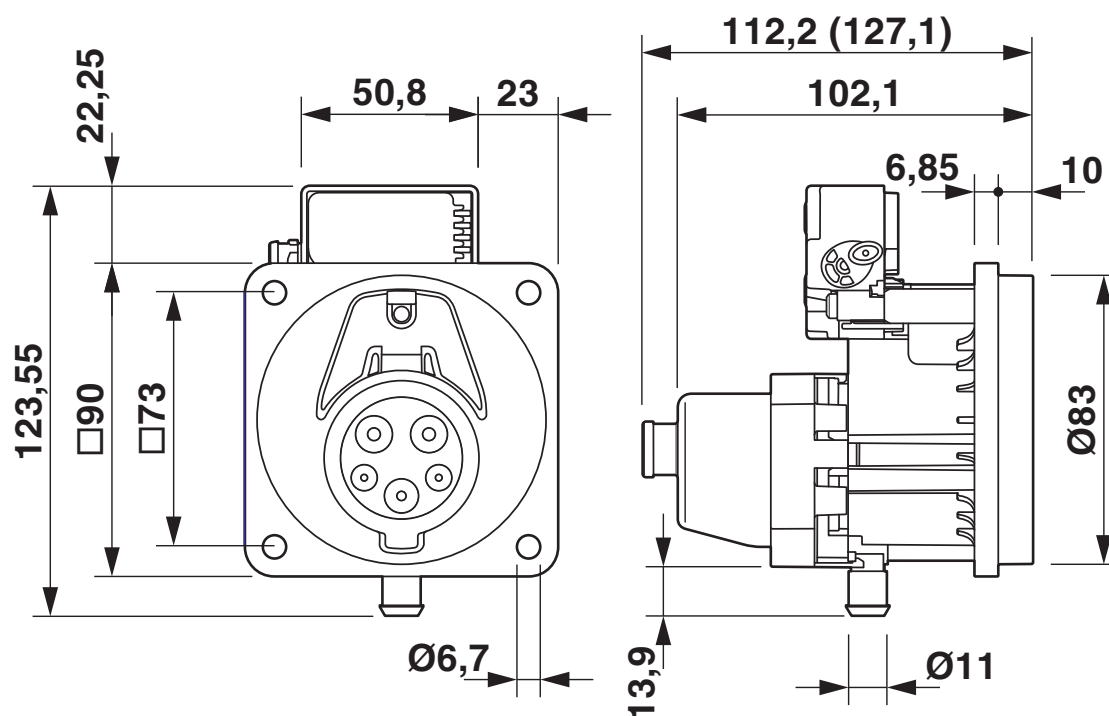
# CHARX T1HCI12-1AC48-5,0M1 - Vehicle charging inlet

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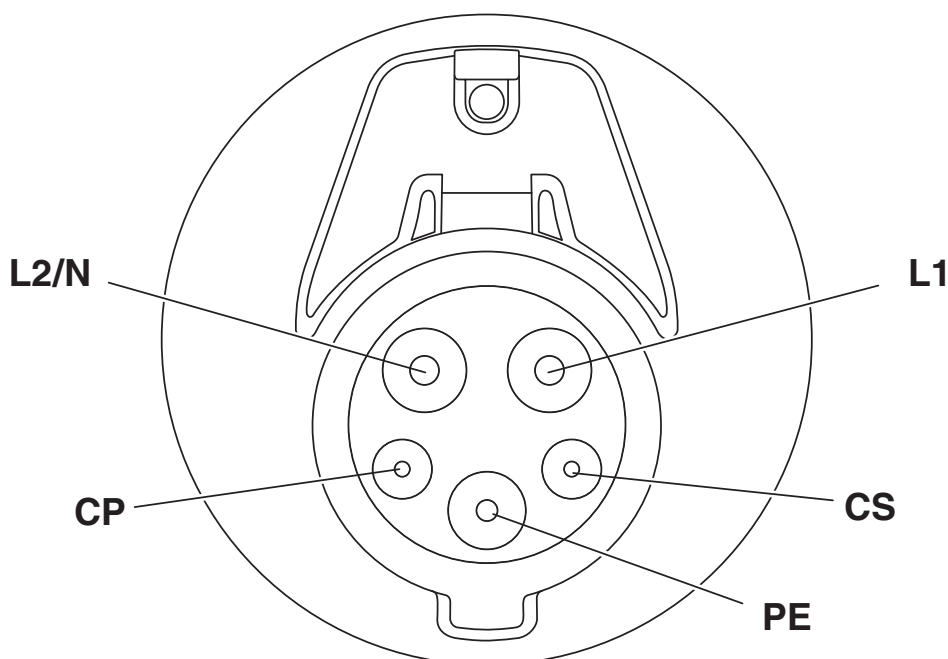
## Drawings

