

Control Solutions

LÜTZE Converters

LCIS Signal Converters Microcompact Converters LCON Converters



Efficiency in Automation Cable • Connectivity • Cabinet • Control

.in

Welcome to LÜTZE



Cabinet Solutions

Cable Solutions



Control Solutions



Transportation Solutions



LÜTZE - Efficiency in Automation

A tradition in automation for over 60 years, with countless pioneering achievements and patents. the LUETZE INTERNATIONAL Group is today one of the leading companies in the automation industry. LÜTZE supplies very efficient electronic and electrotechnical components, system solutions for automation and high tech for rail engineering.

The comprehensive and coordinated supply program ranges from high flexing cables and cable assemblies, to energy efficient AirSTREAM wiring systems for control cabinets through to intelligent Industry 4.0 solutions from the fields of interface technology, current monitoring, power supply and Ethernet infrastructure.

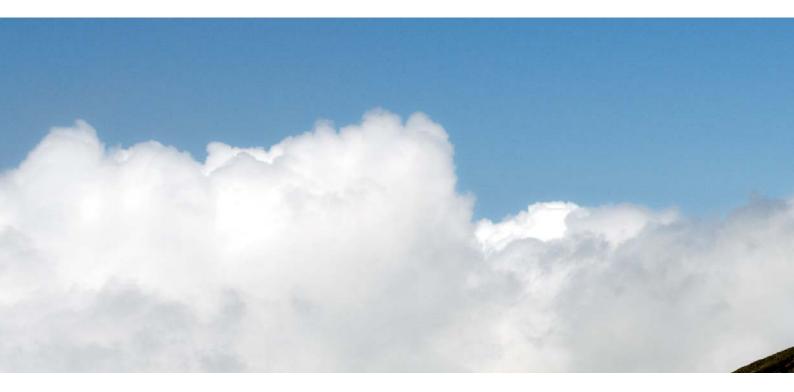
The LUETZE INTERNATIONAL Group has multiple locations throughout Europe, Asia and the USA and numerous distribution partners across the world to provide global product availability and service to our customers in all markets.

LÜTZE is one of the leading suppliers in the rail technology field. LÜTZE Transportation solutions are installed in numerous locomotives, city rail and underground rail systems, as well as high-speed trains across the world.





Business Management: Sustainable and forw



The future is blue

Sustainable enterprise means thinking and planning ahead, understanding and embedding the belief that long lasting success is more important than short-term profit maximisation.

This is an attitude that has existed within LÜTZE for quite some time. Economic and environmental responsibilities complement each other well and are reflected in the sustainable management and product policy - and from now in the *Sky***BLUE** campaign.

We manufacture our products in a resourceful and energy-conscious manner. We use long lasting, environmentally-friendly materials. And our products, in turn, help our customers save energy and resources.

Good for everyone: for us, for the environment, for our customers a win-win-win situation.



ard-looking

"The competitiveness of our industry and of its suppliers depends quite substantially on how we succeed in developing practical results. The results that we produce together today, are our competitive advantages in the future."

Udo LÜTZE, Member of the Executive Committee of the Green Carbody Innovation Alliance



Goods with real value

The value of a product or a solution from LÜTZE is determined by its sustainable qualities as well. Every innovation is only as successful in the future if it has a long-term positive effect. Therefore, we provide long lasting as well as highly efficient components.

We are incorporating the necessary knowledge and manufacturing competence in numerous joint projects with the objective of improving energy efficiency and sustainable technologies and industries. Thus, LÜTZE provides answers and demonstrates how to handle resources responsibly, with our environment and our future in mind.





RoHS



What moves us: Quality, innovation, eff



The people at LÜTZE

Quality, innovation and efficiency begin with people. We would not be where we are today without our highly qualified and motivated employees. An uncompromising focus on quality, nearly 60 years of experience in automation technology and of course a common desire for greater innovation and efficiency – that's what makes LÜTZE so successful. The people at LÜTZE are familiar with automation applications and technologies across all disciplines, as they are involved with our broad range of products comprising four product areas Cable, Connectivity, Cabinet and Control.



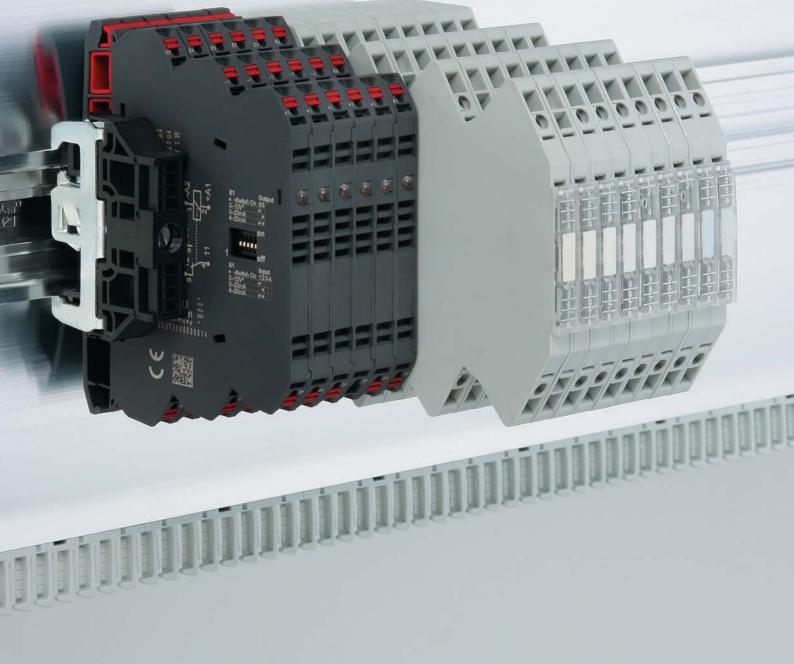
iciency

A prime example of competence in cables: In addition to manufacturing expertise, our cable assembly specialists are familiar with all cable types and offer genuine added value. The decisive advantage: We're cable experts – since 1958.









LUTZE Converters · Product Overview

LCIS



Analog/analog converter passive transformers



Analog/analog converter, active transformers

Page 16-20



Analog/analog converter, manual/ auto signal converter



Analog/analog converter, signal converter



Potential/analog

converter, active



Temperature/analog converter, temperature converter

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transformers Page 25



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Microcompact



Current/analog converter, signal converter

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LCON



converter, interface

converter

Page 38



Analog/limit value converter, interface switch, interface converter

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Temperature/limit switch, interface converter

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Analog/analog

converter

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splitter, interface

converter

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Accessories





Labeling system **USB** Service Cable

converter

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combs - accessories LCIS



combs - accessories microcompact

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Analog/analog / limit value switch, interface

LUTZE Converters · Basics

General description of converters

Converters are needed in a wide variety of areas in industry in order to perform the following basic tasks:

- 1. Signal conversion
- 2. Signal amplification
- 3. Signal isolation
- 4. Signal filtering

A converter is normally constructed as shown in the following schematic:

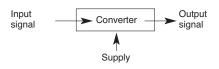


Figure : Schematic of a converter

Input signals may be:

- Voltages
- Currents
- Frequencies
- Other adapted physical quantities (e.g. pressure, temperature, humidity, PH values, etc.)

Output signals may be:

- Voltages
- Currents
- Frequencies
- Signals for field bus interfaces

A further distinction is made between analog and digital signals, which may be both input and output signals.

The input signals must be converted from the required output signals. In this context conversion means:

- Actual conversion of signals (e.g. from voltage into current)
- Amplification of signals (e.g. from low-level signals to standard signals)
- Electrical isolation and where appropriate amplification of signals (e.g. of analogsignals)
- Filtering of interference (e.g. of HF interference from analog signals)

The supply feeds power to the converter. It is required as additional auxiliary power to implement active isolation.

Transmitters

These kinds of converter transform input signals into other physical quantities.

The following lists some examples:

Input signal	Output signal
Voltage	Current/Frequency
Current	Voltage/Frequency
Frequency	Voltage/Current

Various input signals in analog or digital form, as are outputted by puls generators, thermocouples or resistance pick-ups for example, are converted in the transmitters into the desired standardised outputs.

Standard signals (unit signals)

Unit signals are standardised electrical signals in process automation.

Commonly used unit signals include current signals to DIN IEC 60381-1:

- 0 to 20 mA
- 4 mA to 20 mA (live zero)

and voltage signals to DIN IEC 60381-2:

•2 V to 10 V (live zero)

Live-zero signals are used in almost all industrial applications. If the start of the measuring range is assigned an electrical signal other than 0 (zero), a wire break monitor can be implemented. The non-zero initial signal is also termed "live zero". A 0 mA signal is thus always a reliable indicator of a fault.

Current signals are preferred over voltage signals because the current signal is immune to electromagnetic interference (switch-on of adjacent consumers) and voltage losses due to the line resistance.

The maximum length of the signal line is limited only by the maximum load impedance which can be operated by the current source. The 4 mA... 20 mA unit of current signal offers the additional major advantage that the signal circuit is continuously powered. That power can be used by transmitters for their own supply. In this case the PLC must power the signal circuit (passive sensor). An active sensor needs an external power supply for its own demand.

General technical information

Input protection

Describes the protection measures taken and indicates the maximum possible input signal.

Suppressor diodes are mostly used to limit voltage and PTC resistors to limit current.

Input resistance

To ensure low load on the input signal, current inputs are always executed as low-resistance and voltage inputs as highresistance:

I: <100 Ω; U: > 10kΩ

Voltage drop

This relates to passive converters. The voltage drop is dependent on the load impedance and on the device's own power demand. For the applicable values refer to the relevant data sheets.

True RMS measurement

The effective value indicates the value at which the same electrical energy is implemented on an ohmic converter with an equivalent variable. The RMS value depends on the peak value and on the curve form. Lütze current or voltage converters offer true RMS measurement as standard, so non-sinusoidal input quantities can also be correctly measured.

Zero/Span

On conventional devices a zero/span balance must be carried out. This is done by means of two separate potentiometers. Vibration, temperature and other influences alter the set values, so periodically a recalibration is required. Zero-balancing adjusts the zero setting of the output relative to the input. The output signal is amplified relative to the input signal by way

of the span balance. This balancing must also be carried out

when the range is changed, such as by DIP switches.

Lütze converters feature automatic, non-temperature-dependent balancing. Recalibration is not necessary, even in the event of a range change.

Load impedance

The load impedance provides information about the load capacity of the output.

^{•0} to 10 V

LUTZE Converters · Basics

The values for current output lie in a range of 400 Ω and 700 $\Omega,$ for voltage outputs they are 2 k Ω or higher.

Wire break and short-circuit

As already described under "Standard signals", a wire break can be detected by way of a live-zero signal. In monitoring of connected sensors (such as temperature), monitoring for wire break or short-circuit is effected by an internal electronics unit. Such faults can be indicated in different ways:

- LED
- · Defined output signal
- Separate output

Linearity error

Linearity error refers to a deviation from the ideal transmission accuracy without zero/span errors. The figure is given as a percentage.

Accuracy (FSR)

The value indicates the deviation of the output signal relative to the input signal. The figure is always given as a percentage referred to the maximum signal output value, e.g. 10V (full scale range) at room temperature (23°C). The linearity error is built-in to this value.

Temperature coefficient

Describes the deviating accuracy dependent on the ambient temperature. The figure is normally given in ppm/K (parts per million/Kelvin).

Example: 30 ppm/K corresponds to 0.003 %/K

Transmission error

The total deviation of the output signal from the input signal is the sum of the accuracy + temperature coefficient.

Transfer frequency

DC signals are normally transmitted. Signal changes demand a dynamic response however. The transmission frequency indicates the frequency up to which alternating current or voltage can also be transmitted.

Rise time (10% / 90 %)

The response time of the output signal to a change in the input signal from 10% to 90% of the nominal value.

Settling time

The time taken by the output to reach a value with an inaccuracy of 1%. This value already takes account of the rise time.

Ambient-temperature range

The values specified by Lütze relate to a 100% duty cycle. Normally condensation is ruled out. For devices which allow condensation, the fact will be indicated on the "Relative humidity" line or it will be stipulated that the device in question conforms to EN 50155.

Basics of transmission interference

Interference on signal transmission

Error-free, undisturbed, secure signal transmission is vital to the reliable control of processes. Analog signals transmitted between the control side (PLC or instrumentation and control system) and the sensors/actuators are almost always subject to

external interference. There is considerable potential for interference especially given the rough industrial environment and long transmission distances.

Electromagnetic interference

The best known and most widespread interference is that caused by capacitive and inductive effects. In these also cross-cable coupling processes overvoltages may occur which, for example, can destroy input/output modules of a PLC or an industrial computer. To protect those expensive downstream components, it is advisable to use A/A modules. They ensure a defined transition from peripherals and evaluation electronics.

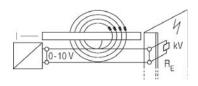
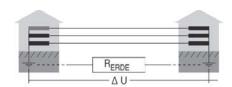


Figure: Electromagnetic interference

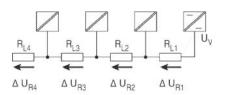
Potential differences

Potential differences occur as a result of earth or chassis loops. If signal transmitters and receivers refer to the earth potential - i.e. the earth is used as a return conductor in signal transmission - this is known as an earth loop. As the distance between the transmitter and receiver increases, the earth resistance increases as the line gets longer. As a result voltage differences of as much as 200 V can occur.



Potential differences due to earth loops

In sequenced measuring circuits potential differences occur due to earth loops. Interconnecting multiple measuring circuits increases the reference voltage with possibly fatal consequences for the data transfer.



Potential differences due to chassis loops

A/A modules are a simple means of bypassing this interference. They electrically isolate the signal input and output, decoupling the measuring circuits. As well as isolating the signal, this also filters out interference. The signals are amplified for longer transmission distances and adapted to the desired output quantities for the evaluation electronics. For optimum functional reliability, as well as the converters shielded cable with twistedpair wires should additionally be used.

Isolation techniques

There are various way of isolating potential.

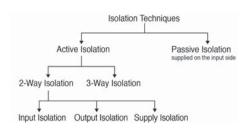


Diagram: Isolation techniques

Active isolation

An additional supply voltage is required for all kinds of active isolation.

3-way disconnection

A characteristic feature of 3-way isolation is complete insulation of all the components from each other, so protecting against mutual interference.

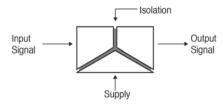


Diagram: 3-way isolation

LUTZE Converters · Basics

The input, output and supply - and thus also all equipment connected to them - are mutually electrically isolated. In this way the input and output circuits are decoupled from the supply and the input and output circuits are decoupled from each other. The input signals must be active signals. The output signal is an amplified filtered signal.

2-way isolation: Input isolation

In this form of isolation the input is electrical isolated from the output and the supply, which are both connected to the same potential.

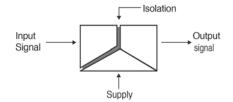


Figure: 2-way input isolation

By this isolation method equipment connected to the output can be effectively protected against interference. The input signals must be active signals. The output signal is an amplified filtered signal.

2-way isolation: Output isolation

In this form of isolation the output is electrically isolated from the input and the supply, which are both connected to the same potential.

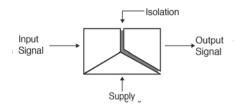


Figure: 2-way output isolation

By this isolation method, equipment connected to the input can be effectively protected against interference. The input signals must be active signals. The output signal is an amplified filtered signal.

2-way isolation: Supply isolation

In this form of isolation an additional supply is provided at the input. This auxiliary power is used to operate passive sensors connected on the input side. The structure of this isolation method is identical to that of input isolation. The supply and output are again connected to the same potential.

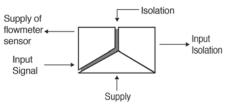


Figure: 2-way supply isolation

By this isolation method, equipment connected to the output can be effectively protected against interference and the auxiliary power described above is additionally provided. The output signal is an amplified filtered signal.

Passive isolation

In contrast to active isolation, no additional supply voltage is required for passive isolation. The power required for electrical isolation and signal transmission is drawn from the input circuit. A minor voltage drop at the input of the isolation module is used for this. The input measurement signal is burdened with this voltage drop. The responding current for the function of the modules is just a few Amperes. The resultant transmission error is negligible. By this isolation method no signal amplification is possible. Also, these isolation modules do not operation reaction-free. This means that every load on the output places an equal load on the input signal. Isolation modules without auxiliary power transmit unipolar current signals at a ratio of 1:1. The possible load impedance voltage at the output is lower than the load capacity of the input signal by the amount of voltage drop at the input in the event of an output short-circuit (own voltage demand).

