

# RLC-PSI-641-xxx-0

## Connection Cable for Railway Line Gate Driver Families

**PRELIMINARY**

### Product Highlights

#### Highly Integrated, Compact Footprint

- Ready-to-use connection cable for Railway Line gate driver families (e.g. 1SP0635V2A0D)
- 6-pin to 4-pin connection from DC/DC-converter to driver power supply
- Mechanical locking
- Mechanical polarity inversion protection
- Supports multiple mating cycles
- -40 °C to +100 °C operating ambient temperature

#### Applications

- Railway inverters
- Industrial drives
- Other industrial applications

#### Description

This data sheet describes the connection cable to the DC/DC-converter of the Railway Line gate driver families 1SP0635V2A0D. This cable is available in a 6-pin to 4-pin configuration.

For detailed information about 1SP0635V2A0D gate drivers, please refer to the related datasheet.

### Pinning of Cable

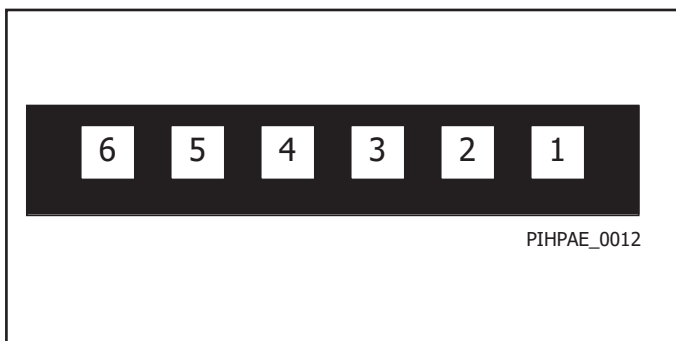


Figure 1. Pinning of 6-pin-Connector, top view, cable side.

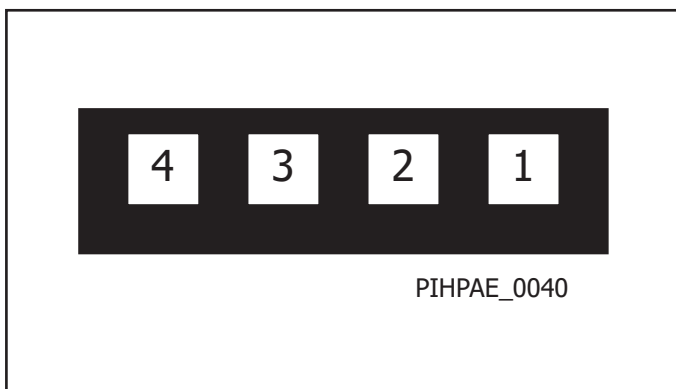


Figure 2. Pinning of 4-pin-Connector, top view, cable side.

### Connectors

#### 4-Pin Connector

Erni 504898 (Female, 4pole, MicroBridge, 1.27 mm pitch, side locking, polarity protection)

#### 6-Pin Connector

Erni 505018 (Female, 6pole, MicroBridge, 1.27 mm pitch, side locking, polarity protection)

#### Crimps

0.35 mm<sup>2</sup>, AWG 22

### Product Dimensions

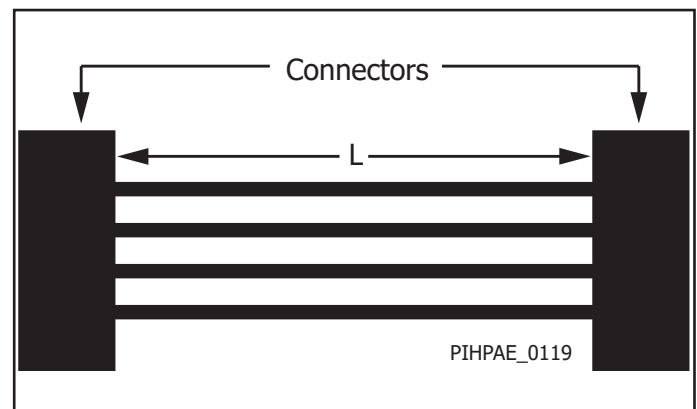


Figure 3. Definition of cable length.

**Absolute Maximum Ratings**

Parameter	Symbol	Conditions	Min	Max	Units
<b>Absolute Maximum Ratings<sup>1</sup></b>					
Storage temperature	$T_{st}$		-40	85	°C
Operating ambient temperature <sup>2</sup>	$T_A$		-40	100	°C
Relative humidity	$H_r$	No condensation		93	%
Peak voltages between wires in cable	$V_{max}$		-200	200	V

**Characteristics**

Parameter	Symbol	Conditions $T_A = -40\text{ °C to }100\text{ °C}$	Min	Typ	Max	Units
<b>Wire</b>						
Wire Cross Section	$D_{Cable}$			22		AWG
Working voltage	$V_{Work}$			30		V

NOTES:

1. Stresses beyond those listed under absolute maximum ratings may cause permanent damage to the device.
2. The maximum ambient temperature of the final product is 85°C. Part of the cable may however be exposed to higher temperatures due to self-heating of the product.

**Standards**

RLC-PSI-641-xxx-0 fulfills the following standards in combination with 1SP0635V2A0D products:

- IEC 61373:2010, Railway applications - Rolling stock equipment - Shock and vibration tests, class 1B
- IEC 60721-3-5, Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities, 5M2
- Plastic materials compliant to EN45545-2, HL3 (Hazard Level 3)

**Routine Test**

The following tests are performed before delivery:

- Continuity test
- Minimum impedance test to neighbor wires
- IPC/sWHMA-A-620, class 2

**Transportation and Storage Conditions**

For transportation and storage conditions refer to Power Integrations' Application Note AN-1501.

**RoHS Statement**

We hereby confirm that the product supplied does not contain any of the restricted substances according Article 4 of the RoHS Directive 2011/65/EU in excess of the maximum concentration values tolerated by weight in any of their homogeneous materials.

Additionally, the product complies with RoHS Directive 2015/863/EU (known as RoHS 3) from 31 March 2015, which amends Annex II of Directive 2011/65/EU.

**Product details**

Part Number	Wire Length (L) see Figure 3		
	Min	Typ	Max
RLC-PSI-641-050-0	495 mm	500 mm	505 mm

Revision	Notes	Date
A	Preliminary Datasheet	05/23

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