Dimensional drawing



Dimensional drawing

Connection diagram



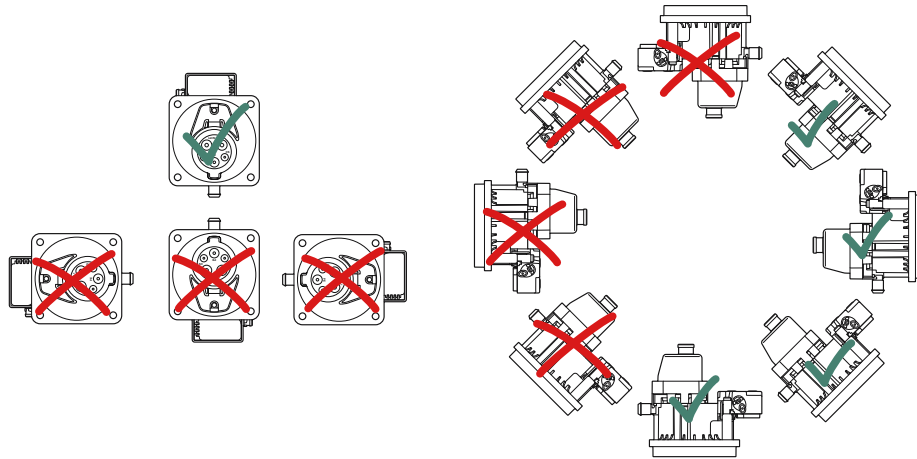
Pin assignment of vehicle charging inlets

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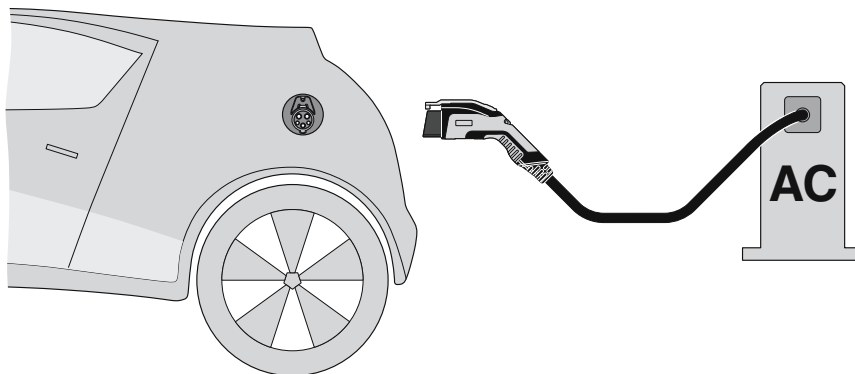
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Connection diagram