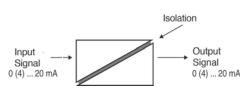


Figure: Passive isolation, supply input

By this isolation method, earth loops can be isolated and signals filtered for example. The input signals must be active current signals. The output signal is likewise a current signal.

FDT technology, what is it?

FDT standardizes the communication and configuration interface between all field devices and host systems. FDT provides a common environment for accessing the devices' most sophisticated features. Any device can be configured, operated, and maintained through the standardized user interface – regardless of supplier, type or communication protocol.

The FDT interface – Integration standard

The FDT interface is the specification describing the standardized data exchange between devices and control system or engineering or asset management tools.

DTM – Device driver

DTMs are classified into two categories:

- · Device DTMs which connect to the field device configuration components
- · CommDTMs which connect to the software communication components.

The DTM provides a unified structure for accessing device parameters, configuring and operating the devices, and diagnosing problems. DTMs can range from a simple Graphical User Interface for setting device parameters to a highly sophisticated application capable of performing complex real-time calculations for diagnosis and maintenance purposes.

DeviceDTM

Provided by the device manufacturer Represents the whole logic and parameters of a device Standardized interface to the FDT Frame Application Can be used in any FDT Frame Application DTM Style Guide

CommDTM

Represents communication components like PC communication cards, couplers, gateways, remote I/Os, and linking devices.

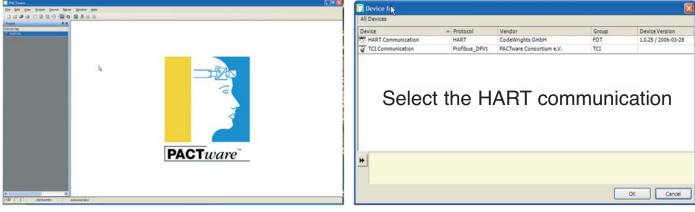
FDT Frame Application – Host system

The Frame Application is a software program that implements Device DTMs and CommDTMs. The Frame Application provides:

- Common environment
- User Management
- DTM Management
- Data Management
- Network Configuration
- Navigation

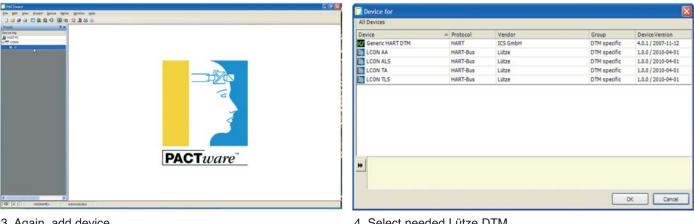


How to implement Lütze DTM's into **PACT**ware



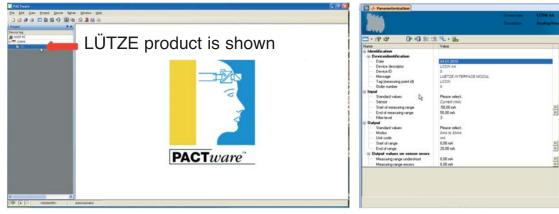
1. Add device

2. Select the communication channel



3. Again, add device

4. Select needed Lütze DTM



5. Device is displayed

6. Double clic on the device open the list of parameter

Identification Type Luetze device des Article number Unchangeable Hardware rev Software revisi

Message User-defined m

Tag (Measuring point designation) User-defined designation, maximum 8 character

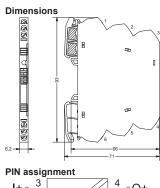
OK Cancel Acely

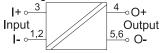
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Interface Technology · LCIS analog/analog converter, passive

Input: 4–20 mA Output: 4–20 mA Insulation: 1.5 kV, 2-way isolation, passive converter







Description	Part	-No.		Туре	PU
Screw terminal					
Rated voltage U _N	passive 7505	528.0000	A *	LCIS-P1K-0528-62-S	1
Push-In					
Rated voltage U _N	passive 7515	528.0000	S*	LCIS-P1K-1528-62-PI	1
Input	750528.000	0		751528.0000	
Input signal			4-20	0 mA	
Galvanic isolation I/O		2-v	vav i	isolation	
Output					
Output signal			4–20	0 mA	
Max. load impedance at I-output				$\Omega(R_{\rm B})$	
Output current				_	
Residual ripple	<	5 mV _{off} (loa	ad in	npedance 100 Ω)	
Operating data		env		1 ,	
Accuracy		0.1 %	FSI	R @ 23 °C	
Linearity error				-	
Build-up time (Accuracy 1%)	6 ms (fo	r working r	esist	ance 500 Ω and 20 mA)	
General	00 (10		2.51		
Rated voltage U _N			pas	sive	
Status indication			puo	_	
nput/output protection		Suppres	ssor	diode (33 V)	
Burden error	<0.06 % from			ue / 100 Ω working resistance	
Temperature drift /K	-0.00 /01/01			m / K FSR	
Temperature drift (working resistan-					
ce >600R)		<100) ppr	n / K FSR	
Temperature drift (working resistan- ce >600R)		<150		n / K FSR	
Insulation voltage input / output				kV _{eff}	
Housing material				V-0, NFF I2, F2)	
Color of the housing				basalt grey	
Mounting	DI	N rail moun		e TS35 (EN 60715)	
Protection class				20	
Installation position				ny	
Connection type	Screwed terminal sing mm ² –2.5 mm ² / AWG 20 ded wire with ferrule 0.25 / AWG 20–1)–14 fine sti mm ² –1.5 m 16	ran- 1m ²	ferrule 0.25 mm ² –1.5 mm ² / AWG 20– 16	
Operation temperature range				+60 °C	
Storage temperature range				+80 °C	
Dimensions (w × h × d)				× 71.0 mm	
Weight				kg/piece	
Approvals				145), DNV GL	
Standards		EN	1 60	947-5-1	
Failure Rate Prediction (MTBF)					
Standards		sion: EN/IÉ	C 6	teference conditions for failure rates and 1709 Failure Rates of Components – Ex es: SN 29500	
Failure rate at +45 °C			12	7 fit	
Failure rate at +45 °C		7	7892	161 h	
	1 fit equa	als one failu	ire p	per 10 ⁹ component hours	
	The indicated temper	rature is the	e me	an component ambient temperature.	
Comments	The results are valid under	er following ie dust leve	con Is ar	ditions: Automotive environment or indus nd harmful substances Continuous opera	
		tion 8	760	h per year	
Commente					

Comments

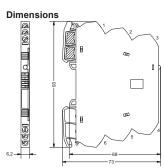
When connected this passive isolator has a non-reactive transmission, so that the current in the input circuit is not interrupted for an output interruption.

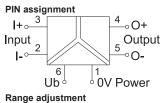


Interface Technology · LCIS analog/analog converter

Input: 0–10 V / 0–20 mA / 4–20 mA Output: 0–10 kHz Insulation: 2.5 kV, 3-way isolation







Range	adjustmer
c	1

ige aujustillellt				
S1	Ir	۱p	u	t
●→Switch On	1	2	3	4
0–10 V*	•			
0–20 mA		•		
4–20 mA	•	•		

S1	С)u	tput
●→Switch On	5	6	Ľ
0–50 Hz*			
0–100 Hz	•		1
0–1000 Hz		•	
0–10000 Hz	۲	۲	

Description		Part-No.		Туре	PU
Screw terminal					
Rated voltage U _N	AC/DC 24 V	750511.0000	R*	LCIS-WAF-0511-62-S	1
Push-In					
Rated voltage U _N	AC/DC 24 V	751511.0000	S*	LCIS-WAF-1511-62-PI	1
Input	7508	511.0000		751511.0000	
Input signal	0–10	V, 0–20 mA, 4–20	mA,	adjustable via DIP switch S1	
Input resistance	>3	00 kΩ @ 0–10 V.	<100	Ω @ 0–20 mA, 4–20 mA	
Galvanic isolation I/O		<u> </u>		solation	
Zero /Span				comparison	
Output					
Output signal	0–50 Hz. 0-	-100 Hz. 0–1 kHz.	0-1	0 kHz adjustable via DIP switch S1	
Residual ripple	, .	,,		_	
Operating data					
Accuracy		01%	FSF	R @ 23 °C	
Linearity error				% FSR	
Build-up time (Accuracy 1%)		0	.00 /	_	
Critical frequency		30	Hz	– @ 3 dB	
Temperature coefficient				m / K FSR	
General		<10U	, hhi		
Rated voltage U _N		۸		C 24 V	
0 11				/ DC 18.0–31.2 V	
Operation voltage range					
Status indication	Origoniality			green	
Input/output protection	Overvoltag			TC fuse, short circuit-proof output	
Rise time (10 - 90%)		treque		-dependent	
Insulation voltage input / output		54.6.6.4.4		kV _{eff}	
Housing material		,		V-0, NFF I2, F2)	
Color of the housing				basalt grey	
Mounting		DIN rail moun		e TS35 (EN 60715)	
Protection class				20	
Installation position				ny 2. 2. 2.	
Connection type	mm ² –2.5 mm ² / A ded wire with ferru	nal single wire 0.25 \WG 20–14 fine str \le 0.25 mm ² –1.5 m /G 20–16	ran-	Push-In single wire 0.25 mm ² –2.5 mm ² / AWG 20–14 fine stranded wire with ferrule 0.25 mm ² –1.5 mm ² / AWG 20– 16	
Operation temperature range				+60 °C	
Storage temperature range				+85 °C	
Dimensions (w × h × d)		6.2 × 9	93.0	× 73.0 mm	
Weight		0.0)29 k	kg/piece	
Approvals		cULus (E	135	145), DNV GL	
Standards		EN	00	947-5-1	
Failure Rate Prediction (MTBF)					
Standards		conversion: EN/IE	C 6	eference conditions for failure rates and 1709 Failure Rates of Components – Ex- es: SN 29500	
Failure rate at +45 °C		pectod		7 fit	
Failure rate at +45 °C		1		305 h	
	1			per 10 ⁹ component hours	
				ean component ambient temperature.	
Comments				ditions: Automotive environment or indus-	
Commento		extreme dust leve	ls ar	nd harmful substances Continuous opera- h per year	



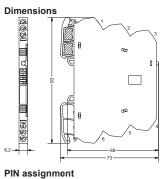


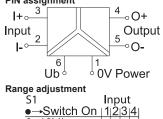
- A Available with a leadR Available on request Available with a lead time

Interface Technology · LCIS analog/analog converter

Input: 0–10 V / 0–20 mA / 4–20 mA Output: 0–10 V / 0–20 mA / 4–20 mA Insulation: 2.5 kV, 3-way isolation







0–10V*	•		
0–20mA		•	
4–20mA	•	•	

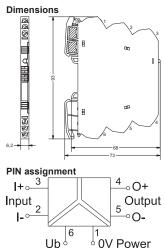
S1	С)u	tput
●→Switch On	5	6	i.
0–10V*	٠		
0–20mA		۰	
4–20mA	•	•	

	Part-No.		Туре	PU	
AC/DC 24 V	750539.0000	A *	LCIS-WAA-0539-62-S	1	
AC/DC 24 V	751539.0000	S*	LCIS-WAA-1539-62-PI	1	
			751539.0000		
0–10	V, 0–20 mA, 4–20) mA	adjustable via DIP switch S1		
>3	600 kΩ @ 0–10 V	, <10	0 Ω @ 0–20 mA, 4–20 mA		
	3.	way	isolation		
	Produ	iction	comparison		
	,				
		<u> </u>			
	max.	5 m/	A @ 0–10 V		
	< 16 V @) 0– 2	0 mA, 4–20 mA		
		<20 n	nVeff _{eff}		
	0.1 % FSR @ 23 °C				
17 ms					
30 Hz @ 3 dB					
<150 ppm / K FSR					
	AC 19.2–20				
			5		
Overvolta	ge, current input v		· · ·		
			• •		
	DIN rail mou		· · · · · · · · · · · · · · · · · · ·		
			· · · · · · · · · · · · · · · · · · ·	2.	
mm ² –2.5 mm ² / A ded wire with ferru	AWG 20–14 fine s ile 0.25 mm ² –1.5	tran-	AWG 20–14 fine stranded wire with		
	-25	5°C.	+60 °C		
	-40	°С.	+80 °C		
	6.2 ×	93.0	× 73.0 mm		
			01		
	E	N 60	947-5-1		
	conversion: EN/I	ÉC 6	1709 Failure Rates of Components – E		
		53	1 fit		
		1881	921 h		
1	fit equals one fai	lure p	per 10 ⁹ component hours		
The results are va	lid under followin	g con	ditions: Automotive environment or indu		
	AC/DC 24 V 750 0-10 >3	AC/DC 24 V 750539.0000 AC/DC 24 V 751539.0000 0-10 V, 0-20 mA, 4-20 >300 kΩ @ 0-10 V >300 kΩ @ 0-10 V 3 Produ 3 Produ 3 Q 10 V, 0-20 mA, 4-20 3 Produ adjustab 500 Ω @ 2 max. <16 V @	AC/DC 24 V750539.0000 A^* AC/DC 24 V751539.0000 S^* 750539.0000 0^{-10} V, 0^{-20} mA, 4^{-20} mA, > 300 k Ω @ 0^{-10} V, <100 3^{-way} Productionadjustable via 500Ω @ 0^{-20} $2 k\Omega$ @ $0 20 \Omega$ $2 k\Omega$ @ $0 -20$ $2 k\Omega$ @ $0 -20$ 	AC/DC 24 V 750539.0000 A* LCIS-WAA-0539-62-S AC/DC 24 V 751539.0000 S* LCIS-WAA-1539-62-PI 750539.0000 751539.0000 0-10 V, 0-20 mA, 4-20 mA, adjustable via DIP switch S1 >300 k $\Omega \oplus 0$ -10 V, <100 $\Omega \oplus 0$ -20 mA, 4-20 mA 3-way isolation Production comparison adjustable via DIP switch S1 500 $\Omega \oplus 0$ -20 mA, 4-20 mA 2 k $\Omega \oplus 0$ -10 V max. 5 mA $\oplus 0$ -10 V <pre></pre>	



Input: 0–10 V . Output: 0–10 V / 0–20 mA / 4–20 mA Insulation: 2.5 kV, 3-way isolation



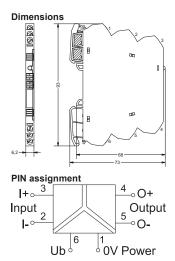


Description		Part-No.		Туре		PU
Screw terminal						
Output signal	0 – 10 V	750530.0000		LCIS-WAA-0530-62-S		1
	0–20 mA	750531.0000	R*	LCIS-WAA-0531-62-S		1
	4–20 mA	750532.0000	R*	LCIS-WAA-0532-62-S		1
Push-In						
Output signal	0 – 10 V	751530.0000	S*	LCIS-WAA-1530-62-P	l	1
	0–20 mA	751531.0000	S*	LCIS-WAA-1531-62-P	l .	1
	4–20 mA	751532.0000	S*	LCIS-WAA-1532-62-P		1
Input						
Input signal			0-	10 V		
Galvanic isolation I/O		3-	wav	isolation		
Zero /Span				comparison		
Output						
Output signal	0 – 10 V		0-2	0 mA	4–20 mA	
Residual ripple	0 10 0			nVeff _{eff}	1 20 110 1	
Max. load impedance at I-output	_		-201	500 Ω		
Operating data	_			000 32		
Accuracy		0.1.0	% E9	R @ 23 °C		
Linearity error				% FSR		
Build-up time (Accuracy 1%)				ms		
Critical frequency						
	30 Hz @ 3 dB <150 ppm / K FSR					
Temperature coefficient		<15	o pp	M/KFSK		
General				0.0411		
Rated voltage U _N				C 24 V		
Operation voltage range		AC 19.2–20		/ DC 18.0–31.2 V		
Status indication				green	• · · ·	
Input/output protection	Overvoltag	e, current input v		PTC fuse, short circuit-pr	oof output	
Rise time (10 - 90%)				ms		
Insulation voltage input / output				kV _{eff}		
Housing material				V-0, NFF I2, F2)		
Color of the housing				basalt grey		
Mounting		DIN rail mou		e TS35 (EN 60715)		
Protection class				P20		
Installation position				any		
Connection type	mm ² –2.5 mm ² / A ded wire with ferrul		tran-	Push-In single wire 0.2 AWG 20–14 fine stra ferrule 0.25 mm ² –1.5 16	anded wire with	
Operation temperature range		-25	5°C.	+60 °C		
Storage temperature range		-40	°C .	+80 °C		
Dimensions (w × h × d)		6.2 ×	93.0) × 73.0 mm		
Weight		0	.029	kg/piece		
Approvals				5145), DNV GL		
Standards	EN 60947-5-1					
Failure Rate Prediction (MTBF)						
Standards		conversion: EN/I	ÉC 6	Reference conditions for 1709 Failure Rates of C es: SN 29500		
Failure rate at +45 °C			50)4 fit		
Failure rate at +45 °C			1983	3891 h		
	1	fit equals one fai	lure	per 10 ⁹ component hour	S	
				ean component ambient		
Comments	The results are val	id under following	g con	ditions: Automotive envi nd harmful substances C	ronment or indus-	



A Available with a leadR Available on request Available with a lead time Input: 0–20 mA Output: 0–10 V / 0–20 mA / 4–20 mA Insulation: 2.5 kV, 3-way isolation



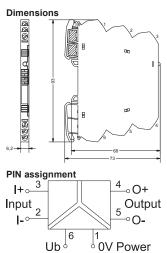


Description		Part-No.		Туре	PU
Screw terminal					
Output signal	0 – 10 V	750533.0000	R*	LCIS-WAA-0533-62-S	1
	0–20 mA	750534.0000	R*	LCIS-WAA-0534-62-S	1
	4–20 mA	750535.0000	R*	LCIS-WAA-0535-62-S	1
Push-In					
Output signal	0 – 10 V	751533.0000	S*	LCIS-WAA-1533-62-PI	1
	0–20 mA	751534.0000	S*	LCIS-WAA-1534-62-PI	1
	4–20 mA	751535.0000	S*	LCIS-WAA-1535-62-PI	1
Input					
Input signal			0.0	0 mA	
Galvanic isolation I/O		2			
				isolation	
Zero /Span		Produ	ICLION	comparison	
Output	0 401/		0.0	0.00.00.00.00.00.00.00.00.00.00.00.00.0	
Output signal	0 – 10 V			0 mA 4–20 mA	
Residual ripple			<20 r	nVeff _{eff}	
Max. load impedance at I-output	-			500 Ω	
Operating data					
Accuracy				R @ 23 °C	
Linearity error				% FSR	
Build-up time (Accuracy 1%)				ms	
Critical frequency		3	0 Hz	@ 3 dB	
Temperature coefficient		<15	50 pp	m / K FSR	
General					
Rated voltage U _N		L. L	AC/D	C 24 V	
Operation voltage range		AC 19.2-26	6.4 V	/ DC 18.0–31.2 V	
Status indication			LED	green	
Input/output protection	Overvoltage	e, current input v	with F	PTC fuse, short circuit-proof output	
Rise time (10 - 90%)	Ŭ		6	ms	
Insulation voltage input / output			2.5	kV _{eff}	
Housing material		PA 6.6 (U		V-0, NFF I2, F2)	
Color of the housing				basalt grey	
Mounting				e TS35 (EN 60715)	
Protection class		Dirtianinoa		220	
Installation position				ny	
Connection type	Screwed termin	al single wire 0.2		Push-In single wire 0.25 mm ² –2.5 mm ²	2/
	mm ² –2.5 mm ² / A ded wire with ferrul	NG 20–14 fine s	stran-		
Operation temperature range		-25	5°C.	+60 °C	
Storage temperature range				+80 °C	
Dimensions (w × h × d)		6.2 ×	93.0	× 73.0 mm	
Weight				kg/piece	
Approvals				145), DNV GL	
Standards		,		947-5-1	
Failure Rate Prediction (MTBF)				· · ·	
Standards		conversion: EN/I	ÈC 6	Reference conditions for failure rates and 1709 Failure Rates of Components – Ex es: SN 29500	
Failure rate at +45 °C		poolod		4 fit	
Failure rate at +45 °C				3891 h	
	1 1	fit equals one fai		per 10 ⁹ component hours	
				ean component ambient temperature.	
Comments	The results are vali	d under following	g con	ditions: Automotive environment or indus nd harmful substances Continuous opera	



Input: 4–20 mA Output: 0–10 V / 0–20 mA / 4–20 mA Insulation: 2.5 kV, 3-way isolation





Description		Part-No.		Туре	PU	
Screw terminal	0 40.14	750500 0000	-			
Output signal	0 – 10 V	750536.0000		LCIS-WAA-0536-62-S	1	
	0–20 mA	750537.0000			1	
	4–20 mA	750538.0000	R*	LCIS-WAA-0538-62-S	1	
Push-In						
Output signal	0 – 10 V	751536.0000	-	LCIS-WAA-1536-62-PI	1	
	0–20 mA	751537.0000		LCIS-WAA-1537-62-PI	1	
	4–20 mA	751538.0000	S*	LCIS-WAA-1538-62-PI	1	
Input						
Input signal			4–2	0 mA		
Galvanic isolation I/O		3.	way	isolation		
Zero /Span		Produ	iction	comparison		
Output						
Output signal	0 – 10 V		0-2	0 mA 4	–20 mA	
Residual ripple	0 .0 0			nVeff _{eff}	201101	
Max. load impedance at I-output	_		201	500 Ω		
Operating data	_			000 32		
Accuracy				R @ 23 °C		
Linearity error			0.05	% FSR		
Build-up time (Accuracy 1%)			17	ms		
Critical frequency	30 Hz @ 3 dB					
Temperature coefficient		<15	60 ppi	m / K FSR		
General						
Rated voltage U _N			AC/D	C 24 V		
Operation voltage range		AC 19.2-20	6.4 V	/ DC 18.0–31.2 V		
Status indication			LED	green		
Input/output protection	Overvoltage	e, current input v	vith F	TC fuse, short circuit-proof	output	
Rise time (10 - 90%)	, in the second s	· · ·	6	ms	·	
Insulation voltage input / output			2.5	kV _{eff}		
Housing material		PA 6.6 (U		V-0, NFF I2, F2)		
Color of the housing		,		basalt grey		
Mounting				e TS35 (EN 60715)		
Protection class				220		
Installation position				ny		
Connection type	Screwed termin	al single wire 0		Push-In single wire 0.25 mr	$m^2 - 2.5 mm^2/$	
	mm ² –2.5 mm ² / A\ ded wire with ferrule	NG 20–14 fine s	tran-		ed wire with	
Operation temperature range		-25	5°C.	+60 °C		
Storage temperature range		-40)°C.	+80 °C		
Dimensions (w × h × d)		6.2 ×	93.0	× 73.0 mm		
Weight		0	029	(g/piece		
Approvals		cULus (E135	145), DNV GL		
Standards	EN 60947-5-1					
Failure Rate Prediction (MTBF)						
Standards		conversion: EN/I	ÉC 6	eference conditions for failu 1709 Failure Rates of Comp es: SN 29500		
Failure rate at +45 °C			50	4 fit		
Failure rate at +45 °C			1983	891 h		
	1 f	it equals one fai	lure p	per 10 ⁹ component hours		
				an component ambient tem	perature.	
Comments	The results are vali	d under following	g con	ditions: Automotive environn nd harmful substances Conti	nent or indus-	

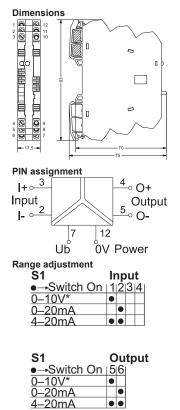


A Available with a lead timeR Available on request

Interface Technology · LCIS analog/analog converter

Input: 0–10 V / 0–20 mA / 4–20 mA, manual off automatic Output: 0–10 V / 0–20 mA / 4–20 mA Insulation: 2,5 kV / 4 kV, 3-way isolation, Wide range input





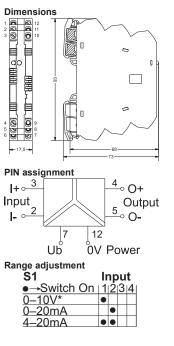
Description Screw terminal		Part-No.		Туре	PU	
	AC/DC 24 V	750518.0000	R*	LCIS-WAA-MA-0518-175-S	1	
Rated voltage U _N	AC/DC 24 V AC/DC 24–240 V	750518.0000	R*	LCIS-WAA-MA-0518-175-S LCIS-WP-WAA-MA-0519-S	1	
Push-In	A0/D0 24-240 V	730313.0000	ĸ	2010-111 -1174-1114-0313-0		
Rated voltage U _N	AC/DC 24 V	751518.0000	S*	LCIS-WAA-MA-1518-175-PI	1	
	AC/DC 24–240 V	751519.0000	S*	LCIS-WP-WAA-MA-1519-PI	1	
Input						
Input signal	0–10 V	0-20 mA 4-20) mA	adjustable via DIP switch S1		
Input resistance				$\Omega @ 0-20 \text{ mA}, 4-20 \text{ mA}$		
Galvanic isolation I/O		<u> </u>		isolation		
Zero /Span				comparison		
Output						
Output signal	0-	10 V. 0–20 mA.	4–20	mA adjustable via switch		
Max. load impedance at l-output				0 mA, 4–20 mA		
Min. load impedance at U-output		-		2 0–10 V		
Output current		max. 5 mA @ 0–10 V				
Output voltage				0 mA, 4–20 mA		
Residual ripple		<20 mVeff _{eff}				
Operating data				GI		
Accuracy		0.1	% FS	R @ 23 °C		
Linearity error		0.05 % FSR				
Build-up time (Accuracy 1%)		17 ms				
Critical frequency	30 Hz @ 3 dB					
Temperature coefficient	<150 ppm / K FSR					
General	AC/E	C 24 V		AC/DC 24–240 V		
Operation voltage range	AC 19.2–26.4 V	/ DC 18.0-31.2	V	AC 19.2–264 V / DC 18.0–264 V		
Status indication	LED green					
Input/output protection	Overvoltage	e, current input v	vith P	TC fuse, short circuit-proof output		
Rise time (10 - 90%)			6	ms		
Insulation voltage input / output	2.5	kV _{eff}		4.0 kV _{eff}		
Housing material		PA 6.6 (U	L 94	V-0, NFF I2, F2)		
Color of the housing		RAL	7012	basalt grey		
Mounting		DIN rail mou	ntable	e TS35 (EN 60715)		
Protection class			IF	220		
Installation position				ny		
Connection type	ded wire with ferrul	NG 20–14 fine s	tran-	Push-In single wire 0.25 mm ² -2.5 mm ² AWG 20-14 fine stranded wire with ferrule 0.25 mm ² -1.5 mm ² / AWG 20- 16		
Operation temperature range		-25	5°C.	+60 °C		
Storage temperature range				+80 °C		
Dimensions (w × h × d)) × 75.0 mm		
Weight				kg/piece		
Approvals		,		145), DNV GL		
Standards		E	N 60	947-5-1		
Failure Rate Prediction (MTBF)						
Standards		conversion: EN/I	ÉC 6	teference conditions for failure rates and 1709 Failure Rates of Components – Ex es: SN 29500		
Failure rate at +45 °C			72	4 fit		
Failure rate at +45 °C			1381	278 h		
	11	it equals one fai	lure p	per 10 ⁹ component hours		
	The indicated	emperature is the	ne me	ean component ambient temperature.		
Comments		extreme dust lev	els ar	ditions: Automotive environment or indu nd harmful substances Continuous oper h per year		

tion 8760 h per year



Input: 0-10 V / 0-20 mA / 4-20 mA Output: 0-10 V / 0-20 mA / 4-20 mA Insulation: 4 kV, 3-way isolation, Wide range input





S1	С)u	tput
●→Switch On	5	6	ı'
0–10V*	٠		
0–20mA		٠	
4–20mA	•	•	

Description		Part-No.		Туре	Ρ
Screw terminal					
Rated voltage U _N	AC/DC 24-240 V	750510.0000	R*	LCIS-WP-WAA-0510-175-S	1
Push-In					
Rated voltage U _N	AC/DC 24-240 V	751510.0000	S*	LCIS-WP-WAA-1510-175-PI	1
Input		10.0000		751510.0000	
Input signal				, adjustable via DIP switch S1	
Input resistance	>30	-		0 Ω @ 0–20 mA, 4–20 mA	
Galvanic isolation I/O				isolation	
Zero /Span		Produ	iction	comparison	
Output					
Output signal	0—	10 V, 0–20 mA,	4–20	mA adjustable via switch	
Max. load impedance at I-output		500 Ω @	0-20	0 mA, 4–20 mA	
Min. load impedance at U-output		2	kΩ @	0−10 V	
Output current		max.	5 m/	A @ 0–10 V	
Output voltage		< 18 V @) 0–2	0 mA, 4–20 mA	
Residual ripple		-		nVeff _{eff}	
Operating data					
Accuracy		0.1	% FS	R @ 23 °C	
Linearity error				% FSR	
Build-up time (Accuracy 1%)				'ms	
Critical frequency		30 Hz @ 3 dB			
Temperature coefficient				m / K FSR	
General					
Rated voltage U _N		AC		24–240 V	
Operation voltage range	AC 19.2–264 V / DC 18.0–264 V				
Status indication	LED green				
Input/output protection	Overvoltage, current input with PTC fuse, short circuit-proof output				
Rise time (10 - 90%)	Overvoltage	s, carrent input i		ms	
Insulation voltage input / output				kV _{eff}	
Housing material		DA 66 (1)		V-0, NFF I2, F2)	
Color of the housing				basalt grey	
Mounting				e TS35 (EN 60715)	
Protection class		Din fail mou		P20	
Installation position					
	Sorowod termin	al aingle wire 0		ny Push-In single wire 0.25 mm ² –2.5 mm ²	/
Connection type	mm ² –2.5 mm ² / A ded wire with ferrul	e 0.25 mm ² –1.5 G 20–16	tran- mm ²	AWG 20–14 fine stranded wire with ferrule 0.25 mm ² –1.5 mm ² / AWG 20– 16	
Operation temperature range				+60 °C	
Storage temperature range				+80 °C	
Dimensions (w × h × d)				0 × 73.0 mm	
Weight				kg/piece	
Approvals		,		145), DNV GL	
Standards		E	N 60	947-5-1	
Failure Rate Prediction (MTBF)					
Standards		conversion: EN/I	ÉC 6	Reference conditions for failure rates and 1709 Failure Rates of Components – Ex es: SN 29500	
Failure rate at +45 °C		1		57 fit	
Failure rate at +45 °C				3305 h	
	1	fit equals one fai		per 10 ⁹ component hours	
				ean component ambient temperature.	
Comments	The results are vali	d under followin extreme dust lev	g con els ai	ditions: Automotive environment or indus nd harmful substances Continuous opera	

tion 8760 h per year

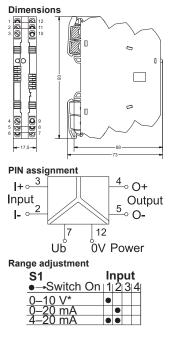


* S Article from stock

A Available with a leadR Available on request Available with a lead time

Input: 0–10 V / 0–20 mA / 4–20 mA Output: 0–10 kHz Insulation: 4 kV, 3-way isolation, Wide range input





S1	С)u	tput
●→Switch On	5	6	Ē
0–50 Hz*			
0–100 Hz	•		
<u>0–1000 Hz</u>		•	
0–10000 Hz	۲		