Installation positions

Connection diagram



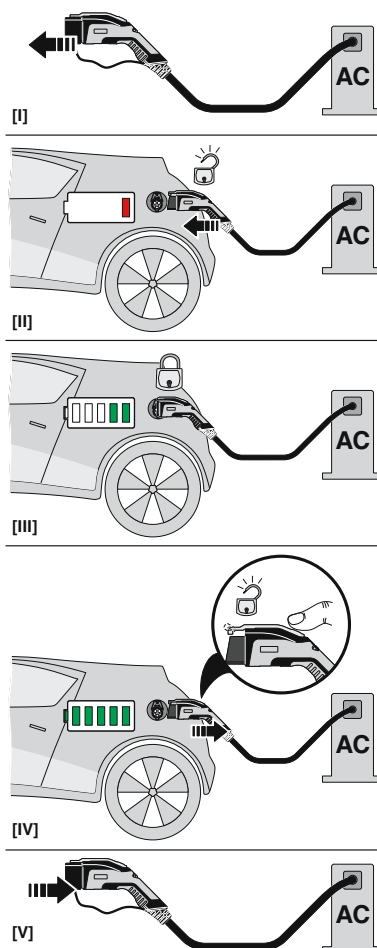
Terminology definition

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Functional drawing



Operating instructions

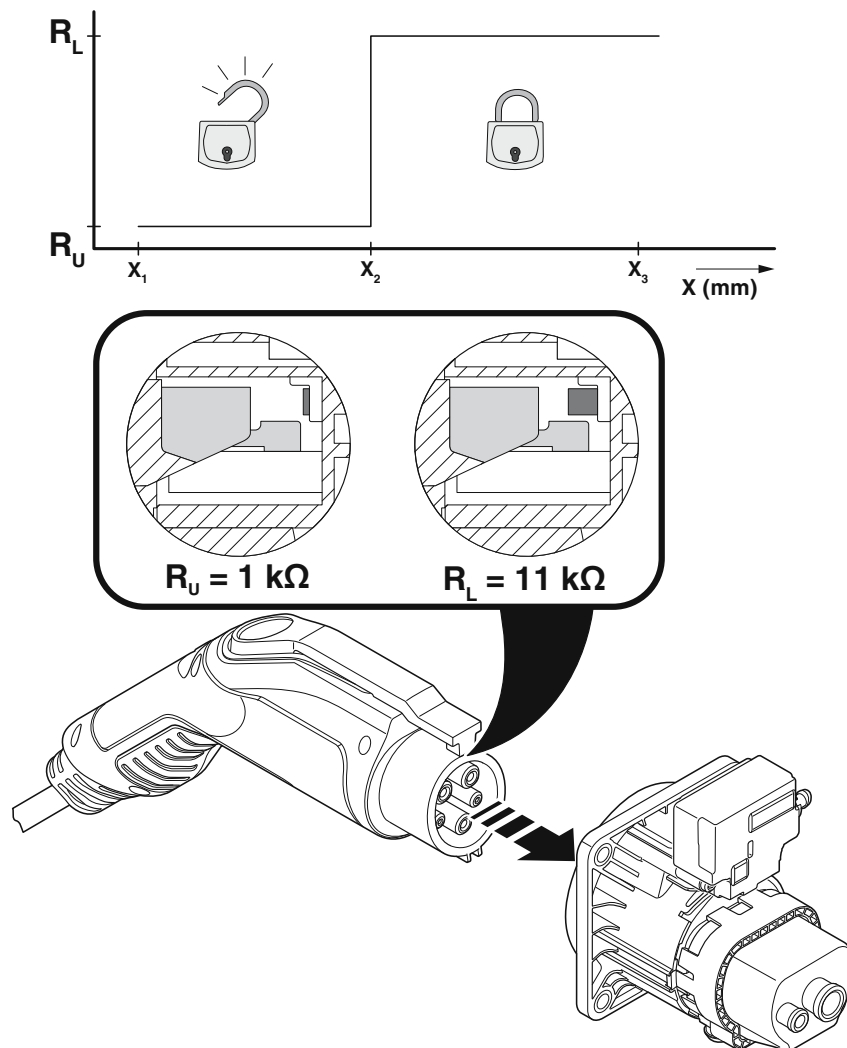