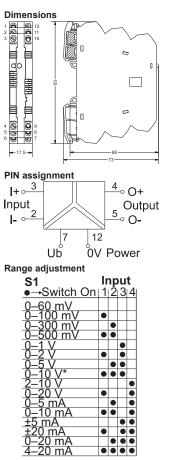
Description		Part-No.		Туре	PU
Screw terminal					
Rated voltage U _N	AC/DC 24–240 V	750512.0000	R*	LCIS-WP-WAF-0512-175-S	1
Push-In					
Rated voltage U _N	AC/DC 24–240 V	751512.0000	R*	LCIS-WP-WAF-1512-175-PI	1
Input	7505	12.0000		751512.0000	
Input signal	0–10 V	, 0–20 mA, 4–20) mA	, adjustable via DIP switch S1	
Input resistance	>30	0 kΩ @ 0–10 V	<10	0 Ω @ 0–20 mA, 4–20 mA	
Galvanic isolation I/O		3.	way	isolation	
Zero /Span		Produ	iction	comparison	
Output					
Output signal	0–50 Hz, 0–	100 Hz, 0–1 kHz	., 0–1	0 kHz adjustable via DIP switch S1	
Residual ripple				-	
Operating data					
Accuracy		0.1	% FS	R @ 23 °C	
Linearity error				% FSR	
Build-up time (Accuracy 1%)				-dependent	
Critical frequency				@ 3 dB	
Temperature coefficient				m / K FSR	
Transmission frequency	frequency-dependent				
General				asponaon	
Rated voltage U _N		AC		24–240 V	
Operation voltage range				/ DC 18.0–264 V	
Status indication		710 10.2 2		green	
Input/output protection	Overvoltage	e current input v		PTC fuse, short circuit-proof output	
Rise time (10 - 90%)	Overvoltage			-dependent	
Insulation voltage input / output		nequ		kV _{eff}	
Housing material		PA 6 6 (1)		V-0, NFF I2, F2)	
Color of the housing				basalt grey	
Mounting				e TS35 (EN 60715)	
Protection class		Dirivitali filou		220	
Installation position				ny	
Connection type	Screwed termin	al cinglo wiro 0		Push-In single wire 0.25 mm ² –2.5 mm ²	/
Connection type	mm ² –2.5 mm ² / A\ ded wire with ferrule	NG 20–14 fine s e 0.25 mm ² –1.5 G 20–16	tran- mm ²	AWG 20–14 fine stranded wire with ferrule 0.25 mm ² –1.5 mm ² / AWG 20– 16	
Operation temperature range				+60 °C	
Storage temperature range				+80 °C	
Dimensions (w × h × d)		6.2 ×	93.0	× 73.0 mm	
Weight		0	058	kg/piece	
Approvals				145), DNV GL	
Standards		E	N 60	947-5-1	
Failure Rate Prediction (MTBF)					
Standards		conversion: EN/I	ÉC 6	Reference conditions for failure rates and 1709 Failure Rates of Components – Ex- es: SN 29500	
Failure rate at +45 °C			72	4 fit	
Failure rate at +45 °C				278 h	
	11	fit equals one fai	lure p	per 10 ⁹ component hours	
				ean component ambient temperature.	
Comments	The results are vali	d under followin	g con	ditions: Automotive environment or indus	

The indicated temperature is the mean component ambient temperature. The results are valid under following conditions: Automotive environment or industrial areas without extreme dust levels and harmful substances Continuous operation 8760 h per year



Input: 16 selectable ranges Output: 0–10 V / 0–20 mA / 4–20 mA Insulation: 2.5 kV / 4 kV, 3-way isolation, Wide range input





S1			tput
●→Switch On	5	6	-
0–10 V*	•		
0–20 mA		۲	
4–20 mA	•	۰	

Description Screw terminal		Part-No.		Туре	Pl
		750540 0000	D +		
Rated voltage U _N	AC/DC 24 V	750516.0000			1
	AC/DC 24–240 V	750517.0000	R*	LCIS-WP-WUAA-0517-175-S	1
Push-In					
Rated voltage U _N	AC/DC 24 V	751516.0000		LCIS-WUAA-1516-175-PI	1
	AC/DC 24–240 V	751517.0000	S*	LCIS-WP-WUAA-1517-175-PI	1
Input	AC/D	OC 24 V		AC/DC 24–240 V	
Input signal			ustah	ble via DIP switch S1 0–1, 0–2, 0–5, 0–10	
input signal		stable via DIP sw	vitch S	S1 0–5, 0–10, 0–20, 4–20, ±5, ±20 mA ad DIP switch S1	
Input resistance		>300 kΩ @	۶mV,	V, <100 Ω @ mA	
Galvanic isolation I/O		3.	way	isolation	
Zero /Span		Produ	iction	comparison	
Output					
Output signal	0-1	10 V, 0–20 mA, 4	4–20	mA, adjustable via switch	
Max. load impedance at I-output				0 mA, 4–20 mA	
Min. load impedance at U-output		-		0–10 V	
Output current			~	A @ 0–10 V	
Output voltage				0 mA, 4–20 mA	
Residual ripple		<20 mVeff _{eff}			
Operating data			2011		
Accuracy		0.1.9	% ES	R @ 23 °C	
Linearity error				% FSR	
Build-up time (Accuracy 1%)				ms	
		2			
Critical frequency	30 Hz @ 3 dB				
Temperature coefficient	10/2		ou ppi	m / K FSR	
General		OC 24 V		AC/DC 24–240 V	
Operation voltage range	AC 19.2–26.4 V	/ DC 18.0–31.2		AC 19.2–264 V / DC 18.0–264 V	
Status indication	- ···			green	
Input/output protection	Overvoltage	e, current input v		PTC fuse, short circuit-proof output	
Rise time (10 - 90%)			6	ms	
Insulation voltage input / output	2.5	kV _{eff}		4.0 kV _{eff}	
Housing material		PA 6.6 (U	L 94	V-0, NFF I2, F2)	
Color of the housing				basalt grey	
Mounting		DIN rail mou	ntabl	e TS35 (EN 60715)	
Protection class			IF	20	
Installation position			a	ny	
Connection type	Screwed termin mm ² –2.5 mm ² / AV	NG 20–14 fine s	tran-		
		G 20–16		16	
Operation temperature range		-25	5°C.	+60 °C	
Storage temperature range		-40) °C .	+80 °C	
Dimensions (w × h × d)		17.5	× 93.0) × 73.0 mm	
Weight		0	.059	kg/piece	
Approvals				145), DNV GL	
Standards				947-5-1	
Failure Rate Prediction (MTBF)					
Standards	Electronic compo	nents – Reliabili	v – F	Reference conditions for failure rates and	
		conversion: EN/I	ÉC 6	1709 Failure Rates of Components – Ex- es: SN 29500	
Failure rate at +45 °C			68	1 fit	
Failure rate at +45 °C			1468	3511 h	
	1 f	fit equals one fai	lure p	per 10 ⁹ component hours	
				ean component ambient temperature.	
Comments				ditions: Automotive environment or indus	-
		extreme dust lev	els ai	nd harmful substances Continuous opera h per year	



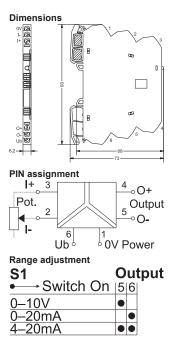
* S Article from stock

A Available with a lead timeR Available on request

Interface Technology · LCIS potentiometer/analog converter

Input: 0–1 k Ω / 0–6 k Ω Output: 0–10 V / 0–20 mA / 4–20 mA Insulation: 2.5 kV, 3-way isolation





	In			
→ Switch On	1	2	3	4
0–6 kΩ				
0–1 kΩ				

Description		Part-No.		Туре	PU	
Screw terminal		Turt-No.		Type	10	
Rated voltage U _N	AC/DC 24 V	750557.0000	R*	LCIS-WRA-0557-62-S	1	
Push-In	10/00/211	100001.0000				
Rated voltage U _N	AC/DC 24 V	751557.0000	S*	LCIS-WRA-1557-62-PI	1	
Input	7505	57.0000		751557.0000		
Input variable		Poti 0-	-1 kΩ	, Poti 0–6 kΩ		
Galvanic isolation I/O		3	-way	isolation		
Measuring procedure		2-wire	, con	stant current		
Zero /Span		Produ	iction	comparison		
Input resistance			>1	MΩ		
Parameterisation		0	0IP sv	vitch S1		
Sensor current		0.45 mA @ 0–	1 kΩ	/ 0.15 mA @ 0– 6 kΩ		
Protection device Input		Over	/oltag	je protection		
Output						
Output signal		0–10 V,) mA, 4–20 mA		
Max. load impedance at I-output				Ω 00		
Min. load impedance at U-output				kΩ		
Load deviation				x. 5 mV @ 2 kΩ		
Output voltage		-		0 mA, 4–20 mA		
Output current				nA @ 10 V		
Residual ripple				nVeff _{eff}		
Parameterisation				vitch S1		
Protection device		short	circu	it protection		
Operating data		0.0				
Accuracy		0.3		R @ 23 °C		
Linearity error Build-up time (Accuracy 1%)	0.1 % FSR					
		approx. 60 ms @ 23 °C 10 Hz @ 3 dB / 23 °C				
Critical frequency Temperature coefficient			<u> </u>	n / K FSR		
General		15	o ppi	II/ KT SK		
Operation voltage range		AC 10 2_2	8 4 V	/ DC 18.0-31.2 V		
Rated voltage U_N				C 24 V		
Rated current	appro			/ approx. 13 mA @ DC 24 V		
Status indication	uppre			green		
Insulation voltage input / output				kV _{eff}		
Housing material		PA 6.6 (U		V-0, NFF I2, F2)		
Color of the housing				basalt grey		
Mounting				e TS35 (EN 60715)		
Protection class				20		
Installation position			а	iny		
Connection type	mm ² –2.5 mm ² / A ded wire with ferru	le 0.25 mm ² –1.5 G 20–16	stran- mm ²	Push-In single wire 0.25 mm ² –2.5 mm AWG 20–14 fine stranded wire witt ferrule 0.25 mm ² –1.5 mm ² / AWG 20 16	า	
Operation temperature range				+60 °C		
Storage temperature range				+85 °C		
Dimensions (w \times h \times d)				× 73.0 mm		
Weight				kg/piece		
Approvals				aration, DNV GL		
Standards		E	N 60	947-5-1		
Failure Rate Prediction (MTBF)	-					
Standards		conversion: EN/	ÉC 6	Reference conditions for failure rates ar 1709 Failure Rates of Components – E es: SN 29500		
Failure rate at +45 °C				i6 fit		
Failure rate at +45 °C				5795 h		
				per 10 ⁹ component hours		
				ean component ambient temperature.		
Comments		extreme dust lev	els a	ditions: Automotive environment or ind nd harmful substances Continuous ope h per year		



Interface Technology · LCIS analog/analog converter

Output: 0–60 mV Output: 0–10 V / 0–20 mA / 4–20 mA Insulation: 2.5 kV, 3-way isolation



Dimensions
PIN assignment
I+ <u>3</u> 4_0+
Input / 人 / Output
-° ² 5°0-
6 1
6 1 Ub° 0V Power
Range adjustment
S1 Output
● Switch On 56
<u>0–10V</u>
0–20mA
4–20mA ●●
S1 Input $ \xrightarrow{\bullet} $ Switch On $ 1 2 3 4 $
<u>0–60 mV </u>

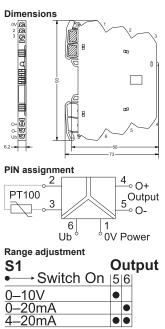
Description		Part-No.		Туре	PU	
Screw terminal						
Rated voltage U _N	AC/DC 24 V	750901.0000	R*	LCIS-WAA-0901-62-S	1	
Push-In						
Rated voltage U _N	AC/DC 24 V	751901.0000	S*	LCIS-WAA-1901-62-PI	1	
Innut	750	901.0000		751901.0000		
Input	750		Itono			
Input variable			•	0-60 mV		
Galvanic isolation I/O				isolation		
Measuring procedure				easurement		
Zero /Span		Produ		comparison		
Input resistance				ΜΩ		
Parameterisation		L	IP SV	vitch S1		
Sensor current		<u>,</u>		-		
Protection device Input		Over	oltag	je protection		
Output						
Output signal		0–10 V,) mA, 4–20 mA		
Max. load impedance at I-output				Ω 0		
Min. load impedance at U-output				kΩ		
Load deviation				ax. 5 mV @ 2 kΩ		
Output voltage				0 mA, 4–20 mA		
Output current				nA @ 10 V		
Residual ripple				nVeff _{eff}		
Parameterisation		C	IP sv	vitch S1		
Protection device		short	circu	it protection		
Operating data						
Accuracy		0.1 9	% FS	R @ 23 °C		
Linearity error			0.1 %	6 FSR		
Build-up time (Accuracy 1%)		appro	k. 60	ms @ 23 °C		
Critical frequency	10 Hz @ 3 dB / 23 °C					
Temperature coefficient		15) ppn	n / K FSR		
General						
Operation voltage range		AC 19.2-20	6.4 V	/ DC 18.0-31.2 V		
Rated voltage U _N			AC/D	C 24 V		
Rated current	appr	ox. 22 mA @ AC	24 V	/ approx. 13 mA @ DC 24 V		
Status indication		Ŭ		green		
Insulation voltage input / output			2.5	kV _{eff}		
Housing material		PA 6.6 (U		V-0, NFF I2, F2)		
Color of the housing		,		basalt grey		
Mounting				e TS35 (EN 60715)		
Protection class				220		
Installation position				iny		
Connection type	mm ² –2.5 mm ² / A ded wire with ferru		25 tran-	Push-In single wire 0.25 mm ² –2.5 mm		
Operation temperature range		-25	σ°C.	+60 °C		
Storage temperature range				+85 °C		
Dimensions (w × h × d)		6.2 ×	93.0	× 73.0 mm		
Weight				kg/piece		
Approvals		cULus in	prepa	aration, DNV GL		
Standards				947-5-1		
Failure Rate Prediction (MTBF)						
Standards		conversion: EN/I	ÉC 6	Reference conditions for failure rates an 1709 Failure Rates of Components – E es: SN 29500		
Failure rate at +45 °C			56	i6 fit		
Failure rate at +45 °C			1765	5795 h		
	1	fit equals one fai	lure r	per 10 ⁹ component hours		
				ean component ambient temperature.		
Comments	The results are va	lid under following extreme dust lev	g con els ai	ditions: Automotive environment or indu nd harmful substances Continuous oper h per year		



A Available with a lead time
 R Available on request

Input: PT100, 2-wire Output: 0-10 V / 0-20 mA / 4-20 mA Insulation: 2.5 kV, 3-way isolation





S1	In	p	u	t
● Switch On	1	2	3	4
-50 – 50°C				
-50 – 100°C				
-50 – 150°C			•	
0 – 100°C		•	•	
0 – 150°C				
0 – 200°C				
0 – 300°C			•	
0-400°C		•	•	•

Description		Part-No.		Туре	Pl
Screw terminal					
Rated voltage U _N	AC/DC 24 V	750809.0000	R*	LCIS-WPT2LA-0809-62-S	1
Push-In					
Rated voltage U _N	AC/DC 24 V	751809.0000	S*	LCIS-WPT2LA-1809-62-PI	1
Input	750	809.0000		751809.0000	
Input variable		Temper	ature	sensor PT100	
Galvanic isolation I/O				isolation	
Measuring procedure		2-wire	, con	stant current	
Zero /Span				comparison	
Input resistance				ΜΩ	
Parameterisation		C	IP sv	vitch S1	
Temperature range	-50 °C–50 °C / -5			50 °C / 0 °C–100 °C / 0 °C–150 °C / 0 °C- 0 °C / 0 °C–400 °C	-
Sensor current			0.5	mA	
Protection device Input		Overv	oltag	e protection	
Output					
Output signal		0–10 V,	0-20	mA, 4–20 mA	
Max. load impedance at I-output			50	0 Ω	
Min. load impedance at U-output			2	kΩ	
Load deviation		at U-outp	ut ma	x. 5 mV @ 2 kΩ	
Output voltage		< 16 V @	0–2	0 mA, 4–20 mA	
Output current		-		A @ 10 V	
Residual ripple				nVeff _{eff}	
Parameterisation		C	IP sv	vitch S1	
Protection device		short	circu	it protection	
Operating data					
Accuracy		0.3	% FS	R @ 23 °C	
Linearity error				6 FSR	
Build-up time (Accuracy 1%)		appro	x. 60	ms @ 23 °C	
Critical frequency		10 H	z @ 3	3 dB / 23 °C	
Temperature coefficient			<u> </u>	n / K FSR	
Error coefficient of measuring line				Κ/ Ω	
General					
Operation voltage range		AC 19.2-2	6.4 V	/ DC 18.0–31.2 V	
Rated voltage U _N			AC/D	C 24 V	
Rated current	app	rox. 22 mA @ AC	24 V	/ approx. 13 mA @ DC 24 V	
Status indication		_		green	
Insulation voltage input / output			2.5	kV _{eff}	
Housing material		PA 6.6 (U		V-0, NFF I2, F2)	
Color of the housing				basalt grey	
Mounting				e TS35 (EN 60715)	
Protection class				220	
Installation position				ny	
Connection type	mm ² –2.5 mm ² / ded wire with ferr	VG 20–16	25 tran- mm ²	Push-In single wire 0.25 mm^2 - 2.5 mm^2 , AWG 20-14 fine stranded wire with ferrule 0.25 mm ² -1.5 mm ² / AWG 20- 16	
Operation temperature range		-25	5°C.	+60 °C	
Storage temperature range				+85 °C	
Dimensions (w × h × d)		6.2 ×	93.0	× 73.0 mm	
Weight		0	030 I	kg/piece	
Approvals				aration, DNV GL	
Standards		E	N 60	947-5-1	
Failure Rate Prediction (MTBF)					
Standards		r conversion: EN/I	ÉC 6	Reference conditions for failure rates and 1709 Failure Rates of Components – Ex- es: SN 29500	
Failure rate at +45 °C			56	6 fit	
Failure rate at +45 °C			1765	795 h	
		1 fit equals one fai	lure p	per 10 ⁹ component hours	
	The indicate	d temperature is th	ne me	ean component ambient temperature.	
Comments	The results are va	alid under followin t extreme dust lev	g con els ar	ditions: Automotive environment or indus nd harmful substances Continuous opera h per year	

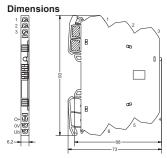


* S Article from stock Available with a lead time

A Available with a leadR Available on request

Input: PT100, 2-wire/3-wire Output: 0–10 V / 0–20 mA / 4–20 mA Insulation: 2.5 kV, 2-way isolation





PIN as	signment	
PT100	2	6 5 0V 4 0+ Output

Range adjustment			
S1	0	u	tput
$\bullet \rightarrow$ Switch On	5	6	
0–10V	•		
0–20mA			
4–20mA	•	•	

S1	In	p	u	t
● Switch On	1	2	3	4
PT100, 3-wire				
PT100, 2-wire	•			
-50 – 50°C				
-50 – 100°C				
-50 – 150°C				
0 – 100°C				
0 – 150°C				\bullet
0 – 200°C				
0 – 300°C				\bullet
0-400°C		•	•	

Description		Part-No.		Туре	Ρl
Screw terminal					
Rated voltage U _N	AC/DC 24 V	750819.0000	R*	LCIS-WPT3LA-0819-62-S	1
Push-In					
Rated voltage U _N	AC/DC 24 V	751819.0000	S*	LCIS-WPT3LA-1819-62-PI	1
Input	750	819.0000		751819.0000	
Input variable		Tempera	ature	sensor PT100	
Galvanic isolation I/O				solation	
Measuring procedure				constant current	
Zero /Span				comparison	
Input resistance				>500 kΩ @ 3-wire	
Parameterisation		-		vitch S1	
Temperature range	-50 °C–50 °C / -5	50 °C–100 °C / -50	°C–1	50 °C / 0 °C–100 °C / 0 °C–150 °C / 0 °C–) °C / 0 °C–400 °C	-
Sensor current			0.5	mA	
Protection device Input		Overv	oltag	e protection	
Output					
Output signal		0–10 V,	0–20	mA, 4–20 mA	
Max. load impedance at I-output			50	0 Ω	
Min. load impedance at U-output			2	kΩ	
Load deviation		at U-outpu	it ma	x. 5 mV @ 2 kΩ	
Output voltage) mA, 4–20 mA	
Output current				A @ 10 V	
Residual ripple				1Veff _{eff}	
Parameterisation				vitch S1	
Protection device				it protection	
Operating data		0011			
Accuracy		030	6 ESI	R @ 23 °C	
Linearity error				S FSR	
Build-up time (Accuracy 1%)				ms @ 23 °C	
Critical frequency				dB / 23 °C	
Temperature coefficient			<u> </u>	/KFSR	
Error coefficient of measuring line	2			onductor: 0.1 K + 0.1 %/Ω	
General	Ζ-		2, 3-0	0100Ct01. 0.1 K + 0.1 /0/22	
		AC 10 0 06		/ DC 18.0–31.2 V	
Operation voltage range					
Rated voltage U _N					
Rated current	арр	-		/ approx. 13 mA @ DC 24 V	
Status indication				green	
Insulation voltage input / output				kV _{eff}	
Housing material				V-0, NFF I2, F2)	
Color of the housing				basalt grey	
Mounting		DIN rail mour		e TS35 (EN 60715)	
Protection class			IP	20	
Installation position				ny	
Connection type	ded wire with ferr	NG 20–16	nm²	ferrule 0.25 mm ² –1.5 mm ² / AWG 20– 16	
Operation temperature range				+60 °C	
Storage temperature range				+85 °C	
Dimensions (w × h × d)				× 73.0 mm	
Weight		0.	030 k	g/piece	
Approvals				ration, DNV GL	
Standards		E	N 609	947-5-1	
Failure Rate Prediction (MTBF)					
Standards		r conversion: EN/I	EC 6	eference conditions for failure rates and 1709 Failure Rates of Components – Ex- es: SN 29500	
Failure rate at +45 °C		peoted		8 fit	
Failure rate at +45 °C				323 h	
		1 fit equals one fail		er 10 ⁹ component hours	
				an component ambient temperature.	
Comments				an component ampient temperature. ditions: Automotive environment or indus-	
Comments		it extreme dust leve	, els ar	attions: Automotive environment or indus- id harmful substances Continuous opera- h per year	



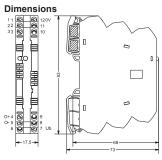


tion 8760 h per year

A Available with a lead timeR Available on request

Input: PT100, 2-wire/3-wire Output: 0-10 V / 0-20 mA / 4-20 mA Insulation: 4.0 kV, 3-way isolation





```
PIN assignment
```

PT100	7	12	4 Output 5 0-
	Ub °	٥ [\] 0	Power

Range adjustment			
S1	0	u	tput
● Switch On	5	6	-
0–10V	•		
0–20mA		•	
4–20mA		•	

	In			
← Switch On	1	2	3	4
PT100, 3-wire				
PT100, 2-wire				
-50 – 50°C				
-50 – 100°C				
-50 – 150°C				
0 – 100°C			•	
0 – 150°C				\bullet
0 – 200°C		•		\bullet
0 – 300°C			•	\bullet
0-400°C		•	•	

Description		Part-No.		Туре	PL		
Screw terminal		7500					
Rated voltage U _N	AC/DC 24–240 V	750817.0000	R*	LCIS-WP-WPT3LA-0817-175-S	1		
Push-In							
Rated voltage U _N	AC/DC 24-240 V	751817.0000	S*	LCIS-WP-WPT3LA-1817-175-PI	1		
Input	7508 [,]	24–240 V 750817.0000 R* LCIS-WP-WPT3LA-0817-175-S 24–240 V 751817.0000 S* LCIS-WP-WPT3LA-1817-175-Pl 750817.0000 751817.0000 Temperature sensor PT100 3-way isolation 2-wire of 3-wire, constant current Production comparison >1 MΩ @ 2-wire, >500 kΩ @ 3-wire DIP switch S1 50 °C / -50 °C -100 °C / -50 °C / 0 °C -100 °C / 0 °C -150 °C / 0 °C 200 °C / 0 °C -300 °C / 0 °C -400 °C 0.5 mA Overvoltage protection 0-10 V, 0-20 mA, 4–20 mA 500 Ω 2 kΩ at U-output max. 5 mV @ 2 kΩ < 18 V @ 0-20 mA, 4–20 mA max. 5 mA @ 10 V < 20 mVeff _{eff} DIP switch S1 short circuit protection 0.3 % FSR @ 23 °C 0.1 % FSR approx. 60 ms @ 23 °C 10 Hz @ 3 dB / 23 °C 10 Hz @ 2 dB / 23 °C 10 Hz @ 1 dB / 23 °C 10 Hz @ 2 dB / 23 °C 10 Hz @ 3 dB / 23 °C 10 Hz @ 2 dB / 23 °C 10 Hz @ 2 dB / 23 °C 10 Hz @ 2 dB / 23 °C 10 Hz @ 3 dB / 23 °C 10 Hz @ 1 dB / 23 °C 10 Hz @ 1 dB / 23 °C 10 Hz @ 2 dB / 23 °C 10 Hz @ 1 dB / 23 °C 10 Hz @ 2 dB / 23 °C 10 Hz @ 1 dB / 23 °C 10 Hz @ 2 dB / 23 °C 10 Hz @ 2 dB / 23 °C 10 Hz @ 1 dB / 23 °C 10 Hz @ 2 dB / 23 °C 10 Hz @ 1 dB / 23 °C 10 Hz @ 2 dB /					
Input variable		Temper	ature	sensor PT100			
Galvanic isolation I/O		3.	way i	solation			
Measuring procedure		2-wire of 3	-wire,	constant current			
Zero /Span		Produ	ction	comparison			
Input resistance		>1 MΩ @ 2-	wire,	>500 kΩ @ 3-wire			
Parameterisation		C	IP sv	vitch S1			
Temperature range	-50 °C–50 °C / -50				-		
Sensor current			0.5	mA			
Protection device Input		Over	oltag	e protection			
Output							
Output signal		0–10 V,	0-20	mA, 4–20 mA			
Max. load impedance at I-output			50	0 Ω			
Min. load impedance at U-output			2	kΩ			
Load deviation		at U-outp	ut ma	x. 5 mV @ 2 kΩ			
Output voltage		< 18 V @	0–20	0 mA, 4–20 mA			
Output current		max	(. 5 m	A @ 10 V			
Residual ripple				<u> </u>			
Parameterisation				CII CII			
Protection device		short	circu	it protection			
Operating data				•			
Accuracy		0.3	% FS	R @ 23 °C			
Linearity error				0			
Build-up time (Accuracy 1%)		appro					
Critical frequency							
Temperature coefficient							
Error coefficient of measuring line	2-00						
General	2-00		_, 5 0				
Operation voltage range		AC 19 2-2	64 V	/ DC 18.0–264 V			
Rated voltage U_N							
Rated current	ann						
Status indication	app						
Insulation voltage input / output				•			
Housing material		PA 66 (II					
Color of the housing							
Mounting							
Protection class				. ,			
Installation position	Coroured torrelia				1		
Connection type	ded wire with ferrule	e 0.25 mm ² –1.5 G 20–16	mm ²	AWG 20–14 fine stranded wire with ferrule 0.25 mm ² –1.5 mm ² / AWG 20– 16			
Operation temperature range							
Storage temperature range							
Dimensions (w × h × d)							
Weight							
Approvals							
Standards		E	N 60	947-5-1			
Failure Rate Prediction (MTBF)							
Standards		onversion: EN/I	ÉC 6	1709 Failure Rates of Components – Ex-			
Failure rate at +45 °C			71	3 fit			
Failure rate at +45 °C				367 h			
	1 f	it equals one fai	lure p	per 10 ⁹ component hours			
				an component ambient temperature.			
Comments	The results are vali	d under followin extreme dust lev	g con els ar	ditions: Automotive environment or indus nd harmful substances Continuous opera h per year			
				1 /			

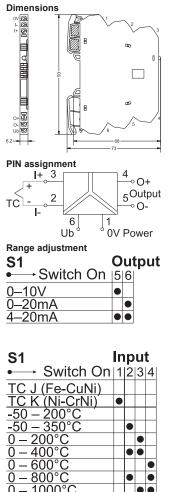


* S Article from stock Available with a lead time

A Available with a leadR Available on request

Input: Thermal elements J, K Output: 0-10 V / 0-20 mA / 4-20 mA Insulation: 2.5 kV, 3-way isolation





•

 $\bullet \bullet$ •••

Description Screw terminal		Part-No.		Туре	PU		
	AC/DC 24 V	750839.0000	R*	LCIS-WTCA-0839-62-S	1		
U 11							
	AC/DC 24 V	751839.0000	S*	LCIS-WTCA-1839-62-PI	1		
Input	750	839.0000		751839.0000			
•			lemer				
•		U ,		· · · · · · · · · · · · · · · · · · ·			
01			•				
Sarew Year Market Sarew Year Market Sarew Year Market Veltage U _N AC/DC 24 V 750839.0000 R* LCIS-WTCA-0839-62-PI 1 Actic Veltage U _N AC/DC 24 V 750839.0000 S* LCIS-WTCA-1839-62-PI 1 nput Actic Veltage U _N AC/DC 24 V 750839.0000 S* LCIS-WTCA-1839-62-PI 1 advantable Thermo voltage, element J or K (DIN/IEC 584-1) advantable Thermo voltage, element J or K (DIN/IEC 584-1) advantable Thermo voltage, element J or K (DIN/IEC 584-1) advantable Thermo voltage, element J or K (DIN/IEC 584-1) advantable Thermo voltage measurement Voltage To C-300 °C / 0° C-200 °C / 0° C-200 °C / 0° C-400 °C / 0° C-600 °C / 0° C- 2010 junction compensation Throughout the entire temperature range Voltage Volt			•				
		_					
	-50 °C–200 °C / -	50 °C–350 °C / 0	°C–20	00 °C / 0 °C–400 °C / 0 °C–600 °C / 0 °C-	-		
Cold junction compensation							
		0		1 5			
		Overv	ronay	e protection			
•		0.401/	0 00				
		0-10 V,					
		-					
Screw Values Unit AC/DC 24 V 750830.0000 R* LCIS-WTCA-0839-62-S 1 Reade voltage Unit AC/DC 24 V 750830.0000 R* LCIS-WTCA-1839-62-P1 1 Input 750830.000 S* LCIS-WTCA-1839-62-P1 1 Input 750839.0000 751833.000 751833.000 751833.000 Input 750839.000 751839.000 751839.000 751839.000 751839.000 Gavanic facilitatio I/O 3-way isolation Values Case 1 7 Production compensation Production compensation Production compensation 700 °C / 0° °C /							
Residual ripple			<20 n	1Veff _{eff}			
Parameterisation		C	IP sv	vitch S1			
Protection device		short	circu	it protection			
Operating data				1			
		0.5 % -	+ 2K I	-SR @ 23 °C			
				0			
,				•			
				0			
			<u> </u>				
		10	u ppn	IIKFOR			
				-			
Rated current	appi	rox. 22 mA @ AC	24 V	/ approx. 13 mA @ DC 24 V			
Status indication			LED	green			
Insulation voltage input / output			2.5	kV _{eff}			
Housing material		PA 6.6 (U	L 94 '	V-0, NFF I2, F2)			
0				. ,			
	mm ² –2.5 mm ² / / ded wire with ferre	AWG 20–14 fine s ule 0.25 mm ² –1.5	25 stran-	Push-In single wire 0.25 mm ² –2.5 mm ² / AWG 20–14 fine stranded wire with ferrule 0.25 mm ² –1.5 mm ² / AWG 20–	1		
Operation temperature range		-25	5°C.	+60 °C			
Storage temperature range		-40) °C .	+85 °C			
		6.2 ×	93.0	× 73.0 mm			
· /							
•							
		-		· · ·			
		r conversion: EN/I	ÉC 6	1709 Failure Rates of Components – Ex-			
Failure rate at +45 °C			56	6 fit			
		l fit equals one fai					
Comments	The results are va	alid under following t extreme dust lev	g con els ar				

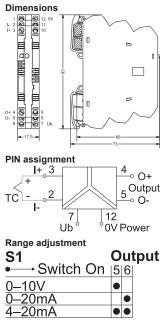


Available with a lead time R Available on request

<u>0 – 1000°C</u> 0 – 1200°C

Input: Thermal elements J, K Output: 0-10 V / 0-20 mA / 4-20 mA Insulation: 4.0 kV, 3-way isolation