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Schematic diagram



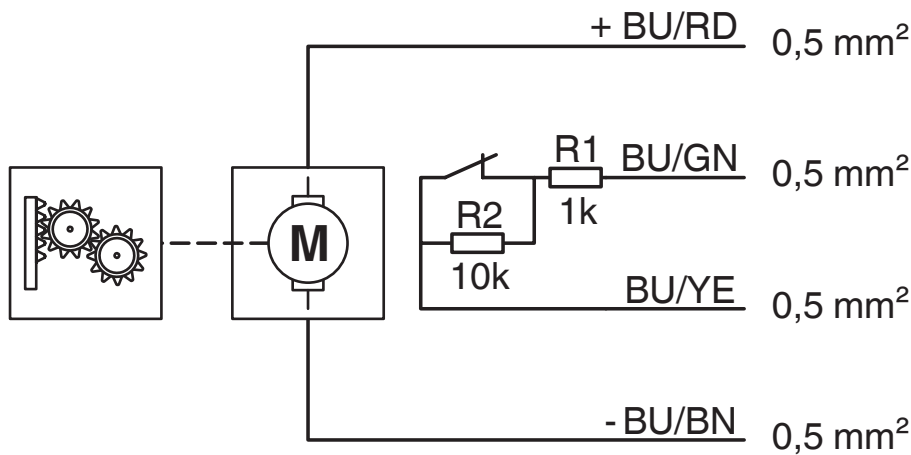
Detection for Vehicle Connector

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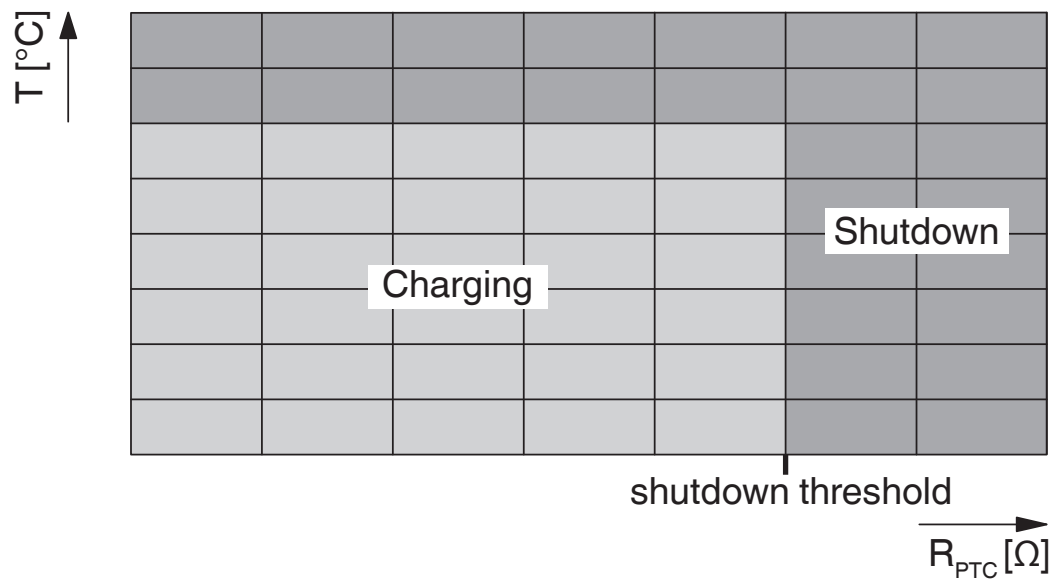
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Schematic diagram