S1 ←→ Switch On	In 1		u 3	
TC J (Fe-CuNi) TC K (Ni-CrNi)	•			_
<u>-50 – 200°C</u> -50 – 350°C		•		
<u>0 – 200°C</u> 0 – 400°C		•	•	
<u>0 - 600°C</u> 0 - 800°C		•		•
<u>0 – 1000°C</u> 0 – 1200°C		•	•	•

Description		Part-No.		туре	PU	
Screw terminal						
Rated voltage U _N	AC/DC 24-240 V	750847.0000	R*	LCIS-WP-WTCA-0847-175-S	1	
Push-In						
Rated voltage U _N	AC/DC 24-240 V	751847.0000	S*	LCIS-WP-WTCA-1847-175-PI	1	
la a cita	7500	7 0000	0000R*LCIS-WP-WTCA-0847-175-S0000S*LCIS-WP-WTCA-1847-175-PI751847.0000age, element J or K (DIN/IEC 584-1)3-way isolationVoltage measurementProduction comparison>1 MQDIP switch S1C / 0 °C -200 °C / 0 °C -400 °C / 0 °C -600 °C / 0(0 °C -1000 °C / 0 °C -400 °C / 0 °C -600 °C / 0/ 0 °C -1000 °C / 0 °C -1200 °Cuut the entire temperature rangeOvervoltage protection10 V, 0-20 mA, 4-20 mA500 Ω2 kΩ-output max. 5 mV @ 2 kΩ8 V @ 0-20 mA, 4-20 mAmax. 5 mV @ 2 kΩ8 V @ 0-20 mA, 4-20 mAmax. 5 mV @ 2 kΩSV @ V @ 2 KΩVervoltage protection5% + 2K FSR @ 23 °C% FSR, temperature linearapprox. 60 ms @ 23 °C10 Hz @ 3 dB / 23 °C150 ppm / K FSR-9.2-264 V / DC 18.0-264 VAC/DC 24-240 VQ 2-264 V / DC 18.0-264 VAC/DC 24 -240 V@ AC 24 V / appr. 19 mA @ DC 24 VLED green4.0 kV _{eff} 3.6 (UL 94 V-0, NFF I2, F2)RAL 7012 basalt greyI mountable TS35 (EN 60715)IP20anyire 0.25 mm ² -2.5 mrfine stranded wire wit </td <td></td>			
Input		47.0000				
Input variable	IN			· · · · · · · · · · · · · · · · · · ·		
Galvanic isolation I/O						
Measuring procedure			•			
Zero /Span		Produ		•		
Input resistance						
Parameterisation						
Temperature range	-50 °C–200 °C / -50				-	
Cold junction compensation		throughout the	entii	e temperature range		
Protection device Input		Overv	/oltag	e protection		
Output						
Output signal		0–10 V,	0-20	mA, 4–20 mA		
Max. load impedance at I-output		,				
Min. load impedance at U-output						
Load deviation		at U-outo				
Output voltage						
Output current						
Residual ripple				-		
Parameterisation				611		
Protection device						
		SHOR	CIICU			
Operating data		0 5 0/				
Accuracy				0		
Linearity error				•		
Build-up time (Accuracy 1%)						
Critical frequency			<u> </u>			
Temperature coefficient		15	0 ppn	n / K FSR		
Transmission frequency				-		
General						
Operation voltage range						
Rated voltage U _N		AC	:/DC :	24–240 V		
Rated current	app	r. 22 mA @ AC	24 V	/ appr. 19 mA @ DC 24 V		
Status indication			LED	green		
Insulation voltage input / output			4.0	kV _{eff}		
Housing material		PA 6.6 (U	L 94	V-0, NFF I2, F2)		
Color of the housing		RAL	7012	basalt grey		
Mounting		DIN rail mou	ntabl	e TS35 (EN 60715)		
Protection class				· · · · · ·		
Installation position			а	ny		
Connection type	Screwed termina mm ² –2.5 mm ² / AV ded wire with ferrule / AWC	VG 20–14 fine s	tran-	ferrule 0.25 mm ² -1.5 mm ² / AWG 20-		
Operation temperature range		-25	5°C.	+60 °C		
Storage temperature range						
Dimensions (w × h × d)		17.5	× 93.0) × 73.0 mm		
Weight		0	059	kg/piece		
Approvals		cULus in	prepa	aration, DNV GL		
Standards		E	N 60	947-5-1		
Failure Rate Prediction (MTBF)						
Standards		onversion: EN/I	ÉC 6	1709 Failure Rates of Components - Ex-		
Failure rate at +45 °C						
Failure rate at +45 °C						
	1 f	it equals one fai		per 10 ⁹ component hours		
	The indicated t	emperature is th	ne me	ean component ambient temperature.		
Comments				ditions: Automotive environment or indus-		
			els ai	nd harmful substances Continuous opera- h per year		



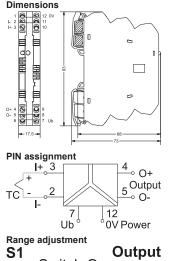
* S Article from stock Available with a lead time

A Available with a leadR Available on request

Input: Thermal elements J, K Output: 0-10 V / 0-20 mA / 4-20 mA Insulation: 4.0 kV, 3-way isolation



Dimensions



51			tpu
→ Switch On	5	6	-
0–10V			
0–20mA			
4–20mA	•	•	

S1	In	p	u	t
 Switch On 	1	2	3	4
TC J (Fe-CuNi)				
TC K (Ni-CrNi)	•			
J: -50 – 150°C				
<u>K: -210 – 105°C</u>				
<u>-50 – 250°C</u>		•		
-50 – 350°C				
0-400°C				
0-600°C				
0-800°C				
0 – 1000°C				
0 – 1200°C		•	•	

Description		Part-No.		Туре	Ρ
Screw terminal					
Rated voltage U _N	AC/DC 24–240 V	750848.0000	R*	LCIS-WP-WTCA-0848-175-S	1
Push-In					
Rated voltage U _N	AC/DC 24–240 V	751848.0000	S*	LCIS-WP-WTCA-1848-175-PI	1
1	75004	8 0000		754949 0000	
Input		8.0000		751848.0000	
Input variable Galvanic isolation I/O	Ine			nt J or K (DIN/IEC 584-1)	
Measuring procedure				isolation easurement	
Zero /Span				comparison	
Input resistance		Flouu		ΜΩ	
Parameterisation		D		vitch S1	
Temperature range	°C–800 °C / 0 °C–1	50 °C–250 °C / - 000 °C / 0 °C–1	-50 °(1200 600	C_350 °C / 0 °C_400 °C / 0 °C_600 °C / 0 °C K: -210 °C_105 °C / -50 °C_250 °C / - °C / 0 °C_800 °C / 0 °C_1000 °C / 0 °C_ 00 °C	
Cold junction compensation		throughout the	entir	e temperature range	
Protection device Input				e protection	
Output					
Output signal		0–10 V,	0–20) mA, 4–20 mA	
Max. load impedance at I-output			50	0 Ω	
Min. load impedance at U-output				kΩ	
Load deviation				x. 5 mV @ 2 kΩ	
Output voltage			·	0 mA, 4–20 mA	
Output current				nA @ 10 V	
Residual ripple				nVeff _{eff}	
Parameterisation				vitch S1	
Protection device		short	circu	it protection	
Operating data					
Accuracy				FSR @ 23 °C	
Linearity error				mperature linear	
Build-up time (Accuracy 1%)				ms @ 23 °C	
Critical frequency			-	3 dB / 23 °C	
Temperature coefficient		150) ppn	n / K FSR	
Transmission frequency General				-	
Operation voltage range		AC 10 2 2	64 V	/ DC 18.0–264 V	
Rated voltage U _N				24–240 V	
Rated current	ann			/ appr. 19 mA @ DC 24 V	
Status indication	appi	. 22 IIIA @ AO		green	
Insulation voltage input / output				kV _{eff}	
Housing material		PA 6 6 (U		V-0, NFF I2, F2)	
Color of the housing		,		basalt grey	
Mounting				e TS35 (EN 60715)	
Protection class				220	
Installation position				ny	
Connection type		/G 20–14 fine s 0.25 mm ² –1.5 20–16	25 tran- mm ²	Push-In single wire 0.25 mm ² –2.5 mm ² / AWG 20–14 fine stranded wire with ferrule 0.25 mm ² –1.5 mm ² / AWG 20– 16	
Operation temperature range				+60 °C	
Storage temperature range				+85 °C	
Dimensions (w × h × d)) × 73.0 mm	
Weight				kg/piece	
Approvals				aration, DNV GL	
Standards		E	N 60	947-5-1	
Failure Rate Prediction (MTBF)	Fleetrania	ante Dell'Illi			
Standards		onversion: EN/I	ÉC 6	Reference conditions for failure rates and 1709 Failure Rates of Components – Ex- es: SN 29500	
Failure rate at +45 °C			70	0 fit	
Failure rate at +45 °C				3555 h	
	1 fi	t equals one fai	lure p	per 10 ⁹ component hours	
	The indicated to	emperature is th	ne me	ean component ambient temperature.	
Comments				ditions: Automotive environment or indus- nd harmful substances Continuous opera-	



tion 8760 h per year

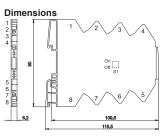
A Available with a leadR Available on request Available with a lead time

Interface Technology · Microcompact current/analog converter

Input: AC/DC 0 – 1 A Output: 0 – 10 V / 0 – 20 mA / 4 – 20 mA - adjustable Insulation: 2.5 kV, 3-way isolation

Description





PIN assignment

Range adjustment

● → S\	witch On		S	1	
Input	Output	1	2	3	4
0-1A	0-10V				
0-1A	0-20mA	٠			
0-1A	4-20mA		٠		

Description	P	art-No.		Туре	PU					
Screw terminal										
Rated voltage U _N	DC 24 V 75	50540	S*	WAA 7-0540	1					
Spring terminal										
Input			75	0540						
Input variable				alog signal						
Input signal		AC/DC 0–1 A, ± 1 A								
Galvanic isolation I/O		3-way isolation								
Input resistance		typ. 0.06 Ω								
Output		typ. 0.00 sz								
Output variable		0 1	01/0 2	0 m 0 1 20 m 0						
Output variable Output signal				0 mA, 4 – 20 mA a DIP switch S1						
1 0		adju								
Max. load impedance at I-output				0 Ω						
Output current				21 mA						
Residual ripple			<5 m	1Veff _{eff}						
Operating data			0 5 6/ 50							
Accuracy				R @ 23 °C						
Linearity error				R @ 23 °C						
Build-up time (Accuracy 1%)			15	0 ms						
General										
Rated voltage U _N				24 V						
Operation voltage range				.8–30 V						
Status indication			LED	yellow						
Insulation voltage input / output				kV _{eff}						
Housing material		PA 6	6.6 (UL 94	V-0, NFF I2, F2)						
Color of the housing			0	t grey						
Mounting		DIN rail	mountabl	e TS35 (EN 60715)						
Protection class			IF	20						
Installation position			а	iny						
Connection type			Screw	terminal						
Operation temperature range			-25 °C .	+60 °C						
Storage temperature range			-40 °C .	+85 °C						
Dimensions ($w \times h \times d$)		6	6.2 × 90.0	× 115.5 mm						
Weight			0.055	kg/piece						
Approvals	(cULus,	CI.1 Div2,	Gr. A, B, C, D, T4A						
Failure Rate Prediction (MTBF)										
Standards		version:	EN/IEC 6	Reference conditions for failu 1709 Failure Rates of Comp es: SN 29500						
Failure rate at +45 °C			63	9 fit						
Failure rate at +45 °C			1564	1896 h						
	1 fit e	quals or	ne failure i	per 10 ⁹ component hours						
				ean component ambient tem	perature.					
Comments	The results are valid ur	nder foll	owing con st levels a	ditions: Automotive environr nd harmful substances Cont h per year	nent or indus-					

Part-No

Type

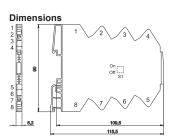


DII

Interface Technology · Microcompact current/analogue converter

Input: AC/DC 0 – 5 A Output: 0 – 10 V / 0 – 20 mA / 4 – 20 mA - adjustable Insulation: 2.5 kV, 3-way isolation





PIN assignment

IN \bullet^{7} I U,I $\overset{4}{\rightarrow}$ OUT+ IN \bullet^{8} $\overset{-1}{\rightarrow}$ I + 2 DC 24V

Range adjustment

● → S'	witch On	Γ	S	1	
Input	Output	1	2	3	4
0-5A	0-10V	Γ			
0-5A	0-20mA	٠			
0-5A	4-20mA		۰		

Description		Part-No		Туре	PU		
Screw terminal							
Rated voltage U _N	DC 24 V	750541	S*	WAA 7-0541	1		
Spring terminal							
Rated voltage U _N	DC 24 V	751541	A*	WAA 7-1541	1		
Input	750)541		75154	1		
Input variable			Single ana	llogue signal			
Input signal			AC/DC 0	–5 A, ± 5 A			
Galvanic isolation I/O			3-way	isolation			
Input resistance			typ.	0.02 Ω			
Output							
Output variable			· ·	0 mA, 4 – 20 mA			
Output signal		ad	justable via	a DIP switch S1			
Max. load impedance at I-output			10	Ω 00			
Output current			max.	21 mA			
Residual ripple			<5 m	nVeff _{eff}			
Operating data							
Accuracy				R @ 23 °C			
Linearity error			0.1 % FS	R @ 23 °C			
Build-up time (Accuracy 1%)			15	0 ms			
General							
Rated voltage U _N				24 V			
Operation voltage range	DC 16.8–30 V						
Status indication			LED	yellow			
Insulation voltage input / output				kV _{eff}			
Housing material		PA	6.6 (UL 94	V-0, NFF I2, F2)			
Color of the housing				t grey			
Mounting		DIN ra		e TS35 (EN 60715)			
Protection class			IF	P20			
Installation position			a	any			
Connection type	Screw	terminal		Spring ter	minal		
Operation temperature range				+60 °C			
Storage temperature range				+85 °C			
Dimensions (w × h × d)				× 115.5 mm			
Weight				kg/piece			
Approvals		cULus,	CI.1 Div2,	Gr. A, B, C, D, T4A			
Failure Rate Prediction (MTBF)							
Standards		onversion	: EN/IÈC 6	Reference conditions for 1709 Failure Rates of C es: SN 29500			
Failure rate at +45 °C		٣		39 fit			
Failure rate at +45 °C			1564	1896 h			
	1 fi	t equals o		per 10 ⁹ component hour	S		
				ean component ambient			
Comments	The results are valid	d under fo	llowing con ist levels a	iditions: Automotive env nd harmful substances (h per year	ironment or indus-		

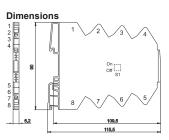


A Available with a lead timeR Available on request

Interface Technology · Microcompact current/analogue converter

Input: AC/DC 0 – 10 A Output: 0 – 10 V / 0 – 20 mA / 4 – 20 mA - adjustable Insulation: 2.5 kV, 3-way isolation





PIN assignment

Range ac	ljustment
----------	-----------

	witch On		S	1	
Input	Output	1	2	3	4
0-10A	0-10V				
0-10A	0-20mA	•			
0-10A	4-20mA		٠		

Description		Part-No.	Туре		PU
Screw terminal					
Rated voltage U _N	DC 24 V	750542 A *	WAA 7-0542	2	1
Spring terminal					
Rated voltage U _N	DC 24 V	751542 S *	WAA 7-1542	2	1
Input	750)542		751542	
Input variable		Single an	alogue signal		
Input signal		AC/DC 0-	-10 A, + 10 A		
Galvanic isolation I/O		3-way	isolation		
Input resistance		typ.	0.02 Ω		
Output					
Output variable		0 – 10 V, 0 – 2	20 mA, 4 – 20 r	nA	
Output signal		adjustable vi	a DIP switch S	1	
Max. load impedance at I-output		4	00 Ω		
Output current		max	. 21 mA		
Residual ripple		<5 r	nVeff _{eff}		
Operating data			- Chi		
Accuracy		0.5 % F	SR @ 23 °C		
Linearity error			SR @ 23 °C		
Build-up time (Accuracy 1%)			50 ms		
General					
Rated voltage U _N		DC	C 24 V		
Operation voltage range			6.8–30 V		
Status indication) yellow		
Insulation voltage input / output			5 kV _{eff}		
Housing material			V-0, NFF 12, F	-2)	
Color of the housing			nt grey	-)	
Mounting		DIN rail mountab	0,	0715)	
Protection class			P20	6110)	
Installation position			any		
Connection type	Scrow	terminal		Spring terminal	
Operation temperature range	00101		+60 °C	opining terminal	
Storage temperature range			+85 °C		
Dimensions ($w \times h \times d$)) × 115.5 mm		
Weight			kg/piece		
Approvals		cULus, CI.1 Div2			
Failure Rate Prediction (MTBF)		COLUS, CI. I DIV2	, 01. A, D, O, D	, 140	
Standards	Electronic compor	onte Poliobility	Poforonco con	ditions for failure rates and	
Standards		onversion: EN/IÉC		Rates of Components – Ex-	
Failure rate at +45 °C			43 fit		
Failure rate at +45 °C			5162 h		
	1 fi	it equals one failure		onent hours	
				nt ambient temperature.	
Comments				notive environment or indus-	
		extreme dust levels a		ostances Continuous opera-	



Compact, flexible, safe: The new Microcompact Signal Converter of

Compact Very narrow housing width of 6,2 mm

Wide temperature range Extended temperature range of -25...+70°C for broad range of applications

Fast response time Up to 1,5 ms response time for AC signal transmission

High load impedance

All current outputs are qualified for 700 Ohm loads!

Safety isolation

All devices offer "Safety isolation" with 2,5kV-isolation voltage acc. EN 61140

Easy installation

Jumper combs instead of wiring via complete Isolated jumper connections simplify installation



Control Solutions

w intelligent the LCON series



Advanced technology

The parametrization via FDT software is the leading technology for engineering, Management & Life Cycle Support in automation applications

Worldwide approvals - Class I Div 2

Worldwide approvals like UL and GL allow for use in global applications

Quality LÜTZE signal converter offer UL 94-V0 and NFF 12, F2

Termination Screw or spring termination available

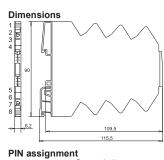
Power bridging

Bridge each potential with isolated jumper bars

Interface Technology · Microcompact analog/analog converter

Input: ±30 V, ±50 mA, ±DC 5 A adjustable Output: 0-20 mA / 4-20 mA / 0-10 V / -10-10 V / 2-10 V / 0-5 V / 1-5 V Insulation: 2.5 kV, 3-way isolation



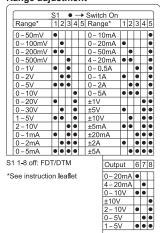


. Parameterisation LED Out U, I ⊗ 4 5 🚿 **~** 6 🛇 8 3 -+A `⊗ 2 7 0 Power DC 24V - GND 8 6 01 +I (A) +I (mA) +U

Range adjustment

-O+

16



Description		Part-No.		Туре	PL
Screw terminal	DO OLIVI		-		
Rated voltage U _N	DC 24 V	750320	R*	LCON AA DFDT 806210	1
Spring terminal	D0.041/	75 1000	0.1		
Rated voltage U _N	DC 24 V	751320	S*	LCON AA DFDT 806211	1
Input					
Measurement input		+30/-30	V. +50/-5	50 mA, DC +5 A/-5 A	
'	adjustable vi			FDT/DTM, connection via micro USB	
Galvanic isolation I/O			3-way	isolation	
Step response (10–90%)	1.5 ms – 750 ms	(adjustable		of filter stage 1–5, default: filter stage 4 = 0 ms)	:
Critical frequency				-	
nput resistance	>800 kΩ @	2 +30/-30 V, ·	<30 Ω @ ·	+50/-50 mA, 10 mΩ @ DC +5 A/-5 A	
Zero /Span			freely a	adjustable	
Output					
Output signal	0–10 V, -10–10			adjustable via switch and software FDT/ via USB service cable	
Max. load impedance at I-output		700	Ω@0-2	20 mA, 4–20 mA	
Min. load impedance at U-output		21	<Ω@0–1	0 V, -10–+10 V	
_oad deviation				-	
Limitation for exceeding measure-				-10 V, -10–10 V	
ment range				-20 mA, 4–20 mA	
max. modulation range/output sig-				10 V, -10–10 V	
nal/output current		21 1	mA @ 0–2	20 mA, 4–20 mA	
Operating data		0 4 0/ 5		0/00// . 50/ 50 . 4	
Accuracy				0/-30 V, +50/-50 mA ≿ @ +5 A/-5 A	
_inearity error				30/-30 V, +50/-50 mA	
				R @ +5 A/-5 A	
General			- ,	0	
Rated voltage U _N			DC	24 V	
Operation voltage range			16.8	3–30 V	
Rated current			appro	x. 18 mA	
Status indication				n, red (error)	
Input/output protection				short circuit-proof output	
Connection type	Screw terminal	0.14 mm ² –	1.5 mm ²	Spring terminal 0.14 mm ² – 1.5 mm ²	
Resolution			1	6-bit	
Temperature compensation internally				-	
Configuration		Swite		tware: FDT / DTM	
Temperature error				pm/K FSR	
Data storage				lash	
nsulation voltage input / output				kV _{eff}	
Housing material				UL 94 V-0)	
Color of the housing		DIN .			
Mounting		DIN rai		le TS35 (EN 60715)	
Protection class				P20	
Installation position				any	
Operation temperature range				+70 °C	
Storage temperature range				+85 °C	
Dimensions (w × h × d) Weight				× 115.5 mm	
Approvals		Lus (E1251/		kg/piece iv2, Gr. A, B, C, D, T4A, GL	
Standards	CU	Lus (L 15514		wz, GI. A, B, C, D, T4A, GL)947-5-1	
Failure Rate Prediction (MTBF)					
Standards				Reference conditions for failure rates and 61709 Failure Rates of Components – Ex-	
		р		ies: SN 29500	
Failure rate at +45 °C				07 fit	
Failure rate at +45 °C				7753 h	
				per 10 ⁹ component hours	
-				ean component ambient temperature.	
Comments				nditions: Automotive environment or indus st levels and harmful substances	-

Comments

NOTE: The device can be configured using the DIP switches on the side or using the accessory LCON ZB service cable (Item no. 750894).

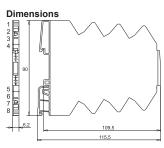


Available with a lead time Α R Available on request

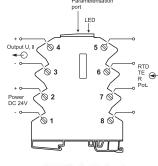
Interface Technology · Microcompact temp./analog converter

Input: PT, thermocouple, potentiometer – adjustable temperature converter Output: 0-20 mA / 4-20 mA / 0-10 V / -10-10 V / 2-10 V / 0-5 V / 1-5 VInsulation: 2.5 kV, 3-way isolation





PIN assignment Parameterisation



$$\begin{array}{c} -15 \\ +20 \\ +20 \\ +24 \\ +40 \\ +40 \\ +55 \\$$

Range adjustment

Rang	ge*		s	1	Γ		S	62					
Star			7	8	1	2	End	3	4	5	6	7	8
-200	°C		•			Γ	0°C	۰					
-150			Ð	•			50°C		•	•			
-100			9		٠		100°C	٠	٠		۰		
-50°	С			۰		۰	150°C	۲		٠	۲		
0°C			D	۰	۰	۰	200°C	۲	۲	۰	۰		
Sen	oor*	0	1	1	2	3	250°C	۲				۲	
		3	1	<u> </u>	2	5	300°C	۲	۰			۲	
Pt10				۰			350°C	۲		۰		۲	
Pt10					۰		400°C	۲	۰	٠		۰	
TE J				۰	۰		450°C	۲			۰	۲	
TEM						۰	500°C	۰	۰		۰	۰	
Pot.	%			۰	•	۲	550°C	۲		۰	۰	۰	
Outp	nut*	S	1	4	5	6	600°C	۲	۰	۰	۰	۰	
		-		4	-		650°C	۲					•
0-2				۰			700°C	۲	۰				۰
4-2		(۰		750°C	۲		٠			•
0-1				۰	٠		800°C	۲	۰	۰			۰
±10\	/					۲	850°C	۲			۲		۰
S1-S2	10.						900°C	۲	۰		۰		۰
FDT/D		JII.					950°C	۲		۰	۲		۰
101/0	I IVI						1000°C	۰	۰	۰	۰		•
*See ir	nstru	ctio	DI	n			1050°C	۲				۲	۰
leaflet							1100°C	۲	۰			۲	۰
							1150°C	۲		۰		۲	
							1200°C	۰	۰	۰		۰	۰
							1250°C	۰			۰	۰	۰
							1300°C	۲	۰		۰	۰	۰
							1350°C	۲		۰	۲	۲	۰
							1400°C	۲	۰	•	۰	۰	۰
						$\bullet \rightarrow \$$	Sw	itc	h	10	n		

Description		Part-No.		Туре	Pl
Screw terminal Rated voltage U _N	DC 24 V	750340	R*	LCON TA DFDT 806210	1
Spring terminal	D0 24 V	100040	K		
Rated voltage U _N	DC 24 V	751340	S*	LCON TA DFDT 806211	1
Input Measurement input		T100 D1	1000 -	sistencia, potenciómetro	
measurement input	The	rmal elen	nents: Ty	rpe B, C, E, J, K, N, R, S, T support points, polynomial	
Galvanic isolation I/O				y isolation	
Temperature range			din	Thermal elements: -210 2310 °C de g on type	
Step response (10–90%)	TE: 10 – 750 ms, PT			stable by means of filter stage 1–5, def - filter stage 4)	ault:
Input resistance			Thermo	couples: 1 MΩ	
Sensor current				: 0.002–0.6 mA depending on type	
Circuit	PT - 2, 3, 4-wire, for	2-wire w		correction, no external bridges necess n. detection	sary,
Output	0 (0)(
Output signal	0–10 V, -10–10 V, (DTM, co	nnection	A adjustable via switch and software F via USB service cable	DT/
Max. load impedance at I-output			0	-20 mA, 4–20 mA	
Max. load impedance at U-output Residual ripple		>2	. K <u>1</u> 2 @ U	–10 V, -10–10 V	
Limitation for exceeding measure-		10	25 V @		
ment range		20.5	mA @ (–20 mÁ, 4–20 mA	
max. modulation range/output sig- nal/output current				⊢10 V, -10–10 V -20 mA, 4–20 mA	
Operating data					
Accuracy				e medida configurado (K) + 0,2 % FSR e set measurement range (K) + 0.4 % F	
Linearity error			±0.	1 % FSR	
General			_	0.04.14	
Rated voltage U _N				C 24 V .8–30 V	
Operation voltage range Rated current				.o-30 v ox. 18 mA	
Status indication				en, red (error)	
Input/output protection	Ove			/, short circuit-proof output	
Connection type	Screw terminal 0.1				nm ²
Resolution				16-bit	
Temperature compensation internally				:: type ±1 K , max. ±2 K	
Configuration		Swite		oftware: FDT / DTM	
Temperature error				ppm/K FSR Flash	
Data storage Insulation voltage input / output				Flash .5 kV _{eff}	
Housing material				(UL 94 V-0)	
Color of the housing				(of several sev	
Mounting		DIN rai		ble TS35 (EN 60715)	
Protection class				IP20	
Installation position				any	
Operation temperature range				C +70 ℃	
Storage temperature range				C +85 °C	
Dimensions (w × h × d) Weight				0 × 115.5 mm 0 kg/piece	
Approvals	cULus	E13514		Div2, Gr. A, B, C, D, T4A, GL	
Standards	00203			60947-5-1	
Failure Rate Prediction (MTBF)					
Standards		nversion	: EN/IÉC	Reference conditions for failure rates 61709 Failure Rates of Components - lues: SN 29500	
Failure rate at +45 °C				678 fit	
Failure rate at +45 °C				74689 h	
				e per 10 ⁹ component hours	
				nean component ambient temperature	
Comments				onditions: Automotive environment or ir ust levels and harmful substances	ndus-

NOTE: The device can be configured using the DIP switches on the side or using the accessory LCON ZB service cable (Item no. 750894).



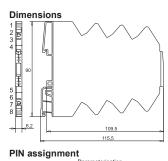
* **S** Article from stock **A** Available with a lead time

R Available on request

Interface Technology · Microcompact analog/limit value switch

Input: ±30 V, ±50 mA, ±5 A adjustable – adjustable limit value switch Output: Semiconductor NO contact Insulation: 2.5 kV, 2-way isolation





. Parameterisation LED. Reset button LED K2 84 5 🛇 ←0 K1 (⊦mA Ö 3 – 6 0 -+A 7 0 Power DC 24V 0 2 - GND 8 6 01 -U/I +I (A) +I (mA) +U 65

Description		Part-No.		Туре	PL				
Screw terminal									
Rated voltage U _N	DC 24 V	750360	R*	LCON ALS FDT 806210	1				
Spring terminal									
Rated voltage U _N	DC 24 V	751360	S*	LCON ALS FDT 806211	1				
Input									
Measurement input				/-50 mA, DC +5 A/-5 A					
	adjust	able via softv		T/DTM, connection via micro USB					
Galvanic isolation I/O				ay isolation					
Step response (10–90%)	4 ms – 750 ms (a	4 ms – 750 ms (adjustable by means of filter stage 1–5, default: filter stage 4 = 200 ms)							
Input resistance	>800 kΩ @	€ +30/-30 V, ·		@ +50/-50 mA, 10 mΩ @ DC +5 A/-5 A					
Zero /Span			freel	y adjustable					
Output									
Output signal	+30/-30 V, +50/-	+30/-30 V, +50/-50 mA, DC +5 A/-5 A, adjustable via software FDT / DTM, connec- tion via USB service cable							
Contact type		K1,K2:	Semi-c	onductor, N/O contact					
Max. switching voltage			[DC 30 V					
Max. switching current		DC 100	mA, no	t short circuit protected					
Status display output				1 and LED yellow K2					
Operating mode	Limit value, wind		itput / a	dditionally adjustable: Hysteresis, input / ou out delay	ut-				
Operating data									
Accuracy		0.1 % F	SR @	+30/-30 V, +50/-50 mA					
-				SR @ +5 A/-5 A					
Linearity error				e +30/-30 V, +50/-50 mA					
		±	0,1 % F	SR @ +5 A/-5 A					
General									
Rated voltage U _N				DC 24 V					
Operation voltage range				6.8–30 V					
Rated current				prox. 12 mA					
Status indication	LED green, yellow (K1, K2), red (error)								
Input/output protection		2		bltage DC 30 V	,				
Connection type	Screw termina	I 0.14 mm [∠] –	1.5 mm		-				
Resolution				16-bit					
Temperature compensation internally			0.6						
Configuration				re: FDT / DTM					
Temperature error			<100	ppm/K FSR					
Data storage				Flash					
Insulation voltage input / output				2.5 kV _{eff}					
Housing material				6 (UL 94 V-0)					
Color of the housing				ight grey					
Mounting		DIN rai	I mount	able TS35 (EN 60715)					
Protection class				IP20					
Installation position			10.5	any					
Operation temperature range				C +70 °C					
Storage temperature range				C +85 °C					
Dimensions (w × h × d)				0.0 × 115.5 mm					
Weight		II							
Approvals	cL	JLUS (E13514		Div2, Gr. A, B, C, D, T4A, GL					
Standards			EN	60947-5-1					
Failure Rate Prediction (MTBF)									
Standards		or conversion	: EN/IÉ(Reference conditions for failure rates and C 61709 Failure Rates of Components – Ei alues: SN 29500 					
Failure rate at +45 °C		٣		435 fit					
Failure rate at +45 °C			2	298502 h					
		1 fit equals o		re per 10 ⁹ component hours					
				mean component ambient temperature.					
Comments				conditions: Automotive environment or indu	S-				
				dust levels and harmful substances					

Comments NOTE: The device can be configured using the DIP switches on the side or using the accessory LCON ZB service cable (Item no. 750894).