Block diagram of the locking actuator

Schematic diagram

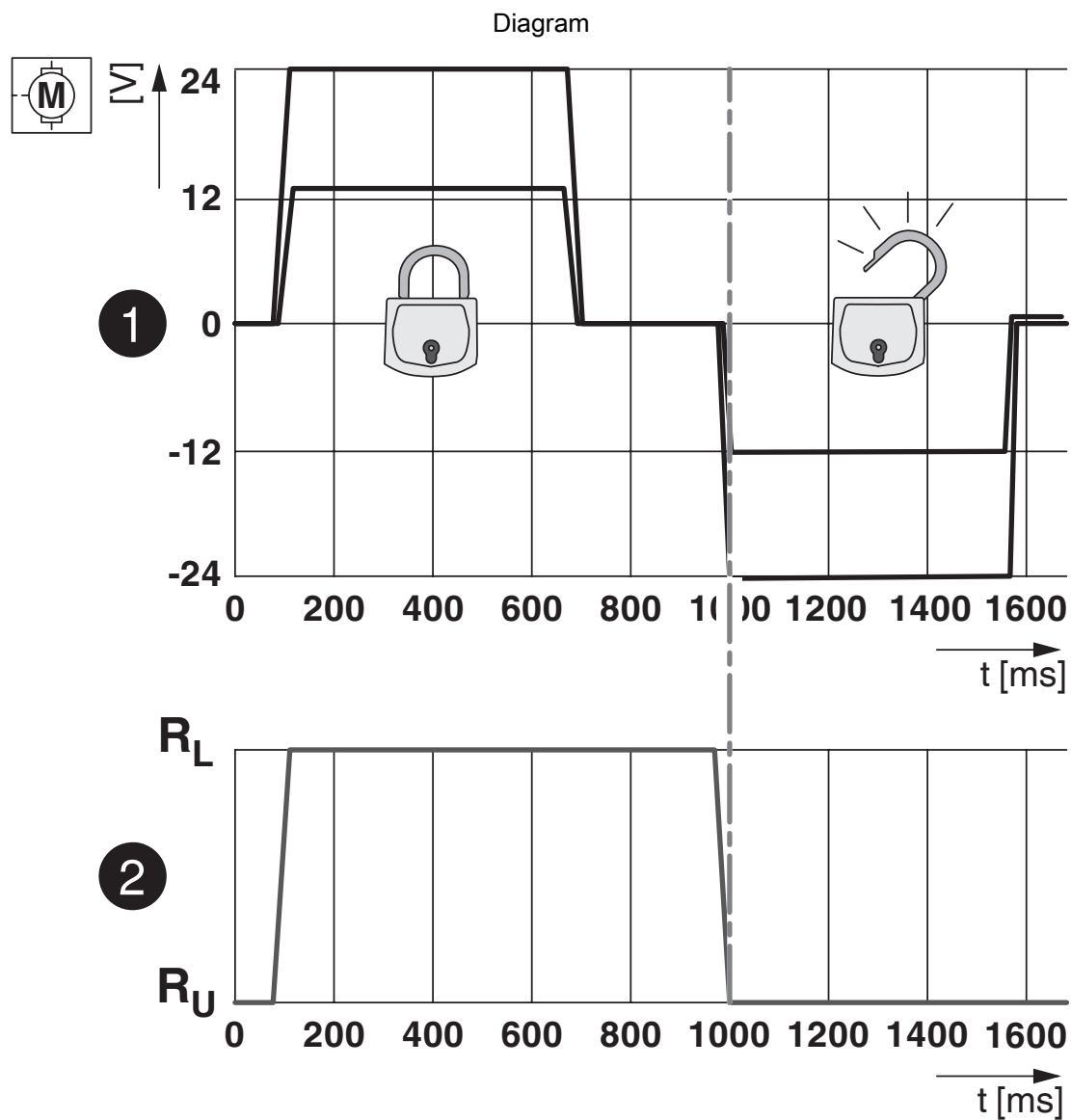


Temperature sensor technology resistance range at AC contacts

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Locking states of the locking actuator

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## Classifications

### ECLASS

ECLASS-13.0	27144706
ECLASS-15.0	27144706

### ETIM

ETIM 9.0	EC002898
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### UNSPSC

UNSPSC 21.0	39121800
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)(CAS: 573-58-0)
	Lead(CAS: 7439-92-1)
	Bis(2-(2-methoxyethoxy)ethyl)ether(CAS: n/a)
SCIP	186e7108-9a7a-48ea-9805-b37d3b4954c3

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