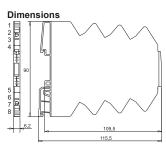
* S Article from stock

A Available with a lead timeR Available on request

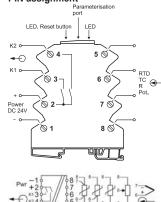
Interface Technology · Microcompact temp./limit value switch

Input: PT, thermocouple, potentiometer – adjustable temperature converter Output: Semiconductor NO contact Insulation: 2.5 kV, 2-way isolation





PIN assignment



Description	Pa	rt-No.		Туре	PU
Screw terminal					
Rated voltage U _N	DC 24 V 75	0370	R*	LCON TLS FDT 806210	1
Spring terminal	B0.0414 ==	1070			
Rated voltage U _N	DC 24 V 75	1370	S*	LCON TLS FDT 806211	1
la a					
Input Measurement input	DT1	00 DT	1000 -	esistencia, potenciómetro	
measurement input	Therma	al elem	nents: T	ype B, C, E, J, K, N, R, S, T	
Galvanic isolation I/O	Custor	nei-sp		a support points, polynomial ay isolation	
Temperature range	PT: -220 850 °C dep	ending	on typ	Thermal elements: -210 2310 °C depen-	
Step response (10–90%)	TE: 10 – 750 ms, PT: 5		ms (adj	ng on type ustable by means of filter stage 1–5, default:	
Input resistance				– filter stage 4)	
Input resistance Sensor current	PT notentiom			e: 0.002–0.6 mA depending on type	
Circuit				et correction, no external bridges necessary,	
	FT - 2, 3, 4-WIE, 101 2-			m. detection	
Output	a dive to be a site	Geo. 10		TM connection via LICD	
Output signal	-			OTM, connection via USB service cable	
Contact type	r	∖1,KZ:		onductor, N/O contact DC 30 V	
Max. switching voltage Max. switching current		C 100		t short circuit protected	
Status display output				1 and LED yellow K2	
Operating mode		-		dditionally adjustable: Hysteresis, input / out-	
		ann ou		but delay	
Operating data					
Linearity error				0.1 % FSR	
Accuracy				neasurement range (K) + 0.2 % FSR e set measurement range (K) + 0.4 % FSR	
General					
Rated voltage U _N				DC 24 V	
Operation voltage range				6.8–30 V	
Rated current				prox. 12 mA	
Status indication	Lt	•		ow (K1, K2), red (error)	
Input/output protection	Screw terminal 0.14 r			bltage DC 30 V	
Connection type	Screw terminal 0.14 r	nm- –	1.5 mm	² Spring terminal 0.14 mm ² – 1.5 mm ² 16-bit	
Resolution Temperature compensation internally	Th	ormold	lomon	ts: type ±1 K , max. ±2 K	
Configuration	111	ermare		re: FDT / DTM	
Temperature error				ppm/K FSR	
Data storage			~ 100	Flash	
Insulation voltage input / output			۵٥	C 2.5 kV _{eff}	
Housing material				6 (UL 94 V-0)	
Color of the housing				ight grey	
Mounting	Г)IN rail		able TS35 (EN 60715)	
Protection class			mount	IP20	
Installation position				any	
Operation temperature range			-40 °	с+70 °С	
Storage temperature range				°C +85 °C	
Dimensions ($w \times h \times d$)		(0.0 × 115.5 mm	
Weight				50 kg/piece	
Approvals	cULus (E	13514		Div2, Gr. A, B, C, D, T4A, GL	
Standards				60947-5-1	
Failure Rate Prediction (MTBF)					
Standards		ersion:	EN/IE	 Reference conditions for failure rates and C 61709 Failure Rates of Components – Ex- alues: SN 29500 	
Failure rate at +45 °C		- Pe	5510U V	480 fit	
Failure rate at +45 °C			2	400 m 081733 h	
	1 fit en	uals o	_	re per 10 ⁹ component hours	
				mean component ambient temperature.	
Comments				conditions: Automotive environment or indus-	
				dust levels and harmful substances	

NOTE: The device can be configured using the DIP switches on the side or using the accessory LCON ZB service cable (Item no. 750894).



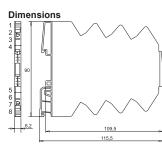
* **S** Article from stock **A** Available with a lead time

R Available on request

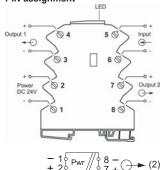
Interface Technology · Microcompact analog/analog splitter

Input: 0-10 V, 0-20 mA, 4-20 mA adjustable Output: 2 × 0-10 V, 0-20 mA, 4-20 mA Insulation: 2.5 kV, 4-way isolation



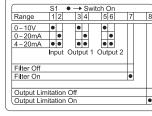


PIN assignment





Range adjustment



See instruction leaflet for details

Description		Part-No		Туре	PU
Screw terminal					
Rated voltage U _N	DC 24 V	750321	R*	LCON AASP D 806210	1
Spring terminal					
Rated voltage U _N	DC 24 V	751321	S*	LCON AASP D 806211	1
Input					
Measurement input	0-	-10 V, 0–20) mA, 4–20) mA adjustable via switch	
Galvanic isolation I/O			4-way	isolation	
Critical frequency		100	Hz (filter o	ff), 5 Hz (filter on)	
Input resistance	>500 kΩ	@ 0-10 V	, <100 Ω @	D 0–20 mA, <100 Ω @ 4–20 mA	
Zero /Span			Production	n comparison	
Output					
Output signal		0-	10 V, 0–20	0 mA, 4–20 mA	
Max. load impedance at I-output				0 mA, 4–20 mA	
Max. load impedance at U-output				-	
Limitation for exceeding measure-					
ment range			yes, si	witchable	
max. modulation range/output sig-			10.5 V	@ 0–10 V	
nal/output current		21		20 mA, 4–20 mA	
Residual ripple			<20	mVeff _{eff}	
Operating data				CII	
Accuracy			0.1 % FS	SR @ 23 °C	
Linearity error				% FSR	
General					
Rated voltage U _N			DC	24 V	
Operation voltage range				3–30 V	
Rated current				3 mA	
Status indication				ireen/red	
Input/output protection	Overvoltag	o current i		PTC fuse, short circuit-proof output	
Connection type				Spring terminal 0.14 mm^2 – 1.5 mm^2	2
Resolution	ocrew terminar t	. 14 11111 -		6-bit	
Configuration				witch	
Temperature error				om/K FSR	
Data storage				lash	
Insulation voltage input / output				kV _{eff}	
Housing material				UL 94 V-0)	
Color of the housing		DIN	•	t grey	
Mounting		DIN ra		le TS35 (EN 60715)	
Protection class				P20	
Installation position				any	
Operation temperature range				+70 °C	
Storage temperature range				+85 °C	
Dimensions (w × h × d)				× 115.5 mm	
Weight				kg/piece	
Approvals	cULus (E135145)	in preparat		viv2, Gr. A, B, C, D, T4A (E319134) in pi tion, GL	re-
Standards			EN 60)947-5-1	
Failure Rate Prediction (MTBF)					
Standards		conversion	: EN/IÉC 6	Reference conditions for failure rates an 61709 Failure Rates of Components – E les: SN 29500	
Failure rate at +45 °C			66	63 fit	
Failure rate at +45 °C			150	9179 h	
	1	fit equals c	one failure	per 10 ⁹ component hours	
				ean component ambient temperature.	
Comments	The results are val	id under fo	llowing cor ist levels a	nditions: Automotive environment or indu nd harmful substances Continuous oper) h per year	

Comments

NOTE: The device can be configured using the DIP switches on the side or using the accessory LCON ZB service cable (Item no. 750894).



* S Article from stock

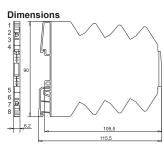
Available with a lead time Α R

Available on request

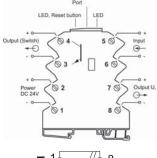
Interface Technology · Microcompact analog/limit value switch

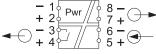
Input/output: 0-10 V, 0-20 mA, 4-20 mA, 2-10 mA, 0-5 V, 1-5 V, 2-10 V adjustable Output: switching transistor DC 30 V/100 mA adjustable (LiveZero) Insulation: 2.5 kV, 4-way isolation



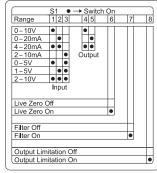


PIN assignment





Range adjustment



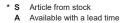
S1 1-8 off: FDT/DTM See instruction leaflet for details

	Part-No.		Туре	PU
	750222	D*		1
DC 24 V	750322	K.	LCON AALS DEDT 806210	1
DC 24 V	751322	S*	LCON AALS DFDT 806211	1
· · · · · · · · · · · · · · · · · · ·	,	,		
,				
5 ms–650 ms (a	adjustable	e by mean	s of filter stage 1–5, default: 150 ms)	
>500 kΩ @ 0–10 V, 0	0–5 V, 1–			۱.
		freely a	djustable	
0 40 1/ 0 5 1/ 4 5		(0, 00		
	400 Ω @) 0–20 mA	, 4–20 mA, 2–10 mA	
			-	
		yes, sv	vitchable	
	10 5 1/ 6	0_10.1/	1-5 \/ 1-5 \/ 2-10 \/	
			<u></u>	
Ŵ	vare FDT	DTM, con	nection via micro USB	
	Switching		•	
Limit value, timefrom	ne tender		, ,	
		0.1 % FS	R @ 23 °C	
		±0.1	% FSR	
Overvoltage	current i	•		
Seren terminar 0.1			1 0	
		<100 pp	m/K FSR	
	DIN rai		· /	
			•	
cULus (E135145) in pr	eparation,			
		EN 60	947-5-1	
		ailure Rates	of Components - Expected values: SN 29500	
		50	8 fit	
4 <i>E</i> L		1671	386 h	
		1671 ne failure p		
	DC 24 V 0-10 V, 0- adjustable 5 ms-650 ms (10 ms - 800 ms >500 kΩ @ 0-10 V, 0 0-10 V, 0-5 V, 1-5 v 0-10 V, 0-5 V, 1-5 v 2 Limit value, timefram C Overvoltage, Screw terminal 0.1	DC 24 V 751322 0-10 V, 0-5 V, 1-5 adjustable via softv 5 ms-650 ms (adjustabl 10 ms - 800 ms (adjustabl >500 kΩ @ 0-10 V, 0-5 V, 1- 0-10 V, 0-5 V, 1-5 V, 2-10 V ware FDT 400 Ω @ 10.5 V @ 21 mA @ 0-10 V, 0-5 V, 1-5 V, 2-10 V ware FDT Switching Limit value, timeframe, tender can be ac Overvoltage, current i Screw terminal 0.14 mm ² - DIN rai CULus (E135145) in preparation,	DC 24 V 751322 S* 0-10 V, 0-5 V, 1-5 V, 2-10 V adjustable via software FDT/D 4-way 5 ms-650 ms (adjustable by means 10 ms - 800 ms (adjustable by means 10 ms - 800 ms (adjustable by means 10 ms - 800 ms (adjustable by means >500 kΩ @ 0-10 V, 0-5 V, 1-5 V, 2-10 V, 6-10 V, 0-5 V, 1-5 V, 2-10 V, 0-20 mA ware FDT/DTM, con 400 Ω @ 0-20 mA (21 mA @ 0-20 mA (22 mA) 0-10 V, 0-5 V, 1-5 V, 2-10 V, 0-20 mA (21 mA @ 0-20 mA) (21 mA @ 0-20 mA) (21 mA @ 0-20 mA) (21 mA @ 0-20 mA) (20 m) 0-10 V, 0-5 V, 1-5 V, 2-10 V, 0-20 mA (20 m) 0-10 V, 0-5 V, 1-5 V, 2-10 V, 0-20 mA (21 mA @ 0-20 mA) (21 mA @ 0-20 mA) (20 m) (21 mA @ 0-20 mA) (20 m) (20 m) (21 mA @ 0-20 mA) (20 m) (20 m)	

Comments

NOTE: The device can be configured using the DIP switches on the side or using the accessory LCON ZB service cable (Item no. 750894).





Α R Available on request

USB Service cable

	 Properties USB interface cable for partime relays, etc. 	rameterization of FDT/DTM capable LCON converters,
Change and the second s	Technical data	
	Status indication Housing material Color of the housing Connection type Operation temperature range Storage temperature	LED green - status operation ABS transparent USB A – Micro USB 0 °C +40 °C -25 °C +50 °C
	range Dimensions (w × h × d)	82.0 × 12.5 × 21.0 mm
	Cable length	1.7 m
	Weight	0.047 kg/piece
Part-No. Type		PU piece
750894 S* LCON ZB USB	ta cable for parameterization	



Labeling system 200 Labeling tabs 5 × 5 mm



Description		Part-No.	Туре	Р	νU
Labelling plates					
Color	white	716431 S *	LOCC-Box-BZW 7-6431	1	l
	red	716432 S *	LOCC-Box-BZR 7-6432	1	J
	blue	716433 S *	LOCC-Box-BZB 7-6433	1	l
	yellow	716434 A *	LOCC-Box-BZG 7-6434	1	l I
General	716431	716432	716433	716434	
Color	white	red	blue	yellow	
Design		2	00 tabs		
Material		PA 6.6 (UL 9	94 V0, NNF I2, F2)		
Operation temperature range		-40 °0	C +80 °C		
Storage temperature range		-40 °0	C +80 °C		
Weight		0.01	0 kg/piece		
Dimensions		5	× 5 mm		



Description

Jumper comb

Insulated jumper combs 2 to 16-pin white



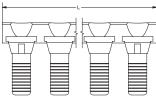
Color	white	762803.1000	S*	LCIS-BKW-2-polig		10			
	white	762813.1000	S*	LCIS-BKW-4-polig		10			
	white	762823.1000	S*	LCIS-BKW-8-polig		10			
	white	762833.1000	S*	LCIS-BKW-16-polig		10			
General	762803.1000	762813.100	00	762823.1000	762833.1000				
Pole number	2	4		8	16				
Connection type	plug-in								
Rated current	DC 6 A								
Contact design	Flat contact 0.5 mm Ribbing on the sides								
Pin spacing			6.2	mm					
Length	12.4 mm	24.8 mm		49.6 mm	99.2 mm				
Contact material			C	uZn					
Material		Fr	ianyl	A3 RV0					
Color			w	hite					
Flamability according to UL 94			١	/0					
Operation temperature range		-40	°С.	+80 °C					
Storage temperature range		-40	°С.	+80 °C					
Weight		0.	0111	kg/piece					

Part-No.

Туре

PU









* S Article from stock

A Available with a lead time
 R Available on request

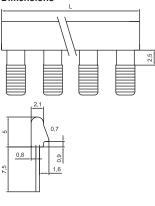
Interface Technology · Microcompact Accessories

Insulated jumper combs 2 to 16-pin white



Description		Part-No.		Туре			PU	
Jumper comb								
Color	white	762803	S*	BK 7-2803 W	'E 2-polig		10	
	white	762806	S*	BK 7-2806 W	'E 3-polig		10	
	white	762813	S*	BK 7-2813 W	'E 4-polig		10	
	white	762823	S*	BK 7-2823 W	'E 8-polig		10	
	white	762833	S*	BK 7-2833 W	'E 16polig		10	
General	762803	762806	7628	313 7	62823	762833		
Pole number	2	3	4		8	16		
Connection type			plug	-in				
Rated current			DC 6	δA				
Contact design	Flat contact 0.5 mm Ribbing on the sides							
Pin spacing			6.2 n	nm				
Length	12.4 mm	18.6 mm	24.8	mm 49	9.6 mm	99.2 mm		
Contact material			CuZ	Zn				
Material			Vectra	C130				
Color			whi	te				
Flamability according to UL 94			VC)				
Operation temperature range			-40 °C	+80 °C				
Storage temperature range			-40 °C	+80 °C				
Weight	0.0006 kg/ piece	0.0008 kg/ piece	0.001 ² piec	0)022 kg/ piece	0.0044 kg/ piece		

Dimensions





Part number index

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716432	45	751557.0000	25						
716433	45	751809.0000	23						
716434	45	751817.0000	29						
750320	38	751819.0000	29						
750321	42	751839.0000	30						
750322	43	751847.0000	31						
750340	39	751848.0000	32						
750360 750370	40 41	751901.0000 762803	26 47						
750510.0000	22	762803.1000							
	16	762805.1000	46 47						
750511.0000	23	762813	47						
750512.0000	23 24		47						
750516.0000	24 24	762813.1000 762823	40						
750517.0000 750518.0000	24	762823.1000	47 46						
750519.0000	21	762833	40						
	15	762833.1000	47						
750528.0000 750530.0000	18	102033.1000	40						
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Notes

Notes

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